ANKI ESSENTIALS

THE COMPLETE GUIDE TO REMEMBERING ANYTHING WITH ANKI

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Anki Essentials
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All layout and content by Alex Vermeer. This is version 1.0.

Disclaimer: I am not responsible for any losses or damages you may experience when using Anki (not that I expect *either* to happen). Also, Anki—a free piece of software written primarily by the brilliant Damien Elmes—is constantly being developed and improved, so some of the information contained in this guide *may* be out-of-date. Of course, I take every measure to prevent this from happening.

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Chapter 1

Introduction

Let's face it: the human memory *sucks*. We forget in a month even the most important ideas in that excellent book we read. We cram the night before a test, only to forget everything in a week. We forget the Five Big Things we're supposed to remember when assessing a project proposal. We never get around to remembering all those guitar chords with their many variations and configurations. The list goes on.

What can we do? Our memory, despite its limitation, is still a powerful tool in the human arsenal. Sure, a new and better brain might be nice, but until that's possible we must focus on making the most of what we have. Many methods for improving human memory retention exist, but one that stands out above the rest is *active recall testing*. Active recall testing is, basically, repeatedly exposing you to material to force yourself to recall it. If recall succeeds, the memory is strengthened; if recall fails, you refresh the memory and recall it again.

Enter **Anki**, a handy little *free* piece of software available on all major platforms—Windows, Mac OS X, iPhone, Android, and so on. Anki is an invaluable tool for creating, learning, and reviewing practically anything with some "structure" to it. From guitar chords to philosophical arguments to languages to productivity advice, Anki can help you remember it all. Anki is both *flashcard* software and *spaced repetition* software. In short: it presents you with a question (Who was the sixteenth president of the USA?). Once you've recalled the answer (Abraham Lincoln), this *card* will be presented again right when Anki thinks you're about to forget, thereby refreshing and strengthening the memory.

Sounds too simple, you say? Well, there is a *bit* more to it than that—and much more you can do with Anki—but that's the basic idea.

The Goal

The goal with this book is to teach you how to become an Anki master. I want to show you how easy it is to improve your memory and recall with a minimal amount of time and effort. The goal is *not* to help you develop a perfect memory. I don't know how to do that, and you should distrust people who claim they do. What I'm providing is a *tool* for getting more from the brain you already have, not a new brain. Still interested? Let's get started.

Key Terms

There are a bunch of key terms I want to highlight before we delve into using Anki. These words are used throughout the book. Don't worry if these aren't completely clear yet, we'll be talking about them a lot in the upcoming pages.

* **Notes** – A *note* is a bunch of information that belongs together. A single note could contain, for example: "Who was the sixteenth president?" and "Abraham Lincoln." A more complex note might contain "Abraham Lincoln," "Honest Abe," "16th," "2-Term," and "1861–1865."
* **Note Fields** – Note *fields* are the different parts of information contained in a note. This could be simple *question* and *answer* fields, or more complex fields such as *name*, *nickname*, *order*, *terms*, and *years* for the above note example.
* **Note Types** – Notes come in various *types*. A note type is a group of note fields used to make up certain kinds of notes. For example, a "Basic" note type may simply contain a *front* and *back* field. A "Presidents" note type may contain the fields in the above example (*name*, *nickname*, etc.). An "Elements" note type may contain the fields *symbol*, *atomic number*, and *valence electrons*.
* **Card Templates** – Notes come in different shapes and sizes. A note with various fields can be presented in different ways. For example, if you created a card template called "President Nicknames," you could display only the president's *name* and ask for the *nickname*. Card templates are used to define exactly what to display when and where.
* **Cards** – Each card template creates a card from a note. By making a bunch of card templates, multiple cards will be generated from a single note.

* **Decks** – Decks are *groups* of *cards* unified under a single name, much like files in a folder. You may have a deck called "Presidents" that contains 44 notes for every US president, resulting in 220 cards (assuming you had five card templates per president).
* **Collection** – A collection is the sum total of all the decks in Anki. Every Anki user has their own collection, and multiple collections can be configured for one installation of Anki (such as if you have multiple people using the same computer).
* **Tags** – Tags are optional labels you can give to individual notes. For example, you could tag the 44 president notes in the above example with the century in which they were president.
* **Studying** – Studying is the general process of going through a group of decks or cards and either learning them if they're new, or reviewing them if they've already been learned.
* **Anki** – Whenever I talk about Anki, I'm referring to the free, open-source, spaced repetition software created by Damien Elms. As of this writing, Anki 2.0 has just been released. Unless I specify otherwise, when I refer to "Anki" I mean Anki 2.0—the latest and greatest—not an older version.
* **AnkiWeb** – AnkiWeb is the online side of Anki where you can create a free account and sync your Anki collection between computers and devices.
* **SRS** – SRS stands for *spaced repetition software*.

What's Covered

Anki Essentials attempts to cover seven general areas:

1. ***Getting Started*** – The absolute bare-bones basics of using Anki, from installation, to setting up an account with AnkiWeb, to creating your first deck.
2. ***Getting Familiar with Anki*** – The inner-workings of Anki; how decks are organized, how notes and cards are edited, and how your collection is managed.
3. ***Creating & Editing*** – The world of creating Anki decks. It covers note types, note fields, card templates, images and sounds, importing and exporting decks, and adding scientific markup.

4. ***Learning & Reviewing*** – Specifics about studying, scheduling, and reviewing in Anki. Cramming, learning statistics, filtered decks, study options, and other topics are covered in depth.
5. ***Specific Applications*** – Taking what you've learned so far and presents a variety of sample applications.
6. ***Expanding & Enhancing*** – An assortment of other topics for getting the most out of Anki, including creating multiple user profiles, configuring Anki's settings, and using advanced card templates.
7. ***Additional Resources*** – Some final comments, as well as listing a bunch of available external resources and reference appendices.

In general, I suggest you go through *Anki Essentials* chapter by chapter. If you are new to Anki, this is especially important for the first few chapters of the book. After that, however, if you reach a chapter that doesn't apply to your situation or tickle your fancy—such as the chapter on LaTeX equations—don't hesitate to skim or skip it all together.

And now, without further ado, let's get started.
–Alex

Chapter 2

The What and Why of Anki

Say hello to your brain. Many methods for improving human memory retention exist, but one that stands out above the rest is *active recall testing*. The easiest way to do active recall testing is to use *spaced repetition software* that manages the spacing of material for you and makes it easy to create, edit, and delete content.

Your brain needs repetition to internalize material. This is where Anki helps.

What is Anki?

Anki can be summed up with two bullets:

* *Questions & Answers.* Anki presents you with a *question*—be it a fill-in-the-blank, a definition, or a standard question-marked sentence—and your job is to recall the correct answer.
* *Scheduling.* Based on how difficult or easy it was to recall the answer to the question, Anki determines the best amount of time to wait before asking you the same question again, thereby strengthening the memory at just the right moment.

Why Use Anki?

Anki is not the only SRS out there, or even the only good one. Some other popular ones include Mnemosyne, Metric, and iSRS. However, Anki is my software of choice for a few reasons:

- *Free.*[1] Anki is completely free, thanks to the hard work and dedication of its primary creator, Damien Elmes.
- *Wide availability.* Anki is available on most devices, including Android and iOS smartphones.
- *Easy syncing between devices.* AnkiWeb hosts all of your Anki content, making it possible to synchronize your information across all devices.
- *Extensive use of shortcuts.* Everything in Anki has an easy keyboard shortcut, making it possible to be very efficient at using it.
- *Extremely customizable.* Anki gives a *lot* of control over what material to store and how to display it.

Anki isn't a cure-all; it won't work for everything. As we'll see in later chapters, information must be formatted in certain ways for it to be effectively learned and memorized. But the things it works well for, it works *very* well.

Learn More about Spaced Repetition

If you're interested to read more about spaced repetition, the best place to start is the article *Spaced Repetition* by Gwern: http://www.gwern.net/Spaced repetition. This is by far my favorite article on the topic, a must read for anyone interested in knowing *why* spaced repetition works so well.

[1] *Except* for the iOS app, which is currently priced at $25.

Chapter 3

Installation & Configuration

I know you're itching to get started mastering your memory and becoming super-human, but before you can do any of that (because you will) you need Anki!

Download & Install

Head over to http://ankisrs.net and grab a free copy of Anki. On the right side of the web page there is a list of download links for various platforms. Anki is available for Windows, OSX, and many others, however this book focuses on the Windows and Mac version of Anki. Everything in this book should be easy to follow if you are on a different platform.

Installation Instructions

1. Download the Anki installer from http://ankisrs.net.
2. Run it (*Windows:* anki-2.0.*x*.exe, *OSX:* anki-2.0.*x*.dmg).
3. Follow the onscreen instructions.
4. Run Anki (*Windows:* Start Menu > Anki, *OSX:* \Applications\Anki.app)

> **Note:** If you are *upgrading* from an older version of Anki, simply follow the onscreen instructions to update your existing Anki database.

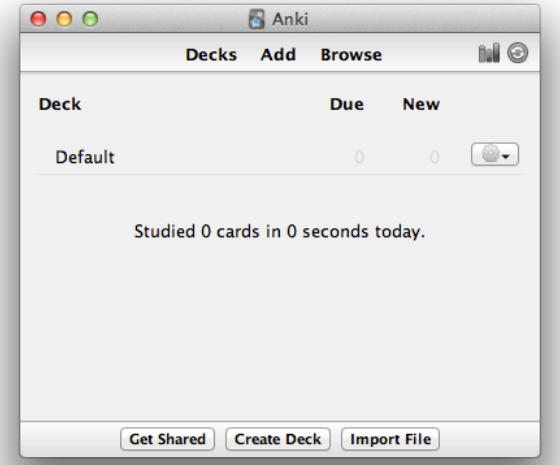
Anatomy of Your Installation

Just for your reference, once the installation is complete the following files will now exist on your computer:

* (My) Documents\Anki**collection.anki2** – This is the main Anki file that contains all the facts, cards, decks, and templates in your collection.
* (My) Documents\Anki**collection.media** – This folder contains all media files that are added to your decks, such as images and sounds.

Run Anki

If you haven't yet, go ahead and start up Anki for the first time! You should see a home screen like the one to the right.



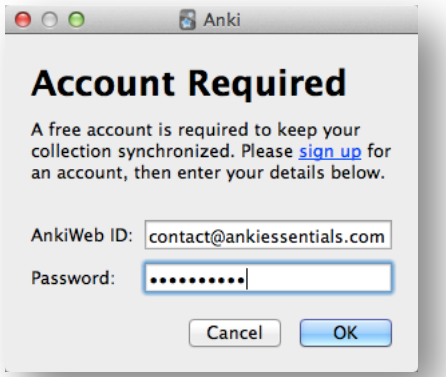
Create an Account at AnkiWeb

Before you start creating content, you need an account at ankiweb.net.

In the top right corner of the Anki window there is a Sync button that looks like .

Clicking this button, or pressing Y, will tell Anki to sync with AnkiWeb. Since there is no account set up yet, the screenshot below should appear.

If you already have an AnkiWeb account then log in using your existing credentials and hit OK. Otherwise, click on the sign up link or go directly to ankiweb.net and create an account. Then return to Anki, enter your account information, and hit OK.



A small window will briefly appear as your new (empty) account is linked to AnkiWeb.

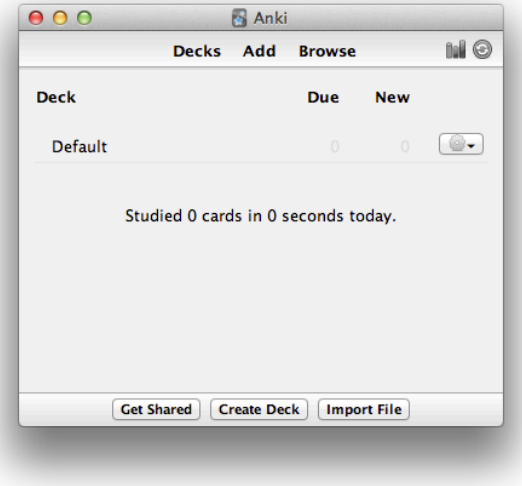
Welcome to Anki! Wasn't that easy?

Chapter 4

Creating Your First Deck

The main Anki window is the Decks page. Here you get a complete overview of *everything* contained in your collection. There's not much here, because we haven't created any decks or notes to learn from yet. But, not to worry, we'll be getting to that.

There are bunch of other features and links on this page, but for now we will ignore these and get started making our first deck.



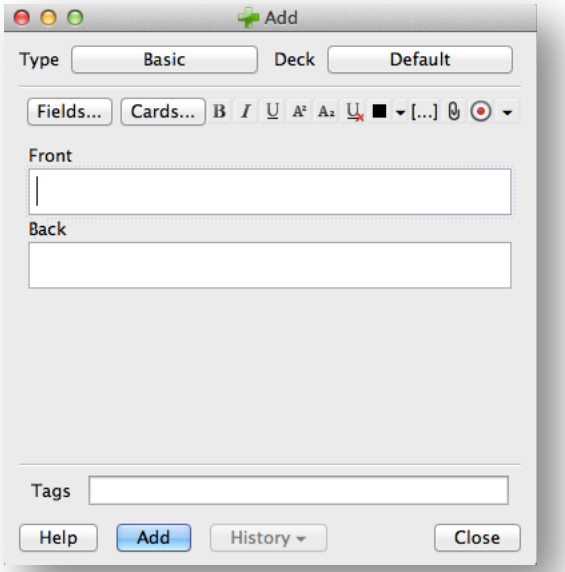
Creating a New Deck

Let's make a deck for learning the capitol cities of European countries.

Learning European Capitals

From the Decks page, click the Add button in the top menu to add some notes. Notes—the stuff you want to learn—are turned into *cards* and organized into *decks*, which act a lot like folders for files on your computer. The Add window should appear, looking something like this:

Here we can see:



* The current **Fact Type** ("Basic") – Anki comes with two basic fact types: Basic and Cloze. We'll only be using Basic for now.
* The current **Deck** ("Default") – By default, you are adding facts to a Default deck.
* The available **Formatting** options – bold, italics, font color, etc.
* The available **Fields**, given this Fact Type ("Front" and "Back").

You don't want to add facts to the Default deck; you want to make a deck specifically for *European Cities*. So, create a new deck by clicking on the Default deck button. A list of all the available decks appears (nothing much to see here yet). Hit Add and enter the name European Cities, followed by OK.

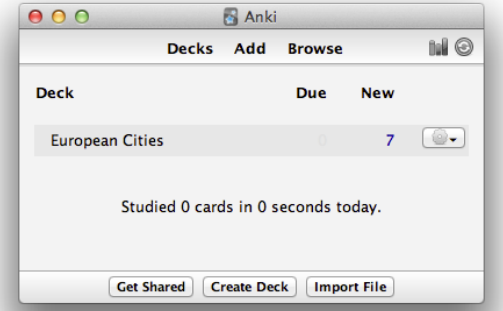
Now the Add window shows that our current deck is European Cities. It's time to add some content.

The **Front** field is what is displayed on the front of the card; it's the *question* Anki will ask. The **Back** field is the *answer* that you will be required to recall. In the Front field textbox put "What is the capital of Greece?" and in the Back field textbox put "Athens." Now hit Add. Congratulations, you just added your first fact!

Add a few more facts to fill out the European Cities deck, such as:

- **Front**: What is the capital of Serbia?
  Back: Belgrade
- **Front**: What is the capital of Germany?
  Back: Berlin
- **Front**: What is the capital of Belgium?
  Back: Brussels
- **Front**: What is the capital of Romania?
  Back: Bucharest
- **Front**: What is the capital of Hungary?
  Back: Budapest
- **Front**: What is the capital of Denmark?
  Back: Copenhagen

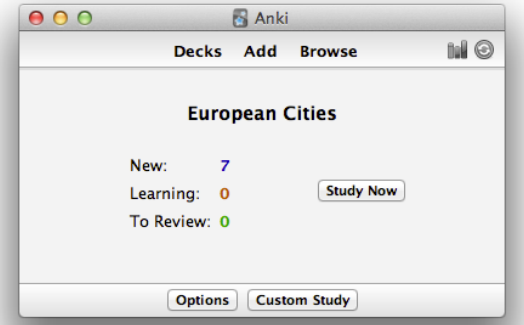
After adding a bunch of facts, hit the Close button to return to the Decks window, where you will now see your newly created deck:



You can see that there are (in my case) 7 **New** facts to learn, and 0 **Due** for review (because I haven't learned them yet). Now that you have some material, it's time to do some learning.

Learning & Reviewing

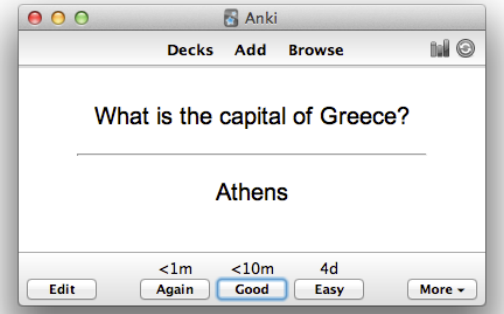
From the Decks window click on the *name* of your new deck. This takes you to the main **Study** window. Here again we see that there are 7 New facts to learn, 0 facts in the middle of learning, and 0 facts awaiting review.



Hit the **Study Now** button to begin studying.

By default, Anki presents new cards for learning in the order they were added. So, the first card you are presented with should be from the fact you added asking about the capital city of Greece.

Think you know the answer? When you're ready, click on Show Answer (or press SPACEBAR).



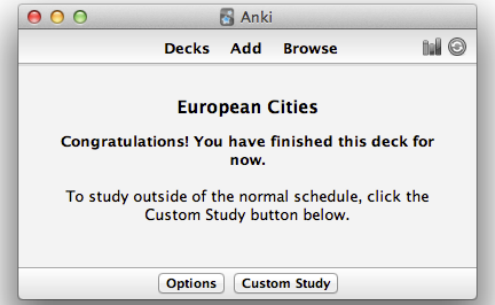
Was it easy? Hard? Did you completely forget? You now have a set of options that are presented after every new card:

* **Again** – Click this if you got it wrong (or press 1)
* **Good** – Click this if you got it right, but it took some effort (or press 2)
* **Easy** – Click this if you got it right and it was easy (or press 3)

There are other options in the Review window, such as Edit and More, but don't worry about these yet. Once you make a selection (Again, Good, or Easy), you will be presented with the next card in the deck. Continue until you have completed all of the cards.

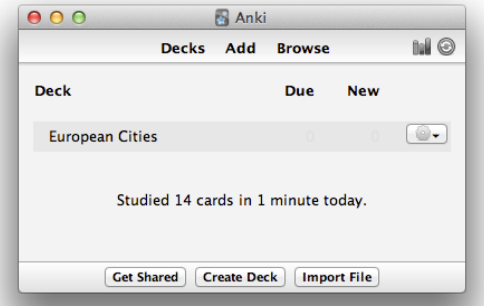
At this point, Anki tells you that you're done reviewing. Congratulation! You've started learning and memorizing useful information with Anki!

NOTE: You may be required to answer the same card multiple times; this is because if you only answered Good and if this is a new card then Anki will ask more than once before delaying the card until tomorrow.



Click the Decks link (or hit D) to return to the Decks window. Since this material is new, and assuming you completed the deck, there should be zero cards due in the Getting Things Done deck—all the cards will be due for review *tomorrow*. As you get the answers correct more frequently and more easily, Anki will wait longer and longer before presenting the same card again, eventually reaching delays of weeks and months.

The Decks window also shows how many cards were studied today and for how long—in my case, 14 cards in 1 minute.



By default, Anki will never ask you to answer more than 100 cards per day. You don't have anywhere near that many yet, but you'd be surprised how quickly they can add up.

Syncing with AnkiWeb

Now that you've created the start of a simple deck and reviewed it, it's time to sync your collection with AnkiWeb. This way the contents of your decks, as well as all your review and study information, will be backed-up online, accessible online, and accessible from any other device or computer where you have Anki installed.

Clicking this Sync button (or pressing Y) will cause Anki to sync everything in your collection with AnkiWeb; it should only take a few seconds.

And that's it! Now your entire collection is accessible from ankiweb.net.

* * *

There you have it. Those are the *bare bones* of using Anki. Of course, there's still *so much more* we're going to cover, but by now you have already succeeded in creating your first deck and reviewing it. Give yourself a pat on the back.

Now take a deep breath, and let's move on!

Chapter 5

Anatomy of a Collection

How does Anki *work*? How is everything organized? Lets spend a moment fleshing out the inner workings of Anki. This may seem a bit confusing or convoluted at the start, but trust me, you'll be glad in the long run if you take the time to understand this stuff.

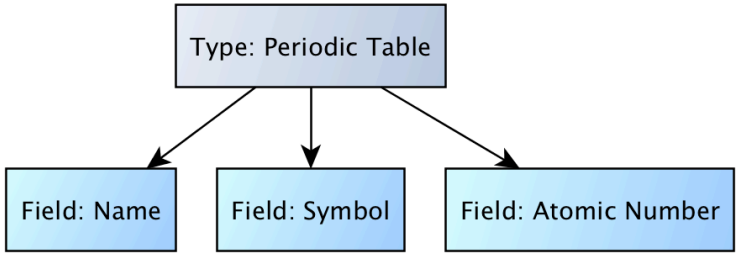
It All Starts With Notes

Notes are the most fundamental pieces of an Anki collection.

Let's say I want to learn about chemistry—specifically, the first twenty elements on the periodic table and their important properties, such as the name, symbol, and atomic number.

Notes, Types, and Fields

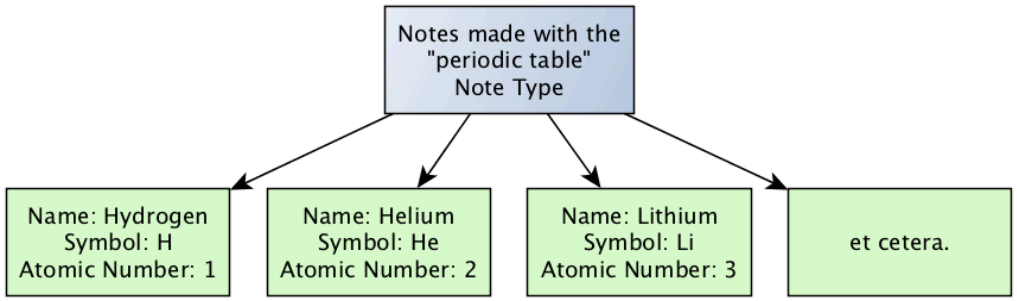
To do this, we would create a **Note Type** called "periodic table" with the three **Note Fields** "name," "symbol," and "atomic number":



Note Types define what *groups of information* you can create, organize, and study. In the above example, the "periodic table" note type has three fields. You could also create a note type with generic "front" and "back" fields, or a more complex period table note type

with name, chemical symbol, valence electrons, common form, type, position, etc. **Note Fields** are the various components of a **Note Type**.

To bring this back down to reality, let's continue with the chemical symbols example. What would some of our periodic table notes contain?



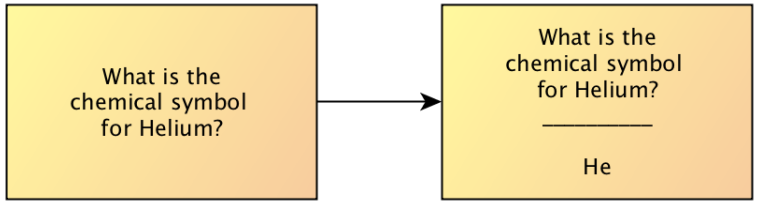
Once we have this information and want to learn it using Anki, we need a way to *present* the information to you, the learner. This is where Cards come in.

Cards and Card Layouts

As mentioned earlier, Anki works by presenting *questions* and *answers*. **Card Layouts**—also called **Card Templates** or **Card Types**—determine how the *note fields* and their *content* will be displayed while you study and review them. Each note type has its own card layouts, unique to itself.

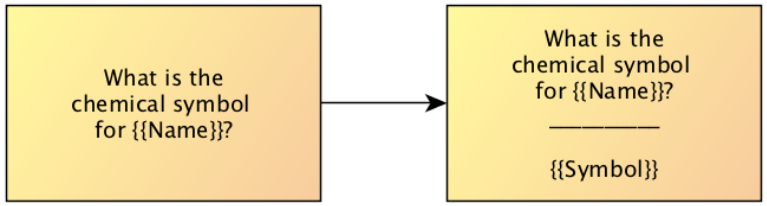
Every single card layout has a *front* and a *back*. The *front* is what Anki displays to ask you a question, and the *back* is what Anki displays to reveal the answer. In "Creating Your First Deck," you exclusively used the Basic note type, which contains a single card type called "card." The *front* of this card type displays the Front field, and the *back* displays both Front field and the Back field (so you can see the original question when the answer is displayed).

The following shows the *front* of a card (the question) and the corresponding *back* of the card (the answer).

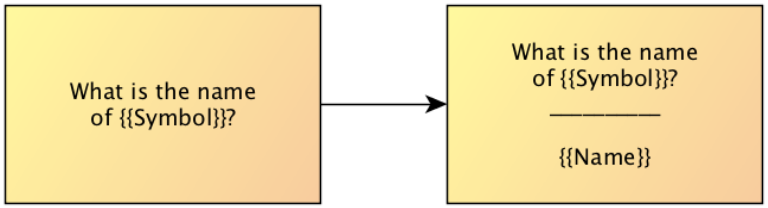


Anki enables you to define what the front and back of a card *look like* by customizing your **Card Layouts**. Still sticking with the periodic table example, we may want to define four different card templates as follows:

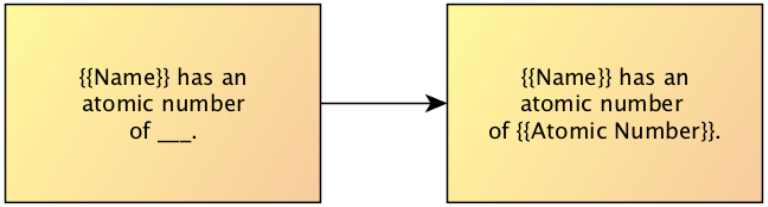
Template: Name to Symbol



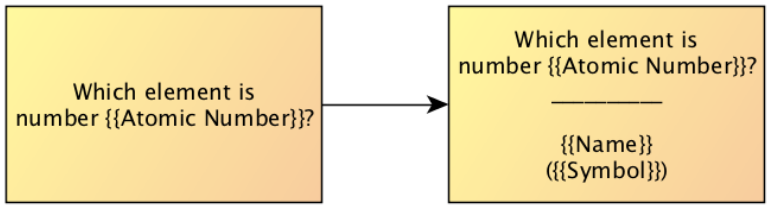
Template: Symbol to Name



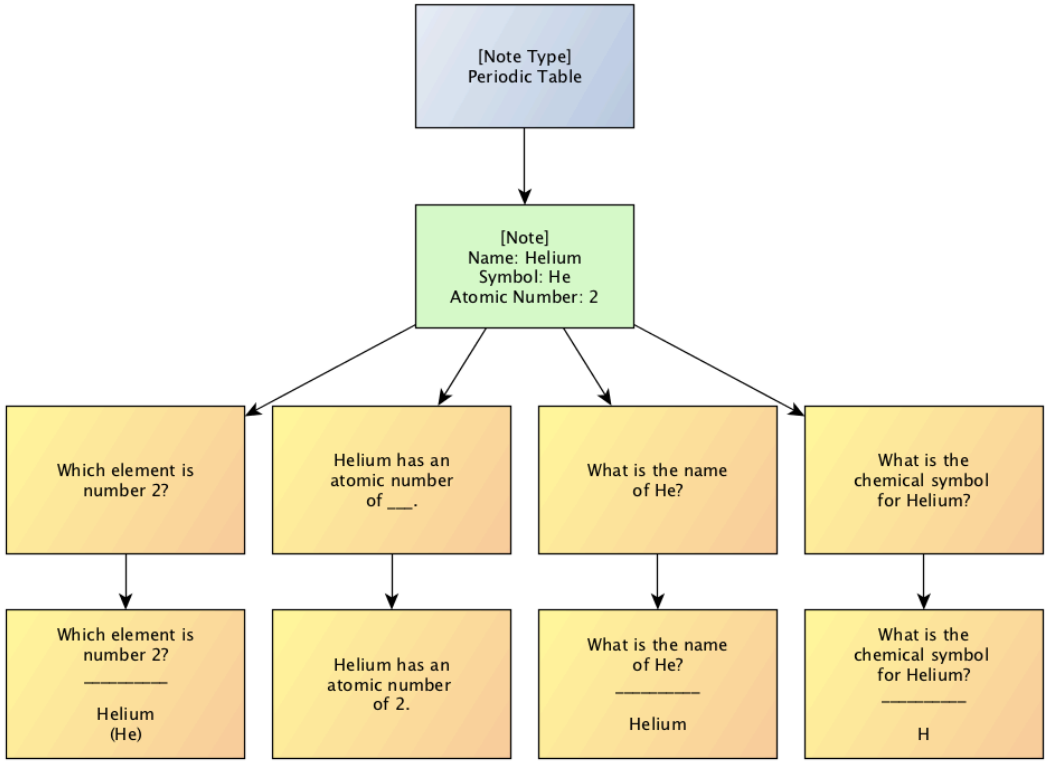
Template: Name to Number



Template: Number to Name



By creating these four Card Templates, every time we create a *single* note, *four* cards for studying are instantly created! The fields surrounded by "{{" and "}}" will be replaced by the actual content of a note to create a learnable card. When we put it all together:



Presto! By creating a single note there are now four **cards** of material to learn using Anki. The card types within Anki are *very* customizable.

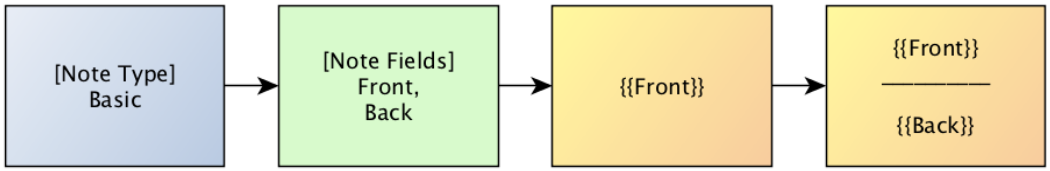
Anki Defaults (What You've Already Used)

In Chapter 4, when creating your first deck, you left the note types, fields, and card layouts all in their defaults. But what defaults, exactly, are included with Anki?

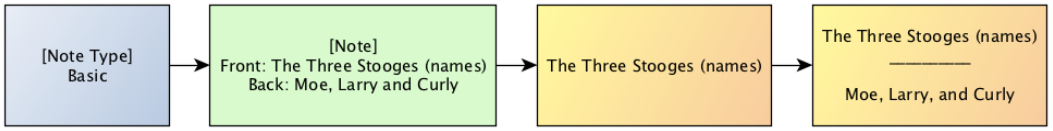
Anki comes with two different pre-configured note types: Basic and Cloze.

Basic

The Basic note type is about as simple as it gets. There are two fields named *front* and *back* (not to be confused with the front and back of the card layout). This is the note type you used to create the *European Cities* notes in Chapter 4.



The Basic note type is flexible and powerful because of its simplicity and generality. You could use it for pretty much anything:



Cloze

The Cloze note type was created with "cloze deletion" in mind. Cloze deletion is when a certain portion of text is omitted and you are required to remember what it is. For example:

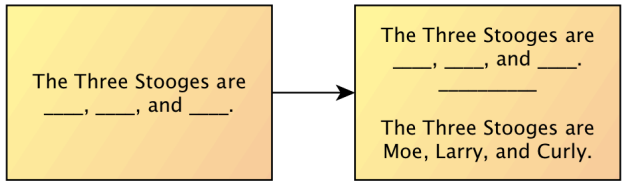
→ *Question:* The Three Stooges are ____, ____, and ____.
Answer: The Three Stooges are **Moe**, **Larry**, and **Curly**.

This is a powerful and useful memorization method. The above question and answer *could* be made using the Basic note type, but since this is a very popular style, Anki has a means to make these types of notes as easy as possible. The above Q&A will look very different depending on which note type, Basic or Cloze, is used:

Using the Basic Note Type

→ **ONE Basic Note's Fields**
Front: The Three Stooges are ____, ____, and ____.
Back: The Three Stooges are **Moe**, **Larry**, and **Curly**.

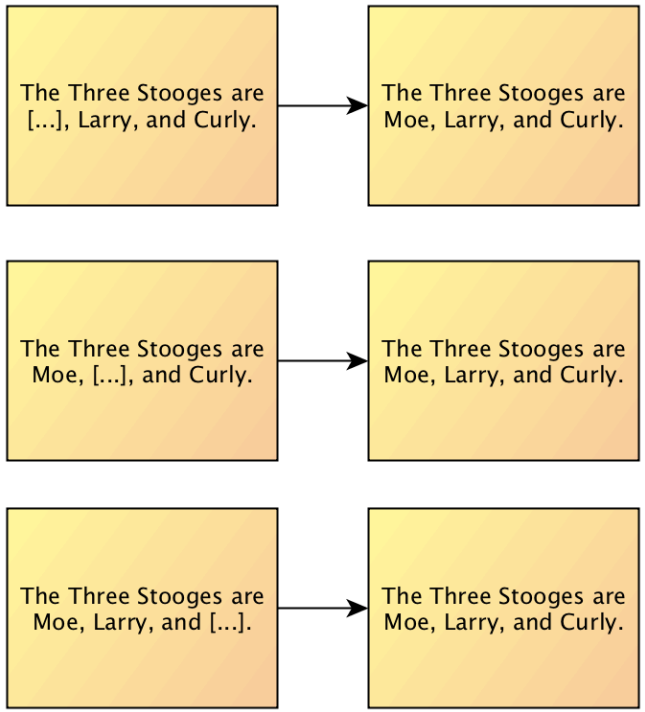
→ **ONE Card Created**



Using the Cloze Note Type

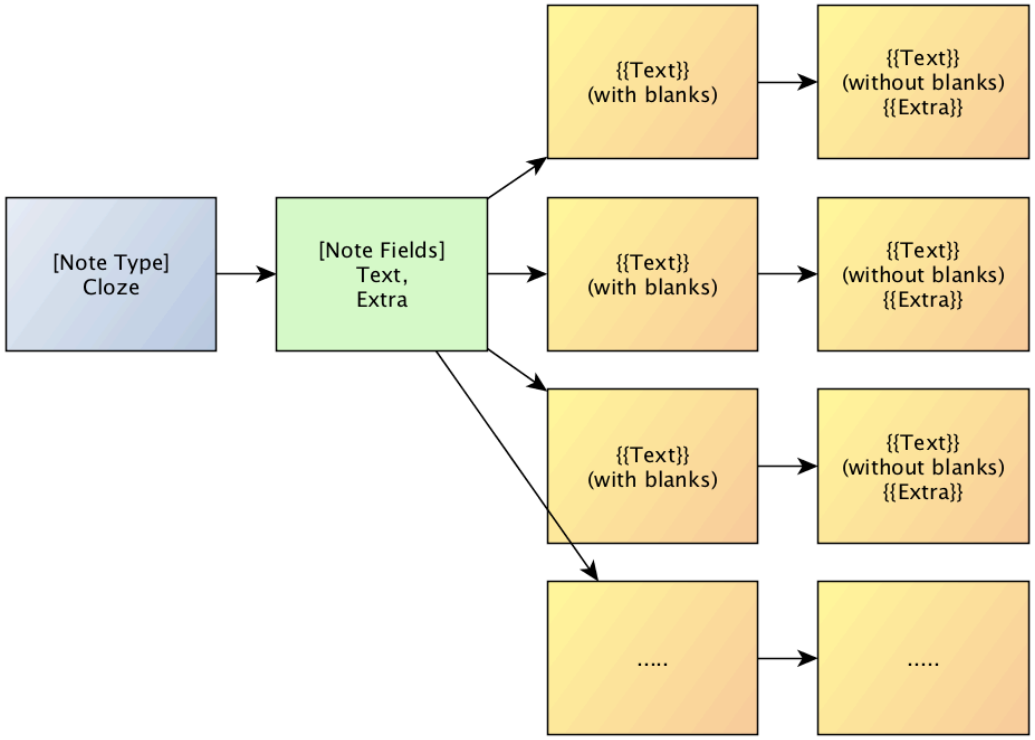
→ **ONE Cloze Note's Fields**
Text: The Three Stooges are {{c1::Moe}}, {{c2::Larry}}, and {{c3::Curly}}.
Extra: [any extra text you want to show on the back of the card; left blank in this example, because it isn't needed]

→ THREE Cards Created



As you can see, using the cloze fields—such as {{c1::Moe}}—causes the Cloze note type to automatically create a card with "[…]" on the front and "Moe" on the back. Don't worry, you don't need to remember how to type "{{c1::Moe}}". When creating notes, Anki has a special "Cloze deletion" button which automatically puts the currently selected text between "{{cl#::" and "}}".

The basic structure of the Cloze note type is shown in the following image. Basically, Anki automatically creates a new card for every single cloze field present in the deck.



Anki has a special way of using cloze deletion text, which we will cover in much greater detail in when talking about creating custom notes and card templates.

Together, the Basic and Cloze notes are very powerful and will probably cover most of your basic note type needs. Anki enables you to create an unlimited number of different note types—each with their own custom note fields and card layouts—to suit whatever your needs may be.

Card Layouts

You've now seen a bunch of different card layout examples. With Cloze deletion, the card layout creates a new card for every "{{cl::…}}" field. With the Basic card type a single card layout displays the question on the front, and the question and answer on the back. With the chemistry example used at the start of the chapter, four different card layouts were defined to ask four different questions.

Enough about *content*. Next we'll briefly cover how these notes and cards are organized together in Anki.

How it's All Organized

Decks

Decks, as you've probably gathered by now, are simply a collection of notes (and their corresponding cards). Decks are usually used to group notes in some way, such as by category, area of coverage, or information type. My personal Anki collection has decks for specific books, specific topics, and specific projects.

Collection

A collection, just to reiterate this once more, refers to the combination of all your decks. Every Anki user has a personal collection.

Summary

Notes are the *raw information*. Once you have a note type, you can create notes by filling in the various note fields. In **Creating Your First Deck**, you added notes using the *Basic* note type to create multiple cards with *front* and *back* fields—this is not to be confused with the *front* and *back* of cards—which can also be called the "question" and "answer" side of your cards.

But you don't have to use just one note type. When creating notes for your decks, you can create as many notes using as many different note types as you like.

The options really are endless—note types can come in many shapes and forms that are simple and general, or specific and complex. These can then be displayed using various card layouts that can create multiple cards for studying based on a single note.

Chapter 6

A Day in the Life of a Deck

This chapter is an overview of the note creation and studying processes. You have already created some single notes for a short deck in Creating Your First Deck. Now let's get into a little more detail about the general note creation and studying process.

The Creation Process

Before you start creating anything, there are a bunch of questions you need to ask.

What am I learning?

Figure out *what* your content is going to look like. Will it be using images and audio files? Will it be basic questions and answers? Will if be a lot of "fill-in-the-blank"?

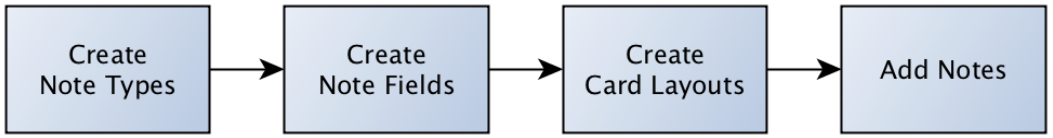
What note types and card layouts should I use?

You may be perfectly fine using the Basic and Cloze note types for most of your purposes. However, if you have something more specific in mind you'll want to decide on how to organize new note types, fields, and card layouts.

What is the best way to organize my material?

Is this all going to go into a single deck or into multiple sub-decks? What will the decks be called? Will you use tags on your notes to organize them?

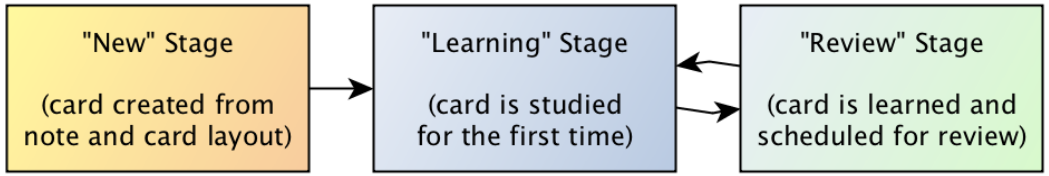
Once you have these things figured out, the general creation process usually looks like this:



We're going to cover everything you need to know about each of these steps in upcoming chapters.

The Studying Process

Every single card created in Anki goes through the same stages:



The New Stage

New cards are those that have been created but not studied. The moment a card is studied for the first time, it enters the learning stage.

The Learning Stage

In the learning stage, cards are presented several times until Anki believes you have learned it—by default this is when you answer it correctly at least twice.

The Review Stage

From this point onward a learned card sits in the "review" stage in which Anki begins leaving longer and longer gaps of time between reviews. If at any point you get the *wrong* answer, a card is then considered to be in the "learning" stage again.

As time goes on, we hope that every card in our collection transition to the review stage and stays there.

We'll get into the studying process in a lot more detail in *Studying 101*.

Chapter 7

The 20 Rules

What is the best, most effective way to structure the information you are going to learn and memorize? Your speed of learning will depend on the way you formulate the material present in your decks. Bad cards = bad learning! This makes a big difference. The same material can be learned *many* times faster, with *much* less stress and effort, if it is well formulated.

Dr. Piotr Wozniak, the creator of SuperMemo, the original *spaced repetition software*, wrote a detailed list of rules and recommendations for how to create learning material. These will help guide you in the ways to most effectively create and organize the material in your Anki decks to make them as effective and efficient as possible. These twenty rules are organized in order of priority.

> If you want to skip this chapter and jump ahead to how to create notes with Anki, feel free—but make sure you come back and read this later.

Here is my own summarized version of the twenty rules based on Wozniak's 20 rules for formulating knowledge in learning. These rules are not only applicable to Anki. Use them to improve your learning and studying in any endeavor.

Rules 1. First Understand

Never memorize something if you do not first understand it! There is no value in memorizing a German history book, word for word, if you do not *understand* what any of those words mean.

As an added negative, the time you will waste for "blind learning" is astronomical compared to learning and remembering what you *understand*. It pollutes and clutters your learning process.

This is a challenge when sharing decks with others. As you'll see in the remaining rules, it helps to add personalization and context to your material, which makes them harder for others to use, and makes using other's decks more difficult for you.

I cannot stress this point enough: do not memorize if you do not understand!

Rule 2. Start with the Big Picture

Don't memorize loosely related facts. Instead, build a picture of the whole before breaking it down into simple items. Read a book or chapter that puts all of these ideas together. Make sure you know the big picture of what you're learning about. If you don't have a clear big picture, memorizing the loosely related facts will be more difficult and time-consuming.

Rule 3. Build on the Basics

Always start with the basics, and do not neglect them. Don't begin by memorizing advanced, difficult, complex ideas. Start with the simplest ideas (see Rule 4!) and build off of them. You can always move onto more complex things later.

The basics take a relatively small proportion of your time to learn, but you will be glad you spent time on them in the end. Memorizing obvious things is *not* a waste of time! Forgetting the basics can cost you dearly in the long run both in terms of time and effort.

Rule 4. Simplify

Make formulated material as simple as possible. Simpler models are easier to create, learn, and memorize. Simplicity does not imply losing information or skipping the difficult parts—though if you're not careful this could happen. Simplicity is saying the most with the least number of words.

Simplicity is imperative for two reasons. First, simple is easier to remember. Remembering an idea is like running through a labyrinth—it's easier when your brain knows exactly which way to go. The labyrinth in your mind is easier to navigate when the idea is simpler. Second, it is easier to schedule repetitions of simple items within Anki.

In general, the longer it takes to remember an idea, the simpler it needs to be. Answers, especially, should be as short as possible. If simplifying doesn't work, see the remaining rules.

Rule 5. Use Cloze Deletion

Cloze deletion—the act of omitting words or phrases—is easy and effective, and can greatly speeds up memorizing. Cloze deletion is highly recommended for beginners.

Rule 6. Use Imagery

A picture is worth a thousand words. Images of information are usually far less volatile that words. The downside of using imagery is that it can be time-consuming to create the material, so it isn't always worthwhile.

Rule 7. Use Mnemonic Techniques

Mnemonic techniques are often amazingly effective and make remembering easier. A mnemonic is a general term for a tool or trick that aids information retention. A common example is the Mnemonic Major System, a way of translating numbers into letters and in turn into visual words. Using this technique, a long string of numbers is much easier to memorize by turning it into a series of visual images. Tony Buzan is a popular writer of books on mnemonic techniques, such as peg lists and mind maps (two other good examples).

Rule 8. Use Graphic Deletion

Graphic deletion is exactly the same as cloze deletion except it omits portions of images rather than sentences. Graphic deletion is great for learning things like anatomy and geography.

Rule 9. Avoid Sets

A set is a collection of objects, such as this list of 20 rules, or “apple, pear, peach,” or the answer to “What countries belong to the EU?” Sets are very difficult to memorize. Sometimes, however, sets are unavoidable. If you must have a list of items, at least convert them to enumerations (Rule 10).

Rule 10. Avoid Enumeration

Enumerations are lists that have been *ordered*. If you were memorizing this list of rules, ordering them by rule number is still very difficult to memorize, but it is much *better* than memorizing them in a random order.

Listing the countries in the EU *alphabetically* is an example of an enumeration, as is listing these twenty rules in order of priority. Enumerations, even through they're better than lists, are still very difficult to memorize and should be avoided whenever possible.

If you must use enumerations then use overlapping close deletion when possible.

Rule 11. Combat Interference

When you learn about similar things it is often easy to confuse them. *Interference* is when knowledge of one item makes it hard to remember another item. For example, if you were learning English vocabulary you may constantly confuse the meanings of "historic" and "historical." Another example: you could find yourself thinking, "I know the meanings of inept and inapt but I can't remember which is which!" This is a sure sign of interference.

Interference is the single greatest cause of forgetting! So what to do about it? *Detect* and *eliminate*. The moment you notice yourself experiencing interference, you must make every effort to change your notes in some way so as to prevent the confusion. Can you make them personal (Rule 14)? Can you use context cues (Rule 16)? And so on. Make your cards as unambiguous as possible, and eliminate interference as soon as you spot it.

Rule 12. Optimize Wording

Sometimes words can be ambiguous or vague. Words can have different meanings, different interpretations, that may be clear now but won't be in the future. Also, there are often single words that can sum up an entire phrase or sentence.

Optimizing wording means conveying an idea in as few words as necessary, as clearly as possible. Optimized wording helps reduce errors, increase specificity, reduce response time, and improve concentration.

For example, replacing “Aldus invented desktop publishing with PageMaker but failed to improve. It was soon outdistanced by …” with “PageMaker lost ground to …” is an example of optimizing wording—it says the same thing but with much fewer words. (This is closely related to Rule 4: Simplify.)

Rule 13. Refer to Other Memories

Referring to memories helps to create context, simplify wording, and reduce interference. For example, replacing “shamelessly conscious of one's failings and asking in a begging way” with “shamelessly humble and supplicant” is an example of referring to other memories (assuming you already know exactly what “humble” and “supplicant” mean).

Rule 14. Use Personalized Examples

Enhance memories by linking them to personalized examples, which are very resistant to interference. For example, “What is the name of a soft bed without arms or back? (like the one at Robert's parents’ place)” is an example of a personalized example.

Rule 15. Rely on Emotional States

Strong emotions help with remembering. Vivid and shocking examples are easy to remember. If you illustrate with examples that are vivid or shocking you will be amazed at how much easier things are to remember.

Rule 16. Use Context Cues

Context cues are words or images that prime you for a type or answer in a simple way. Context cues simplify wording and put an idea within a category. For example, writing “author: Getting Things Done” is much shorter and simpler than “Who wrote the book called Getting Things Done?”

Some other examples of context cues: “title:,” “author:,” “date:,” “math:,” “chem:,” “define:,” and “ex:.”

Rule 17. Use Redundancy

Redundancy means presenting the same information in different ways. This is *not* a waste of time or a contradiction of the Simplify principle. Repeating information in different ways can encourage memorization and internalization.

Rule 18. Provide Sources

Except for well-tested and proven knowledge, it is highly recommended that you include *sources*. Sources help distinguish conflicting information and help judge an idea's reliability or importance. For example, that bit of wisdom from a friend that you want to internalize? Record whom you got it from, so that you can better differentiate it from other advice you may receive in the future.

Rule 19. Use Date Stamping

Date stamping means including the date a piece of information was accessed, created, or recorded. This is especially important for information that is *volatile*—i.e., knowledge that is subject to change over time.

Rule 20. Prioritize

Last but not least, don't forget to *prioritize*. Some information is more important than other information. Some sources are better than others. It rarely makes sense to memorize whole books. Focus on the most important information! One way to implement this rule is to put less important information in parenthesis in your notes.

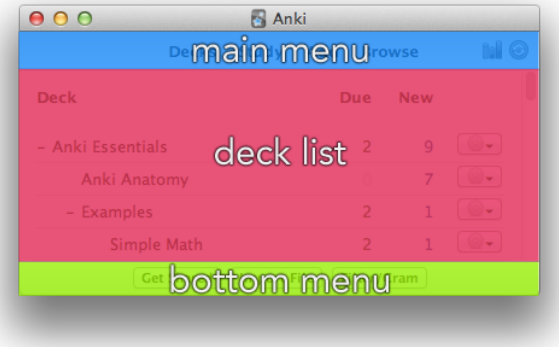
Chapter 8

Getting to Know the Deck List

The Deck list is your Anki "homepage." This is where you start every time you load Anki, and where you go after adding material or reviewing. If you've been experimenting with Anki, your collection may be starting to fill out a bit.

Overview of the Deck List

The Decks list contains three main areas: the main menu, the actual deck list, and the bottom menu. Take a look at the following image to see all the options available to you in the Decks list (i.e. your collection).

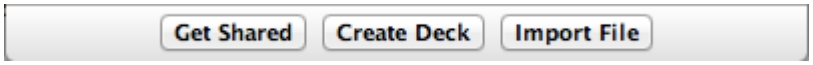


In the main menu, you have the following options:

- **Decks:** This takes you to where you currently are.
- **Add:** Begin creating new notes.

* **Browse:** Browse through all of the notes and cards in your collection (discussed more in the next chapter).
* **Show statistics:** View your learning and reviewing statistics of the current selected deck.
* **Synchronize with Anki Web:** Sync your collection between the computer and AnkiWeb.

On the bottom menu you have the following options:



* **Get Shared:** This takes you to the shared decks page on AnkiWeb, where you can find and share decks with other Anki.
* **Create Deck:** Create a new, blank deck.
* **Import File:** Anki is able to create notes by importing the data in plain text files.

Within the main Decks list window, there are options for each deck listed:

1. You can toggle to display or hide the sub-decks by clicking on the "–" or "+" on the left.
2. The name of the deck.
3. If you click on a deck's name you will be taken to the Study page for that deck.
4. You can see the current Due and New cards.
5. There is an additional options menu.

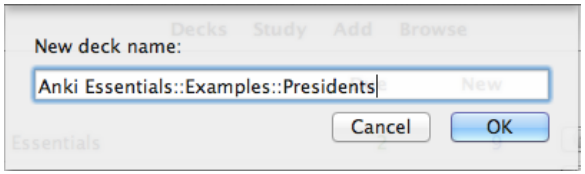
The additional options menu to the right of each deck is pretty self-explanatory:

* **Collapse** – Show or hide all of the sub-decks within this deck.
* **Rename** – Rename the deck.
* **Options** – Provides a bunch of study and review options.

* **Delete** – Deletes the selected deck.

Organizing Decks

Decks can be nested beneath each other by adding a "::" to the name. The Decks page doesn't show the "::" in the deck names, because it displays them using the nice tree view. To see how this works, select Rename from the options menu beside one of your decks. A dialogue box should appears that looks like this:



Go ahead and change the name to something like:

* Anki Essentials::Examples::Test::Test::Test::Presidents

Now hit OK. The Decks window should refresh and show that the "Presidents" deck is now nested five levels deep. Now change the name back to what it was.

Plan Out How You Will Organize Your Decks!

The method by which you will organize your decks is completely up to you, but can save you a lot of frustrations and card-moving in the future. Take some time to plan ahead for the types and groups of decks you plan on creating. Really, you can do whatever you want, but here is a sample outline similar to my own to give you an idea of what it can look like.

Anki
    Anki Essentials
    How to Formulate Material
Languages
    Deutsch
        Basics
        Advanced

- Español
  - Basics
  - Grammar
  - Nouns
- University
  - 2013-Fall
    - ECON*1234 Macro Economics
    - PHIL*3332 Philosophy of Science
  - 2013-Winter
    - ECON*2010 Micro Economics
- Personal Dev
  - Emotional Intelligence 2.0
  - Motivation
- Productivity
  - Books
    - The Four Hour Work Week
    - Getting Things Done
- Memory
  - Mnemonic Major System
- Psychology
  - Books
    - Thinking, Fast and Slow
    - Nudge
    - Why Everyone (Else) is a Hypocrite

Use a Sandbox

One of my own personal methods for keeping my new notes organized—especially when creating them on the fly—is to always create new notes in a deck called "SANDBOX." You could also call this an "Inbox" or "Unsorted" deck. Every now and then I clean up my sandbox and sort the notes therein into decks I already have, or create new decks to hold them.

A Few Deck List Tips

* *Use special characters to sort special decks* – The deck list sorts decks alphabetically. Therefore, if you want certain decks to be forced to the top or bottom of the deck list you can start the name of the deck with a special character. For example. I

put a "~" in front of my ARCHIVE deck to push it to the bottom, and an "@" in front of my SANDBOX deck to push it to the top. Some other special characters you can use, in the order they will be sorted (from top to bottom):

!, #, $, %, &, (, *, ?, @, A–Z, [, ^, a–z, {, ~, Ä–Ž, ä–ž.

* *Use consistent capital or lowercase letters* – Note in the previous tip that A–Z and a–z are sorted separately. To keep your regular decks together, consistently start them with either capitols or lowercase letters. Also note that accented characters are always pushed to the end (something that will hopefully change in the future).

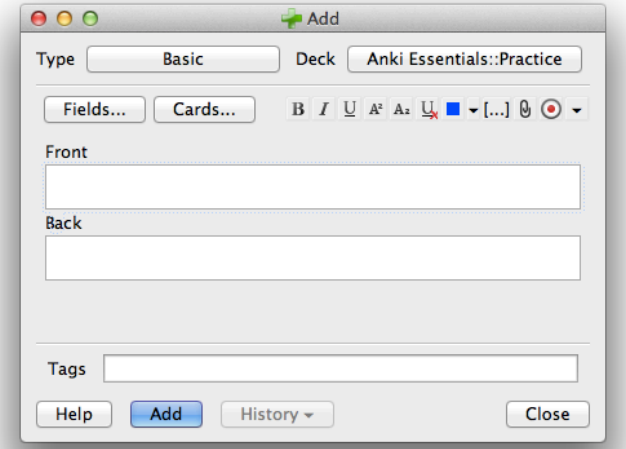
Chapter 9

Everything You Need to Know About Creating Notes

Before creating any notes you need to decide what deck to put them in. The easiest way to do this is from the Deck List page where you can click on the Create Deck button at the bottom of the screen. Then, open up the new deck by clicking on it in the Decks List page.

(There's nothing there yet, so you're congratulated for being "done.") But you don't want to study, you want to *create* material. At the top of the screen hit the Add button to open the **Note Editor**.

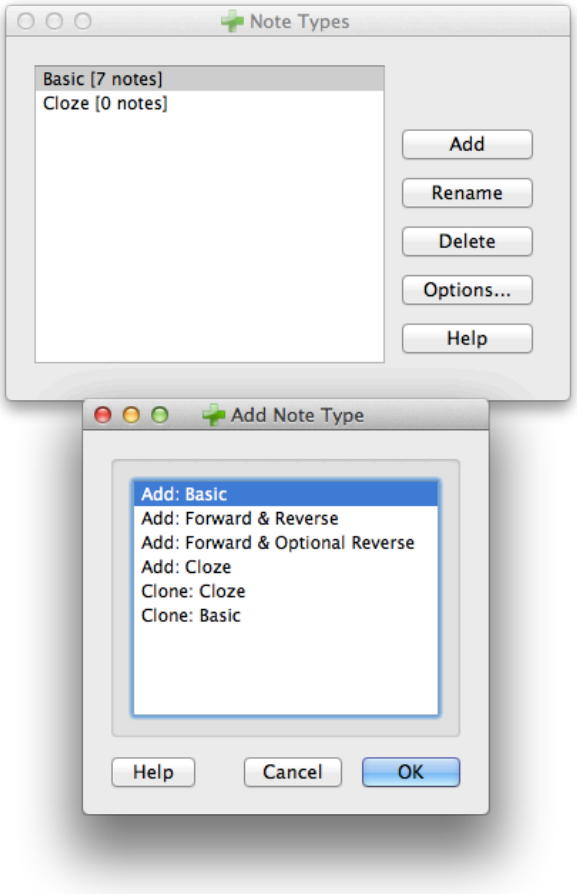
The Note Editor



This is the heart and soul of all note creation in Anki. This is where most of the magic happens! From the Note Editor you have full power to control what note type to use, what deck to create this note for, what note fields to use, what card layouts to use, and what information to contain.

Selecting the Note Type

Starting from the top-left corner we have the current note type (set to Basic in the above screen shot). Clicking on this pulls up a list of all available note types in your entire collection. The two defaults, Basic and Cloze, will be listed, along with any other created note types.



This window also gives you the ability to manage your note types. Simply click the Manage button and you'll be given the option to Add a new type and to Rename or Delete any existing note types.

When adding note types, you have the option to add a new one based off of four built-in templates—Forward, Basic & Reverse, Forward & Optional Reverse, and Cloze—or to clone (copy) any of your existing templates.

Tip! When creating new note types I recommend keeping the names as generic as possible so that they may be reused for other decks in other situations.

Selecting the Deck

Continuing along the top of the Note Editor we can see the current selected Deck. Depending on how you got to the Note Editor, you might need to change this to the deck you want to add notes to.

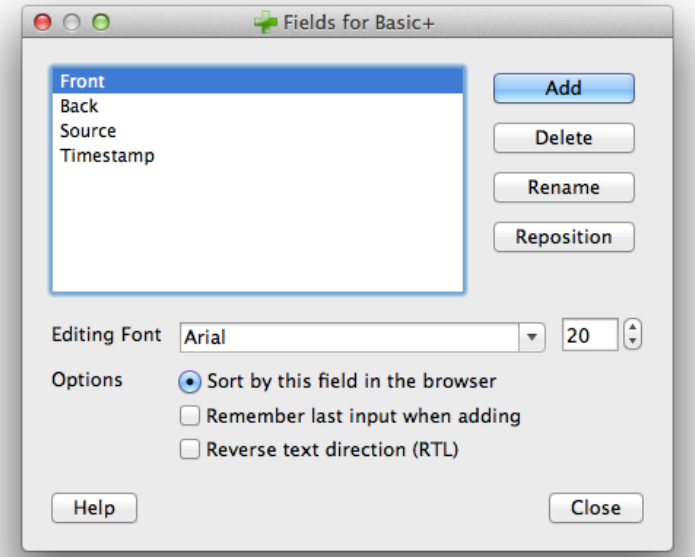
Just as with note types, clicking on the current deck will display all of the decks currently in your collection and give you the ability to add a new deck.

Modifying Note Fields

From the Note Editor you also have the ability to modify, add, and remove the note fields for the currently selected note. In the following images you can see that I added two fields, Source and Timestamp, to a new note type I created called *Basic+*.

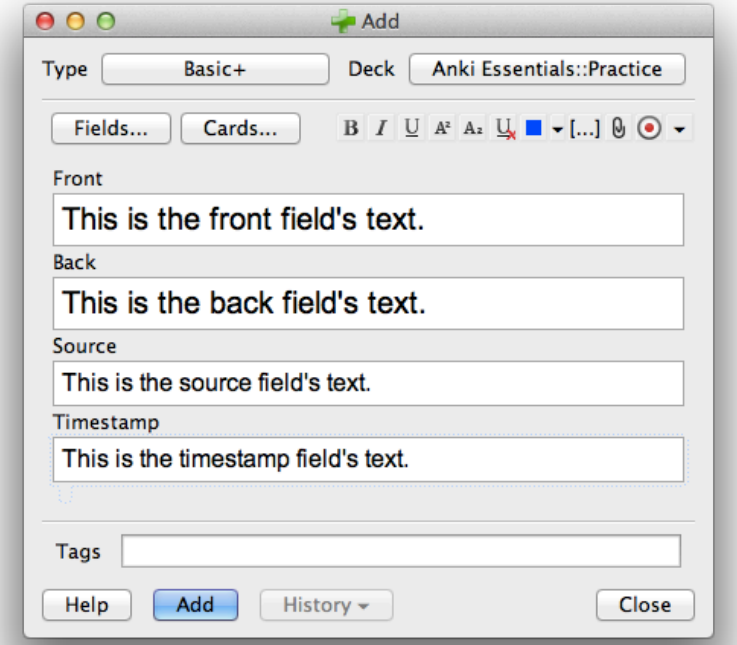
NOTE: For the sake of explanation I have created a new note type called ***Basic+*** that I will use throughout this chapter and the next.

The field editor gives you the ability to set the editing font for a field—how it displays when creating notes, *not* how it will display when studying—as well as define the default sorting field (there can only be one), whether to remember the last input when added (which I



configured the Source field to use, since that will usually be the same) and whether to treat it as a *reverse text direction* field (useful for some languages). You also have the ability to reorder how the fields will be displayed in the Note Editor. Note again that this only affects how the information will be displayed when *creating* the notes, but *not* when studying them.

Now when we return to the Note Editor there are four fields displayed for editing:



Notice that the text for Source and Timestamp are smaller than the others. When creating these two fields I intentionally set the Editing Font size for both to be smaller.

Full Text Editing Capabilities

Anki gives you the ability to apply most of your basic text formatting. There are also a few other features that require some explanation. Anki implements all of this formatting using simple HTML.

- *Basic Formatting* – **Bold**, *italics*, underline, super^{script}, and sub$_{script}$.
- *Clear Formatting* – This removes any and all formatting from the selected text.
- *Font Color* – This sets the color of the selected text.
- *Cloze Deletion* – Cloze deletion notes are easy to make using this powerful button, which automatically wraps "{{cl#::" and "}}" around whatever text you have selected. To use this feature you must using a Cloze note type or else Anki gives a warning.
- *Attach Media* – Used to add images, audio files, and videos to your note.
- *Record Audio* – Record and add an audio file right on the spot.
- *LaTeX, LaTeX equation,* and *LaTeX math environment* – These three options let you include LaTeX code directly in your notes.
- *Edit HTML* – If you're feeling up to it, you can directly edit the HTML code for the current selected field using this option.

A Few Notes about Cloze Deletion

Remember cloze deletion? That's when Anki automatically creates a card with hidden text for every "{{cl#::*text to hide*}}" in your note. There are a few things to note about using the Cloze deletion option in Anki.

1. *Use cloze note types.* To use cloze deletion, you must be using a cloze note type, such as the aptly named Cloze note type that comes with Anki. If you try creating a cloze deletion while, say, using the Basic note type, Anki will produce a warning.

2. *Don't manually type all those curly brackets!* To create a cloze deletion, select the text you wish to cloze delete and hit the cloze deletion button (or press CTRL-SHIFT-C or ⌘-SHIFT-C). For example, this lets me very easily turn this:

   The Three Stooges are Moe, Larry, and Curly.

   into this:

   The {{c1::Three Stooges}} are {{c2::Moe}}, {{c3::Larry}}, and {{c4::Curly}}.

   Anki will now automatically create *four* cards; the first one looking like this:

   Front: The **[...]** are Moe, Larry, and Curly.

   Back: The **Three Stooges** are Moe, Larry, and Curly.
3. *Take advantage of hints.* To add a cloze deletion *hint*, add "::yourhint" to the end of the cloze deletion. For example, you could turn this:

   The Three Stooges are Moe::name, Larry::name, and Curly::name.

   into this:

   The {{cl1::Three Stooges}} are {{c2::Moe::name}}, {{c3::Larry::name}}, and {{c4::Curly::name}}.

   This will produce four cards, the *second* of which will look like this:

   Front: The Three Stooges are **[name]**, Larry, and Curly.

   Back: The Three Stooges are **Moe**, Larry, and Curly.
4. *Don't omit too much content.* As a general rule, don't create cloze deletions that omit a lot of text, as they will be more difficult to remember.
5. *Overlapping cloze deletions do not work.* If you try to put a cloze within a cloze it will not work. For example, the following would *not* work:

   The Three Stooges are {{cl1::Moe, {{cl2::Larry, and {{cl3::Curly}}}}}}.

Tags

Lastly, the Note Editor gives you the ability to add tags to every note created in Anki. Tags are useful for categorizing and organizing your notes across decks and within a deck. For example, you may want to tag notes as "about" to indicate that these notes are *about* the current deck—"What course was this deck created for?" Also, you may want to tag notes based on general categories such as "organic," "analytical," "physical," "inorganic," and "biochem" for a chemistry deck. This enables you to study cards made with a specific tag—maybe you only need to brush up on your organic chemistry?

> *Tip!* Don't tag your notes into "categories" already created with decks or note types. For example, if you have a deck for a text book, with various sub-decks for each chapter, don't tag your notes "chapter-1", "chapter-2", etc. because this is redundant and unnecessary. If you want to study a specific chapter then you could just study that sub-deck.

Tags are separated by *spaces*, so to give a single note a bunch of different tags you want to do something like this: chemistry physical super-important Intro_to_Organic_Chem.

This would result in four different tags: "chemistry", "physical", "super-important", and "Intro_to_Oganic_Chem".

A Bunch of Tips for Using Note Types and Fields

There are major advantages and challenges to using multiple note fields for storing your information:

* *Use an appropriate sort field*. The Basic note type sorts by the Front field, and for many situations this might make sense. However, sometimes it's appropriate to use a specific sorting field for your notes, such as
* *Keep field names generic*. If you make your field names too specific, like "Fall-12-Chem-lecture#," then you'll be forcing yourself to create new note types with different fields in the future. Keep field names generic, such as "Lecture" or "Class Number."
* *Don't overdo it*. Yes, fields are useful, but if you add twenty fields your note will start getting difficult and cumbersome. Sure, there may be *some* situations where it's warranted, but in most cases stay away from note field overload.

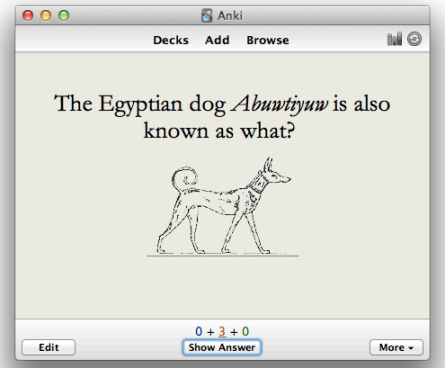
Chapter 10

Cards: Tweaking Layout and Style Using Card Templates

Cards are the actual *material*, created from notes, which are used for studying. Card templates define *how* the information is to be presented on the front and back of study cards. Previous chapters have introduced the idea of card templates, but this chapter goes into a whole lot more details about what you can do and how with your card templates.

Anki has many powerful features and options for card templates, giving you a whole range of customization and flexibility. If you're perfectly fine with plain white and black cards with a simple front and back, you can probably skip this chapter. That said, wouldn't it be nice to turn a simple card like this:

Into this:

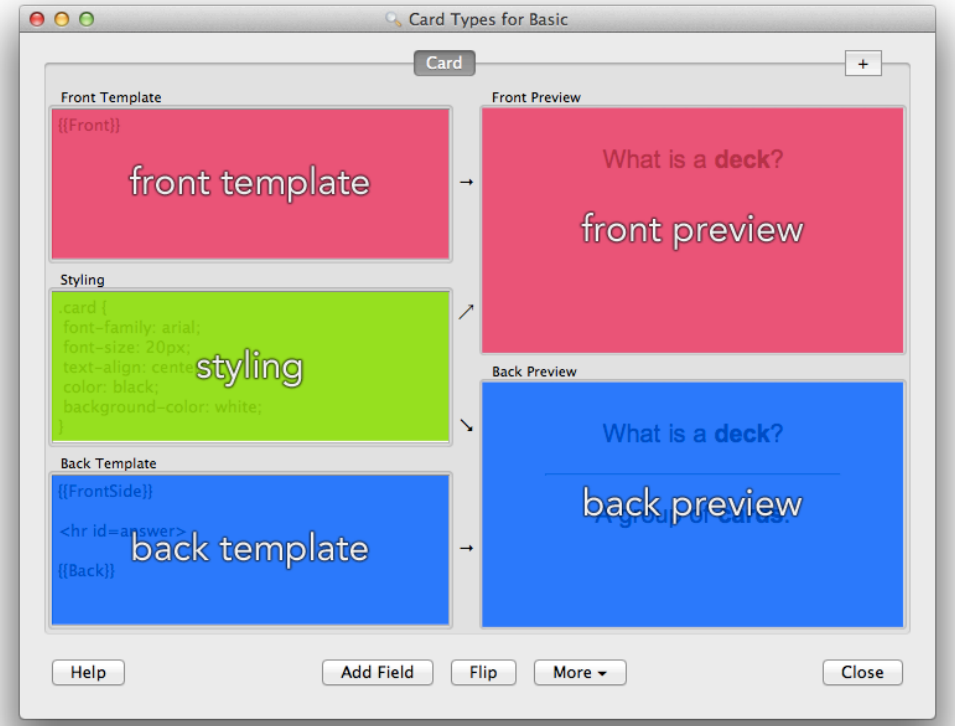


The Basics

Every note type has at least one card template. Every card template has a front and back—a *question* and an *answer*. Note fields can be placed anywhere on the front or back of a card, and any text on a card can be styled in various ways. Styling and layouts are shared by all cards using this note type—that means *all* cards, not just the ones in this deck! So be warned: this means that if you change the Basic note type's card templates, they will be changed for *every* Basic note in your entire collection!

Introducing the Card Editor

From the Note Editor (and several other places) click on the **Cards…** button to open the card editor (also called the card type editor), which looks like this:



The card editor has five key areas:

1. *Front Template* – The template definition for the front of the card.
2. *Back Template* – The template definition for the back of the card.
3. *Styling* – Where all the magic happens to make it look pretty.
4. *Front Preview* – Using the front template and the styling, here you can see a preview of the front of the current note's card—the *question*.
5. *Back Preview* – Using the back template and the styling, here you can see a preview of the back of the current note's card—the *answer*.

Editing the Templates

Card templates in Anki use basic HTML, the same language used to create web pages, as well as a bunch of special things specific to Anki.

Adding Note Fields

Note fields are added to a card template using {{FieldName}}. To include a field anywhere on the front or back of a card template, simply surround the field name with double curly brackets. For example, the Basic note type that comes with Anki has Front and Back fields, and the front and back card template look like this, respectively:

***Basic* note type**

Front Template	*Back Template*
{{Front}}	{{FrontSide}} <hr id=answer> {{Back}}

Here, {{Front}} refers to the content of the front note field, {{Back}} refers to the content of the back note field, and {{FrontSide}} is a special reserved template command that is automatically replaced by whatever is in the front template. The <hr…> bit is a special HTML element that draws a horizontal line.

This is the simple template used in the example at the beginning of this chapter, as well as the cards made at the start of this guide. It's about as easy as it gets.

Special Note Fields

There are a few special fields that Anki always has available for any card template, for any note type, in any deck:

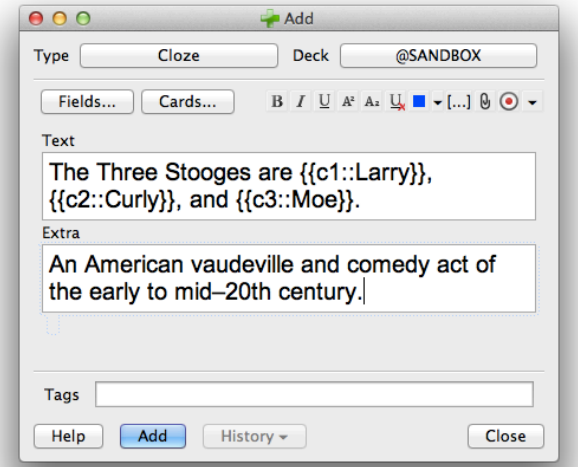
* *{{FrontSide}}* – Already shown in the Basic note type above. This is replaced with a complete copy of whatever is in the front card template. Note that this cannot be used *inside* the front template, only in the back template.
* *{{Tags}}* – The tags from this note.
* *{{Type}}* – The type of note that this card was created from.

* *{{Deck}}* – The deck that this card belongs to.
* *{{Card}}* – The name of this card type.

A special case: Cloze deletion

Most cards and styling use your basic fields that contain text. Cloze fields are a very special kind of field, treated differently by Anki, because of their specific requirements.

Cloze deletion, as you hopefully recall, is when certain portions of text are omitted, and you are asked to recall that omitted text. For example, the Cloze note type that comes with Anki has two fields—Text and Extra—which could look like this:

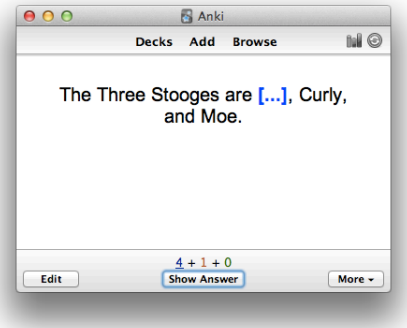


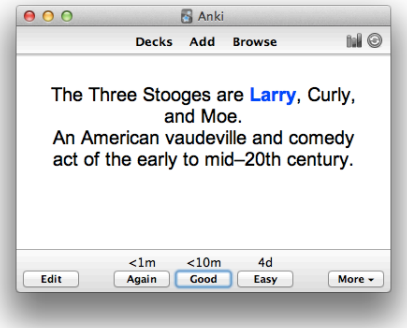
This will produce three cards with each of the names blanked out in turn. The card template accomplishes this by using special cloze fields. In this particular case, the front and back templates are as follows:

Cloze **note type**

Front Template	*Back Template*
{{cloze:Text}}	{{cloze:Text}} {{Extra}}

The {{cloze:Text}} field automatically replaces each "{{cl#::…}}" item in the note with "[…]" for the front template, or the original word **bolded** for the back template. Here is what the *first* of the three generated cards looks like:





Understanding Basic HTML

As already mentioned, Anki's templates and formatting are all done with HTML (Hypertext Markup Language), the same basic coding language used to create web sites.

HTML gives you the ability to create lists, tables, horizontal rules, links, and more. It also enables basic formatting, such as bold, italics, and underline. HTML works by enclosing text in various HTML elements, such as the following.

Front or Back Template	*Resulting Preview*
This text is bold, italics and both.	This text is **bold**, *italics*, and ***both***.
This is a horizontal rule: <hr>	This is a horizontal rule: _____

This is a link to Wikipedia.	This is a link to Wikipedia.
This is one line. This is NOT a new line.	This is one line. This is NOT a new line.
This is one line. This is a new line.	This is one line. This is a new line.

> Note especially the *link break* command: <br>. Anki will only break to a new line if you use this command in your templates; otherwise everything stays on the same line.

Editing Card Styles

Along with basic HTML for layouts, Anki uses web styling called CSS (Cascading Style Sheets). Font, text styling, and layouts can all be styled using CSS. Keep in mind that all styling created for a card is shared by both the front and the back side of that card.

CSS is a powerful styling system, but before I overwhelm you with details, here are a few of the simplest, most basic styling abilities:

* *font-family* – Defines the fonts to use for a portion of text, such as Arial, Garamond, Times New Roman, or Verdana. Note: if the font name has spaces in it, it must be surrounded in double quotes.
* *font-size* – Defines the font size, which can be given in pixels (px), points (pt), percent (%), or ems (em).
* *text-align* – Defines the alignment of the text, which can be set to left, center, or right.
* *color* – Defines the color of the text, using either a supported color name (e.g. red) or a six-letter HTML hex code (e.g. #ff54ts).
* *background-color* – Defines the background color. Uses the same color options as "color."

The Defaults

To give you an idea of what CSS looks like in practice, take a look at the following styling that comes by default with the cards for the Basic and Cloze note types:

```
.card {
    font-family: arial;
    font-size: 20px;
    text-align: center;
    color: black;
    background-color: white;
}
```

The `.card{…}` is a special style definition that is used by the entire card. You can also add your own styles, such as `.green{color: #00c618;}`. Getting into how to use CSS to style is beyond the scope of this guide, but readers with some experience with CSS and HTML should experiment with tweaking and styling card layouts.

Creating Multiple Cards

Along the top of the Card Editor is a list of all the available cards for this note type. Remember that multiple cards templates can be created for a single note type, causing multiple study cards to be generated from each note.

Click the Add button to create a new card type. By default, Anki duplicates the last card to create a new one. Now, for every note created, there will be two cards generated! This isn't so useful for the simple Basic note type, but when you get into more advanced note types and layouts, the power of this becomes more apparent.

The Rest of the Card Editor's Options

Along the bottom of the Card Editor there are several additional options available to you:

* *Add Field* – Lets you choose from a list of the current fields in this note type and add them to the front or back template.
* *Flip* – This will "flip" the front and back templates. This only works if the back template has `<hr id=answer>` somewhere in it.

* *Rename* – Rename the *current* card template. Keep these names generic because you may want to use them for something else in the future.
* *Reposition* – Move the *current* card template to a different position relative to the other cards.
* *Deck Override* – This allows you to change the destination deck of cards made with this note type.
* *Delete* – Deletes the *current* card template.

A Bunch of Card Editor Tips

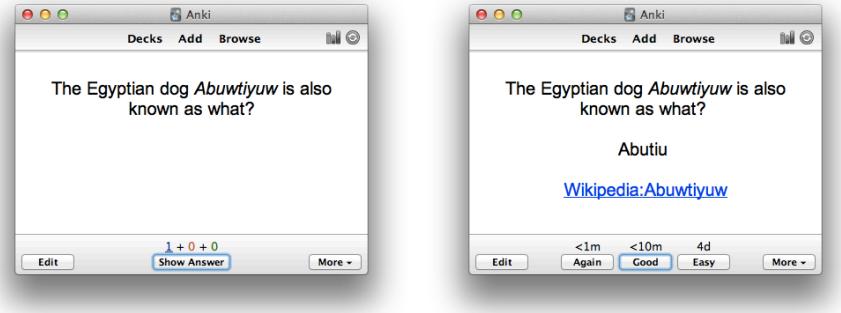
* *Use fields for dynamic URLs* – Let's say I have an Anki deck for memorizing key information from online news articles. I could create a note type with the fields "Source" and "URL," where Source is the name of the article and URL is a full website URL. Then, if I use those fields in an `<a href="…">` link it will be customized to each individual card. For example, if I created a note with the following:

  Front: The Egyptian dog Abuwtiyuw is also known as what?
  Back: Abutiu
  Source: Wikipedia:Abuwtiyuw
  URL: http://en.wikipedia.org/wiki/Abuwtiyuw

  And made a card with the following for a *back* template:

```
{{FrontSide}}<br><br>
{{Back}}
<br><br>
<a href="{{URL}}">{{Source}}</a>
```

I would end up with this:



* *Letting large image be large.* By default, Anki shrinks larger images to fit on the screen. That is, an image will never display larger than the screen, even if the image is in fact larger. You can change this by placing the following code into the Style box on your card layout:
    - `img { max-width: none; max-height: none; }`

Chapter 11

Studying 101

Now that you have an overview of how to create and style notes, it's time to go into the reviewing and studying process.

How to Study

> *Studying* – the general term I'm using to mean learning, reviewing, studying, etc. within Anki.

In the Decks window, simply click on the deck you want to study. That deck, and all sub-decks, will be selected. This takes you to a "summary" page showing you all the current New, Learning, and To Review cards. Hit Study Now and you're rolling!

Anki presents you with the fronts of your cards. Hitting Show Answer or pressing spacebar immediately displays the back.

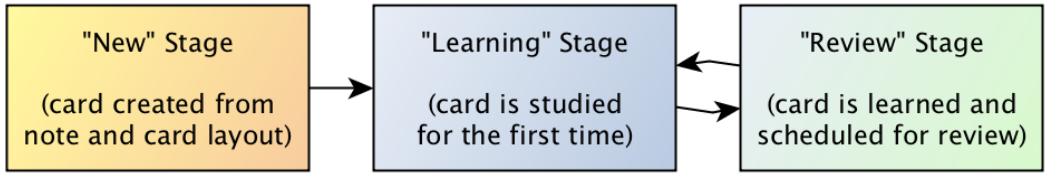
At this point you *grade* your response—how difficult it was to recall this specific answer—which Anki uses to determine when to ask you again.

> *Grading* – When you judge how difficult it was for your to recall a specific answer. (Easy, Good, Hard, and Again).

It's that easy! Of course, there's a lot happening behind the scenes, which is exactly what we're going to talk about next.

Card Stages and Grading Your Performance

As mentioned in *Chapter 6: A Day in the Life of a Deck*, cards go through several stages in their lifetime: New, Learning, and Reviewing. Here's the image again:



Grading in the Learning Stage

New cards that have not been studied are immediately moved to the learning stage the first time they are presented. In the learning stage, the grading options are based on the *steps* set up for this deck.

> *Steps* – the duration and number of reviews required before a card transitions from the learning stage to the review stage

By default Anki uses two steps of one minute and ten minutes.

For example, imagine I created a brand new card. On the very first review, the card is in the learning stage (and step one) and after displaying the answer the grading options are:

1. Again (<1minute),
2. Good (<10 minutes), and
3. Easy (4d).

If I got the right answer (but not too easily) I'd pick "Good." This will reschedule the card no more than 10 minutes in the future (the second step). If I get it right *again* in ten minutes, I've completed all the steps, so the card transitions to the reviewing stage.

If instead I had hit the "Easy" button on a learning stage card, it would immediately move to the reviewing stage, regardless of what step it was on.

Grading in the Reviewing Stage

Once in the reviewing stage, Anki increases the interval between each review after every successful review.

> *Intervals* – the time between reviews of a single card, measured in days.

For example, once I've learned a card, the “good” interval may be four days; in four days, Anki will show it to me to review again, and if it's still good, the interval will increase to around ten days.

Different gradings will result in different intervals between now and the next time this card is displayed. If I keep selecting "Good" every time I review a specific card, the intervals will constantly grow by about 2.5x, such as 4 days, 10 days, 25 days, 63 days, 156 days, etc.

Grading an answer "Hard" will create a shorter interval, and "Easy" will create a longer interval than the default “Good” increase.

Based on which difficulty grading you give when answering a question, Anki will *schedule* the next review accordingly.

> *Scheduling* – When Anki sets the interval between now and the next time this card will be displayed.

Alas, your memory is far from perfect, and sometimes you will *forget* the right answer, even if it’s a card you’ve already learned and answered successfully several times. In Anki terminology, this is called a *lapse*.

> *Lapsing* – when you forget a card that you've already learned (i.e. when a card moves from the Reviewing back to the Learning stage).

A lapse causes a card to move from the reviewing stage back to the learning stage

You will then have to study it several times to get through all the learning steps, until it become a review card again.

Some cards may be too difficult or poorly made, such as by causing too much interference. Whatever the case, if a specific card lapses eight times, Anki marks it as a leech.

> *Leeches* – cards that you keep learning, and then forgetting (lapsing).

Leeches usually occur because they're poorly made, they're breaking some of the 20 rules, or they're too difficult. Anki *suspends* leeches so they are no longer scheduled for review.

Scheduling Siblings

One other things to note is that Anki tries to prevent sibling cards from appearing next to each other during reviews.

> *Siblings* – the "sister" cards created from a single note.

Limiting New and Review Cards

Anki limits both the number of *new* cards and the number of *review* cards that can be viewed each day. These limits are defined in the *study options* for each deck. The defaults are:

* New cards per day: 20
* Maximum reviews per day: 100

The reasoning behind these limits is pretty straightforward: *don't try to learn a thousand things at once!* When you hit either of these limits, Anki will warn you when attempting to learn more:

> "Today's review limit has been reached, but there are still cards waiting to be reviewed. For optimum memory, consider increasing the daily limit in the options."

And:

> "There are more new cards available, but the daily limit has been reached. You can increase the limit in the options, but please bear in mind that the more new cards you introduce, the higher your short-term review workload will become."

All of these limits, as defined for each deck, are *overridden* by their parent's limits. Say you have a deck called Books and a bunch of sub-decks for various books. Also imagine that each of these sub-decks has a limit of 100 reviews, but so does the *parent* Books

deck. So, if you do 90 reviews on the first book, Anki would only let you do 10 reviews on the second book, and then warn you that the daily review limit has been reached.

Heed Anki's warnings! But, if you *must* study more there are two ways to do so. The first is to increase the daily limit for a deck, and the other is to create a Custom Study deck. Both of which are explained in the next chapter.

Study Note Options

While studying a *specific* card there are a bunch of useful study card options that you should get familiar with. These can be found on the bottom right corner of the study screen under the button labeled *More*:

* *Mark Note* (*) – marking a note is a non-specific way to "star" a note: if you notice a problem, or think you might want to make a change to this card (new example? better story? change colors?), add a Mark so you can find it again later. You can use marks to mean anything, but generally it means something like "inspect me later."
* *Bury Note* (-) – burying a note will prevent it from appearing again *in this session*. As soon as you restart Anki, it will appear again as normal. This can be used as a, "This isn't important to learn right now" action.
* *Suspend Card* (@) – suspending a card, unlike burying, will remove a card from the learning process *completely* until it is manually unsuspended. This is useful if you want to force a delay on a card, such as "I won't be ready to learn this for a while." Suspending a card can also be a way to give it "hard mark," as in "inspect me later, and don't show me again!"
* *Suspend Note* (!) – if a note comes in multiple cards, you may want to suspend the entire note instead of just a particular card, for the same reasons you would suspend just a card.
* *Delete Note* (DEL) – delete the current note.
* *Options* (O) – view the study options for the current deck (explained in the next chapter).

* *Replay Audio* (R), *Record Own Voice* (SHIFT-V), and *Replay Own Voice* (V) – these three options, especially the last two, are particularly useful when using Anki to learn languages.

Use these options and take the time to remember their keyboard shortcuts to improve the flow of your Anki studying.

Some Basic Studying Tips

* *Kill Leeches: Edit, Delay, or Delete.* Periodically, in the card browser, review all of the leeches in your collection and process them one by one. Think about *why* this is a leech. Was it labeled as such by mistake? Does it break one of the 20 rules? Then decide to either:
    1. *Edit:* fix it and restore it;
    2. *Delay:* save it for later by suspending it and removing the leech tag; or
    3. *Delete:* get rid of it!
* *Be liberal with marks.* Don't be shy, use those marks whenever a card strikes you as having a problem, needing an update, or anything else.
* *Use keyboard shortcuts.* Keyboard shortcuts make the entire studying process super fast and easy. In the learning stage, grade your answer as Again, Good, and Easy using 1, 2, and 3, respectively. In the Reviewing stage, grade your recall as Again, Hard, Good, and Easy using 1, 2, 3, and 4, respectively. In all cases, use SPACEBAR to both show the current answer and grade your recall as Good. Mark (*), bury (-), and suspend (!) notes as appropriate.
* *Fix mistakes right away.* When possible, if you notice a mistake in the current card, just *fix it* right away. It's dead simple. Hit the Edit button or press E, quickly make the change, and hit ESC to return to the study window.

Tweaking Anki's Preferences

There are several settings in Anki's preferences that affect the way Anki handles studying. All of the following require opening Anki's preferences window and are completely up to your personal preference.

* *Timeboxing study sessions.* An hour of straight Anki can be exhausting. One solution to this problem is to timebox your study sessions: set the *Timebox time limit* value to the amount of time you want to study before taking a short break. For example, setting it to ten minutes will cause Anki to display a small message telling you how many cards you've studied in the past ten minutes.
* *Force Anki to wait the full step length.* If the learning steps in a deck are one and ten minutes, Anki will wait ten minutes after the first successful review to show it again. However, if there are no cards left to study, Anki will just show it right away. By default, if a card is scheduled in the next 20 minutes, Anki will just display it right away if there's nothing else. In Anki Preferences window you can change this by setting the Learn Ahead Limit box to any value you want. If you set a value of *zero* Anki will *always* wait the full delay until asking you to review a card again.
* *Studying late into the evening?* Since Anki schedules in days, you may run into problems when your "days" don't actually correspond to real days, because you stay up too late. By default, Anki treats a new day as starting at 4am. You can change this by setting the *Next day starts at* box to whatever new value you want.
* *New cards first, last, or mixed?* You can change when new cards are displayed during a study session. There are three options in a drop-down box: mix new cards and reviews (the default), show new cards before reviews, and show new cards after reviews.
* *Don't display the number of scheduled cards.* If you don't want to see the number of new, learning, and reviewing cards while studying, you can disable it by deselecting the "Show remaining card count during review" checkbox.
* *Don't display the review intervals.* If you don't want to see the review intervals above the answer/rating buttons while studying, disable them by deselecting the "Show next review time above answer buttons" checkbox.

Chapter 12

Advanced Studying and Retention

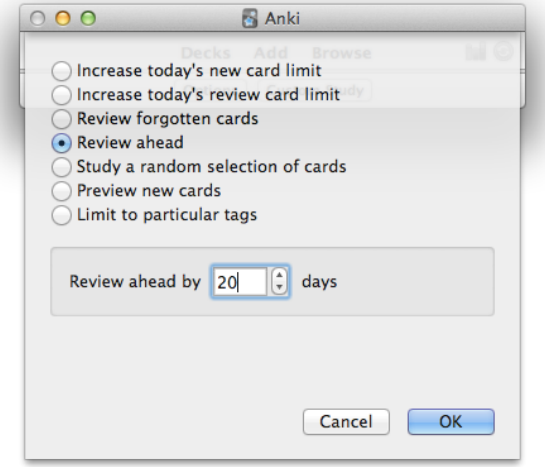
This chapter goes into a little more detail about the various study options available in Anki. You may want to skip past it if you're just getting started, but be sure to come back and take a look later on if you do.

Custom Study: Studying Outside the Normal Schedule

Usually, Anki does all the scheduling for you and there aren't any problems.

In the previous chapter I mentioned that Anki limits the total number of new and review cards per day. What should you do when you've completed all the cards Anki has scheduled for you, but you want to study more? Maybe you have some time to kill, or maybe you want to review again because your test is tomorrow morning?

Any studying, outside of the regularly schedule, is done by creating a Custom Study deck. To do this, open the deck you want to study and hit the Custom Study button at the bottom. There are various types of custom studies, which are fairly self-explanatory:



Doing a custom study session will create a temporary Custom Study deck, containing all of the filtered cards, and automatically open it to begin studying. Deleting this new deck will return everything to its rightful place.

Note that the first two options don't actually create a custom study deck; they just temporarily modify the study options of the current deck.

Filtered Decks

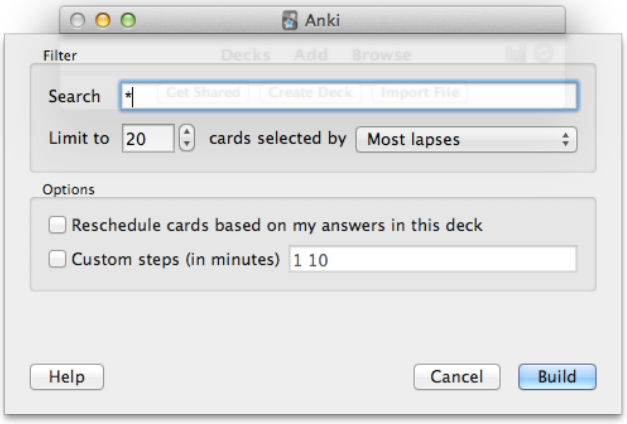
Filters are a powerful way to create decks based on some specific search criteria, "stealing" material from your other decks.

For example, you can create a filtered deck that pulls the 20 most-difficult cards in your entire collection and puts them in a temporary deck called "20 Worst Cards." Then, whenever you want to review your twenty worst cards, simply open that filtered deck and study them.

Once a filtered deck has been reviewed or deleted, all its cards return to their normal places—what's called their *home* deck—leaving the filtered deck empty. These can then be "repopulated" whenever you want to use them again.

Creating Filtered Decks

Go to Anki main window and then from the main program menu go to Tools > Create Filtered Deck (or hit F), which brings up the Create Filtered Deck window:



Here you can enter in any search criteria you'd like, such as limiting yourself to a certain deck(s), tags, or note types. This search uses the standard Deck Browser searching options, discussed in more detail in *Getting Familiar with the Card Browser*.[2]

You can also define a limit to the number of cards to "pull" from your other decks, and the selection criteria to use to determine which cards to take from the search results:

* Oldest seen first
* Random
* Increasing Intervals
* Decreasing Intervals
* Most Lapses
* Order Added
* Order Due
* Latest Added First

The two remaining options require a bit of explanation:

* *Reschedule cards based on my answers in this deck.* If this is not checked, then your reviewing will not influence the regular scheduling of the cards that will be pulled into this filtered deck. If it *is* checked, these cards will be treated as they normally would. Depending on what you're creating a filtered deck for, you'll have to decide whether you want this or not.
* *Custom steps (in minutes).* You can optionally set custom steps to be used during the learning stage of a card (explained in the next section).

Filtered Deck Options

When viewing a filtered deck, you may notice that the bottom menu options are different than for a regular deck:

---

[2] See also http://ankisrs.net/docs/manual.html#searching for a complete list of all search options.

* **Options** – Review or update the filter options set up when creating this filtered deck.
* **Rebuild** – re-run the filter to pull all matching cards into this deck.
* **Empty** – return all cards to their original parent decks.

A Filtered Deck Example

How would you create a filtered deck like the “20 Worst cards” example given above? It's simple:

1. From the main Anki window, go to *Tools* > *Create Filtered Deck…*.
2. In the Search field put "*"—that is, search throughout the entire collection.
3. Limit the search to 20 results, with cards selected by "Most lapses."
4. Disable both checkboxes.
5. Hit Build.

There are many possible uses with filtered decks. You could create filtered decks for every card tagged “science”; for 50 random cards from your entire collection or a specific deck; or for the 25 most recently added cards in a specific sub-deck.

Delving into the Study Options

Every deck has a collection of study options that define things like how many new cards to show per day, what the maximum interval between reviews can be, and when to mark a difficult card as a leech and suspend it.

Open the study options for a deck by selecting Options from the menu next to each deck in the Decks list page:

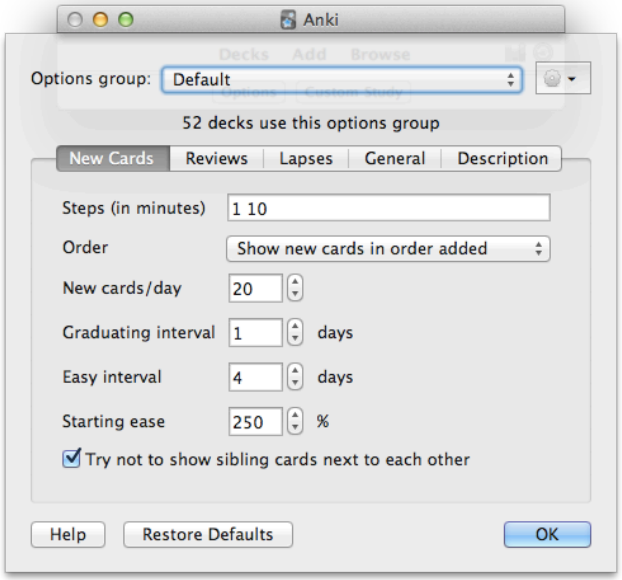
Study Options Groups

Each deck is assigned an *options group*. A single such group comes standard with Anki and is aptly named “Default.”

Study options groups are useful because they let you create saved study options that can be used across multiple decks. Different decks can be assigned to different study groups, as needed.

From the options menu next to the Options group dropdown, you can *Add* a new study options group, *Delete* the current group, and *Rename* the current group. If you make a new study group for a parent deck and want all its sub-decks to use that options group as well, you can use the *Set for all sub decks* option in this list.

The following images show the settings for the Default study options group. Most of the options are pretty self-explanatory, so give them a look-over to see what kind of control you have over how Anki behaves while studying.

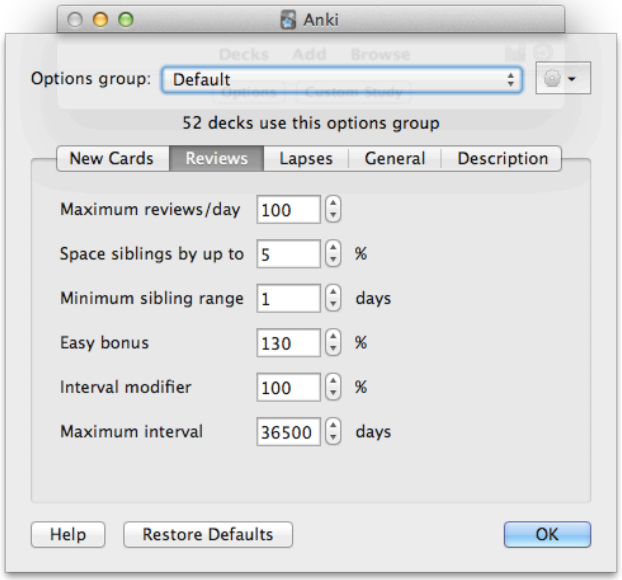


New Cards

The new cards tab lets you control how new, unlearned cards are to be treated. The *starting ease* setting, set to 250% by default, is the multiplier that will be used on new cards graded as "Good" once learned (which is why the old interval is multiplied by 2.5 to get the new interval).

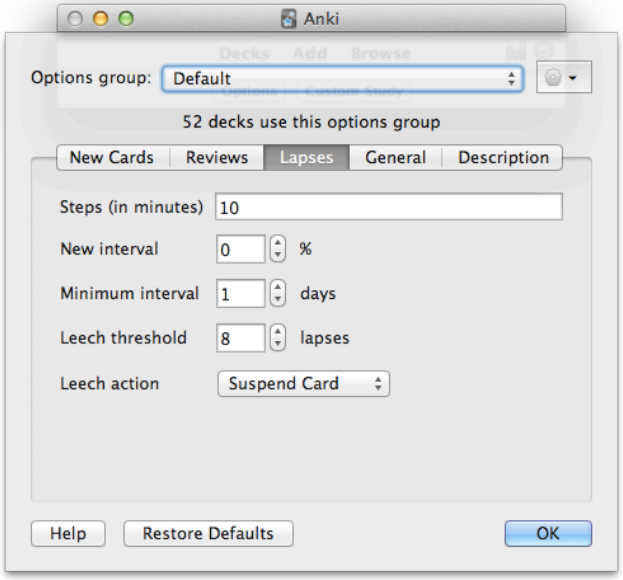
Reviews

The reviews tab gives you control over how to treat cards in the reviewing stage. The *Easy Bonus* is an additional multiplier on top of the standard 2.5x multiplier to give cards graded as "Easy" an extra boost in interval size.



Lapses

The lapses tab lets you control what happens when you lapse during a review (when you fail to recall a card that is in the reviewing stage). The main setting to discuss is *New interval*. This allows you to define what the new reviewing interval will be, relative to the current interval before forgetting this card. For example, if you set this to 10% and the previous interval was 50 days, the new interval—after



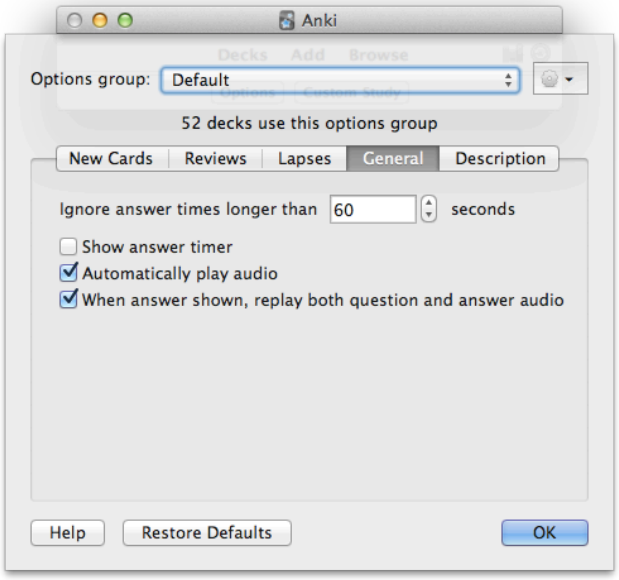
successfully transitioning through the necessary steps to turn the now-learning card into a reviewing card again—would be 5 days.

General

The General tab contains a few general options that are all pretty self-explanatory.

Description

This final panel lets you enter a description to show for the current deck.



A Few Example Study Option Groups

Default

The default study options group is useful for most purposes, with maybe some minor tweaks. In general, you may find that this is all you need.

Archive

I use a study options group called Archive with the following settings (the rest are the same as the Default group):

* New cards/day: 0
* Maximum review/day: 0

I use this for decks I don't want to *remove*, at least not yet, but for whatever reason I don't want them to clutter my learning process, and I don't want to suspend all of the cards.

Weekly

I also have a study group called Weekly with the following:

- Maximum reviews/day: 5
- Maximum interval: 7 days

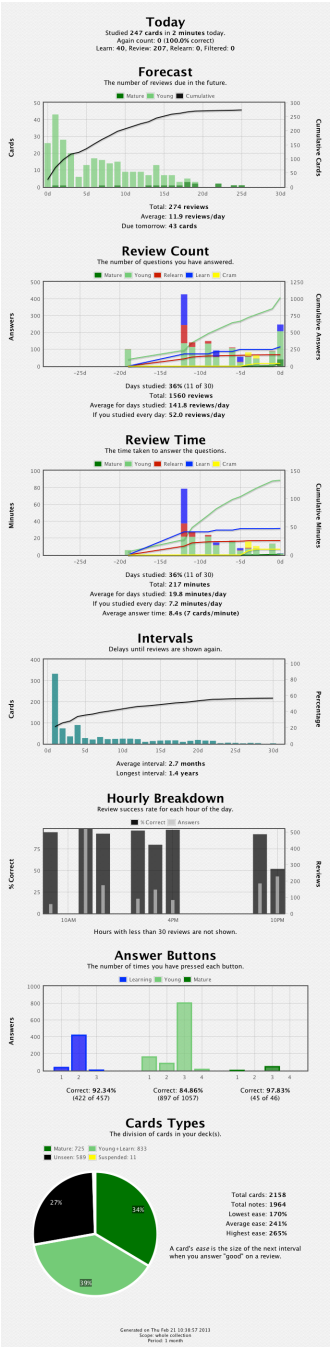
I use this for a very specific deck I have with reminders, cool images, and inspiring quotes that I want to view at least once a week, limited to only 5 a day, so it doesn't clutter my learning.

Anki Studying Statistics

Anki provides a variety of statistics about the state of your studying and learning. From the Decks window, select any deck and then click on the "Show statistics" button (or press SHIFT-S).

This displays all of the available stats for the current deck. (To see the stats for you entire collection select the "collection" radio button on the bottom of the screen.) You can also view stats for the past month, past year, or entire life of the current deck. When you first start using Anki there won't be too much useful information here, so don't be discouraged if your charts aren't too informative at the beginning. There are eight specific areas on the statistics page.

- **Today** – A short summary report of your activities today.
- **Forecast** – A projection of the number of reviews that will be due in the future.
- **Review Count** – The number of questions that you've answered.
- **Review Time** – The time taken to answer questions.
- **Intervals** – The length, in days, of the delays until reviews are shown again.
- **Hourly Breakdown** – The review success rate broken down by each hour of the day.
- **Answer Buttons** – The number of times you've pressed each button.
- **Cards Types** – The division of cards in your decks.



Chapter 13

Getting Familiar with the Card Browser

We've now reviewed how to view and organize the decks of cards in your Anki collection, as well as how to create notes and cards. How do we dive into those decks to view, edit, and move around the actual *notes* they contain?

From the Decks list click on Browse (or hit B) to open the card browser.

Overview of the Card Browser

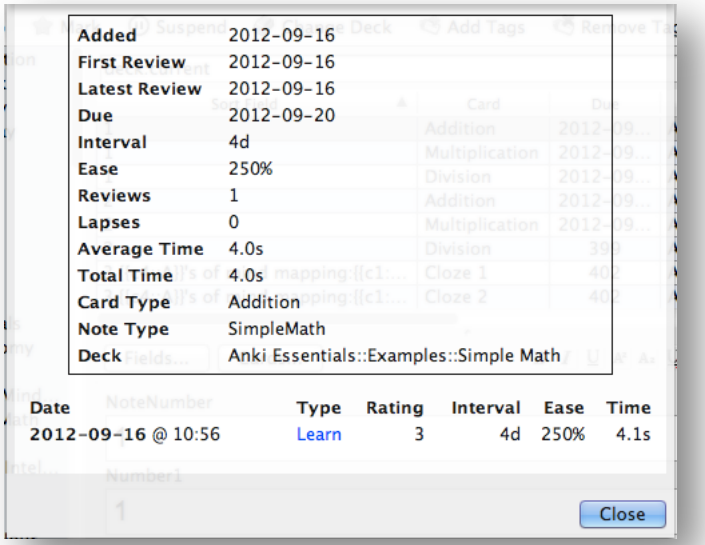
The card browser has four main sections:

1. The main menu has options for modifying/moving the currently selected notes.
2. The search area allows you to search for notes.
3. The deck filter lets you easily find all the cards within a certain deck or group of decks.
4. The basic editing areas let you do exactly that: basic editing of the selected note.

The Main Menu Options

From the main menu along the top of the Browser, you have the following options:

* **Add** – Open's the Add window to start adding notes, by default using the currently selected deck.
* **Info** – The Info option displays a bunch of detailed statistics and information about the selected note, such as when it was created, when it's due next, how many times you've reviewed it, and how "easy" Anki has rated it, based on your studying statistics.



* **Mark** – Marking cards—you could also call it "staring" them—can be used to note that there is something special about these cards. You could use this to mean "cards with typos" or "cards I need to split up" or something else.

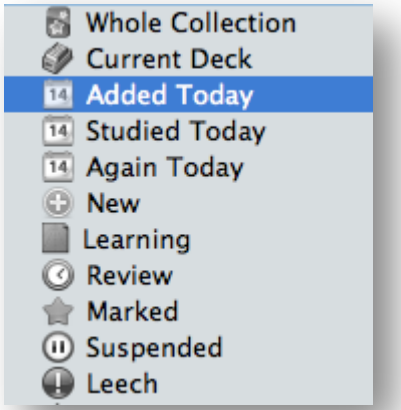
* **Suspend** – Suspending a card will prevent Anki from scheduling it for any future learning or review. Use this if you have any reason to no longer want to review the card, such as if it is unnecessary information (but you don't want to delete it) or it needs to be fixed before reviewing.
* **Change Deck** – This is how you move cards from one deck to another.
* **Add Tags** – This allows you to add tags to notes in bulk. You *could* open each individual task and edit the tags there, but if you select a group of notes and use the Add Tags button you can add tags to all of them in one go.
* **Remove Tags** – Same the above, except it lets you bulk remove tags.
* **Delete** – Exactly what it sounds like: delete the currently selected cards.

Selecting Cards by Feature, Deck, Note Type, and Tag

The left side of the browser contains a bunch of ways to automatically search for specific parts or types or sections of your collection.

Cards by Feature

The first eleven options in the left menu let you view the following decks:

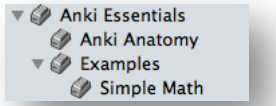


* **Whole Collection** – Show everything in your collection.
* **Current Deck** – Show everything in the current selected deck.
* **Added Today** – Show all cards created today.
* **Studied Today** – Show all cards studied today.
* **Again Today** – Show all cards to be re-reviewed today.
* **New** – Show all new (unlearned) cards.

* **Learning** – Show all cards in the learning stage.
* **Review** – Show all cards in the review stage.
* **Marked** – Show all marked cards.
* **Suspended** – Show all suspended cards.
* **Leech** – Show all cards Anki deems are leeches.

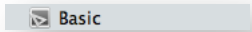
Cards by Deck

After the special feature options, the left menu displays all of the decks—sorted alphabetically and into their sub-decks—contained in your collection. Click on these if you want to view all the cards within a deck or branch of decks.



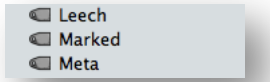
Cards by Note Type

You can also view all the cards from a specific note type, such as Basic or Cloze.



Cards by Tag

Just as with Note Types, you can view all cards that contain a specific tag. Anki has some automatically created tags, such as Leech and Marked.



For every one of these side menu options—feature, deck, note type, or tag—clicking on the item displays all of the cards that fall within that category.

Searching Within the Browser

The simplest way to view all of the cards from a specific deck is to click on that deck in the left decks area. What this is doing is automatically running a search for 'deck:Anki Essentials,' for example. There are many specific search options that can be used if you

need to do some manual nitty-gritty searching and can be found in the official documentation at http://ankisrs.net/docs/dev/manual.html#searching.

Editing Cards on the Fly

The card Browser allows you to quickly edit cards within your decks. When selecting a card from the search results list, the bottom-left edit area allows you to make any instant modifications or changes to the current note.

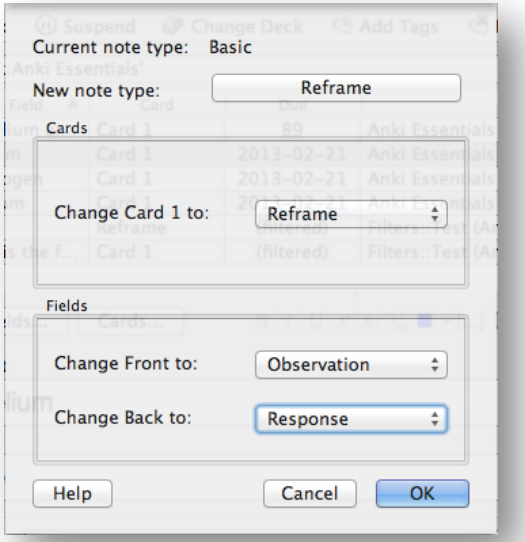
Moving Cards Between Decks

To move a card from one deck to another, select the cards to be moved in the card browser and hit Change Deck from the main menu. Select the new deck, hit Move Cards, and you're done!

Changing Note Types

You may notice that when previewing a note's fields there is no option to change the note type, like when creating notes. Different note types have different fields, so it isn't as simple as selecting the note type from a list to change it.

To change note types, select the notes to be changed (they must all be of the same note type) and from the main Anki menu go to Edit > Change Note Type (or press SHIFT-CTRL-M) to open the following window:



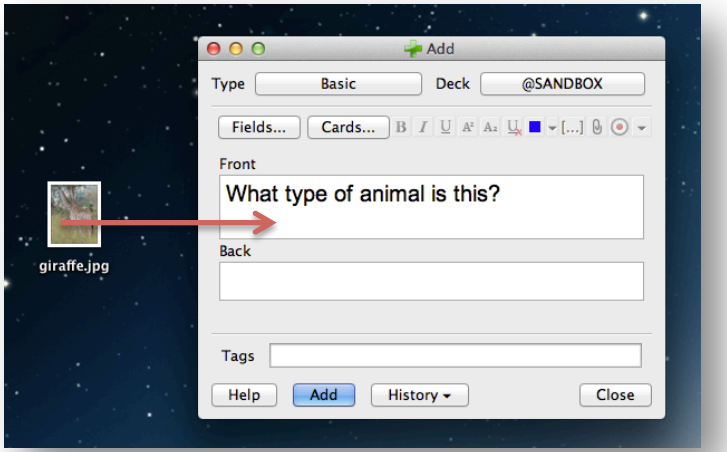
Here you can select which note type to change this card to, and choose which cards and fields to map between the two.

Chapter 14

Enhancing Notes with Images, Sounds and Other Media

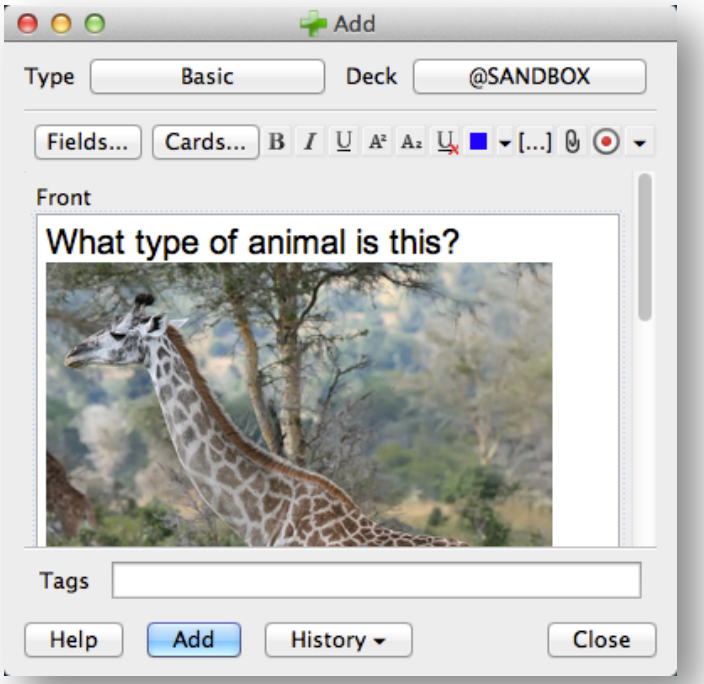
Anki lets you easily add various types of media to your decks, including images, sounds, and videos, all of which are automatically synced with AnkiWeb and across your various Anki devices.[3] All of these can greatly enhance your experience with Anki, if you use them right.

Regardless of the type of media, the easiest way to add some is to simply drag and drop it into the note editor:



[3] Older versions of Anki required a complex and often times error-prone setup of a special Dropbox folder for syncing media, but no longer!

This automatically inserts the full images and saves it to the Anki collection folder:



That's it! You're creating notes and cards with images.

Alternatively, you can click on the "Attach pictures/audio/video" button or press F3 to open the file browser to browse to and select your desired image.

Easy Ways to Capture Images on your Monitor

Your specific poison will vary, but if you are capturing images from your desktop to be added to Anki, these are the tools I recommend:

* For **Windows**, download the free Greenshot (http://getgreenshot.org/) software and get familiar with it. It will likely do all the screen capturing and editing you need.
* For **OSX** I use the built-in screen capture tool. Simply press ⌘⇧4 to enter screen capture mode (optionally, hit spacebar to capture the view from a specific program. This saves an image to your desktop. To simply "copy" what you capture and paste it into Anki, use ⌘⌥⇧4 instead. If necessary, I use Preview to make any minor modifications to the image before adding it to Anki.

Notes on Audio Behavior

When studying a card with audio, you may want to replay the sound. You can easily do this by hitting the R key during studying.

Some Things to Keep In Mind about Media

* *Beware large images.* Technically, there is no limit to the size of images added to Anki. However, every image you add must be synced with AnkiWeb and across your various devices, and larger images mean longer waits. Do yourself a favor: make your media as large as needed, but no larger.

Chapter 15

Math, Equations, and Scientific Markup Using LaTeX

LaTeX, for those of you who have never heard of it before, is a high-quality typesetting system. ("Say what!?") That is, LaTeX separates the *style* of a document from the *content*. LaTeX is commonly used in the scientific world for writing and producing journal articles, among other things, and is especially well known for its ability to produce *equations*.

Anki takes advantage of the powerful math, equation, and scientific markup abilities of LaTeX, so that you can use them in your cards. If this is all a little too abstract, let's clear things up with an example.

How LaTeX Works

LaTeX let's you create elegant equations and notations using the special *markup*. For example, the following markup:

```
\delta (x-\alpha ) = \frac{1}{2\pi } \int_{-\infty }^{\infty } e^{ipx}e^{-ip\alpha }dp
```

will tell LaTeX to display an equation like this:

$$\delta(x-\alpha) = \frac{1}{2\pi} \int_{-\infty}^{\infty} e^{ipx}e^{-ip\alpha}dp$$

Much prettier, no?

Adding General LaTeX, Math, and Equations in Anki

As mentioned, you can use these powerful LaTeX features *in Anki* by using any of Anki's special LaTeX commands.

General LaTeX

If you want to add some generic non-equation LaTeX to a note, simply wrap your LaTeX code between "[latex]" and "[/latex]". This is useful if you already have LaTeX code you want to use to create a card, or if you want to use a specific LaTeX feature in a card. For example, you could add a LaTeX table using the following code:[4]

```
[latex]
\begin{tabular}{ l c r }
1 & 2 & 3 \\
4 & 5 & 6 \\
7 & 8 & 9 \\
\end{tabular}}
[/latex]
```

This would give an output like:

1	2	3
4	5	6
7	8	9

In other words, you can add *any LaTeX content* to Anki using the [latex] environment. You could even use it to add equations, but Anki simplifies this by creating commands specifically for that.

LaTeX Equation and Math Environments

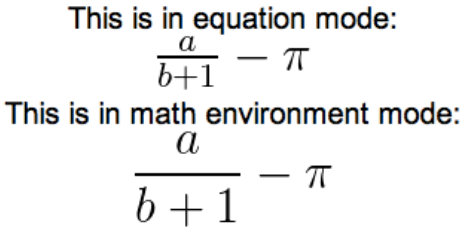
In standard LaTeX, you would add *inline* math by wrapping it in dollar signs. You could as a simple equation like 2 + 2 by writing "$2+2$". You would write stand-along equations (on their own line and centered on the page) using either a "$$" environment

[4] This example is adapted from http://en.wikibooks.org/wiki/LaTeX/Tables.

or something like a “\begin{equation}” environment. In Anki you can do the same by wrapping your LaTeX equation in either “[$]” and “[/$]” or “[$$]” and “[/$$]”.

Take a look at this example to get an idea of how the equation mode and math mode differ. The following note text will produce the card that follows it:

```
This is in equation mode:
[$]\frac{a}{b+1}-\pi[/$]
This is in math environment mode:
[$$]\frac{a}{b+1}-\pi[/$$]
```



To simplify it, equation mode will produce *smaller* and more compact images than the math environment mode.

Note that you *could* type [latex]\begin{equation*}… instead of [$$]…, but the Anki notation makes things simpler. Note also, in that case, that if you wanted to create an *aligned* math environment you could do so, for example:

```
[latex]
\begin{align*}
x &= a + b \\
~ &= 4 + 5 \\
~ &= 9
\end{align*}
[/latex]
```

This would produce:

$$
\begin{aligned}
x &= a + b \\
&= 4 + 5 \\
&= 9
\end{aligned}
$$

Where does it go?

When Anki generates your cards, any LaTeX content between any [latex], [$], and [$$] fields are automatically turned into an *image* and saved along with all your other images so that it's available across all your devices.

LaTeX Must Be Installed Separately

Unfortunately, LaTeX cannot be installed automatically with Anki, so you'll have to install it yourself. Luckily, LaTeX *is* available on all major computer platforms for free! Getting LaTeX installed and configured is beyond the scope of this guide, but here are some links to get you started:

* On Windows install MiKTeX (http://miktex.org/).
* On OSX install MacTex (http://www.tug.org/mactex/).
* On Linux, use your distro's package manager to obtain LaTeX.[5]

In all cases, dvipng must also be installed. Since I am personally using a Mac computer, I simply installed MacTex with all of the default packages, and everything works. If you run into any problems, you'll have to go searching the internet or post your issues on the official Anki forums (see the *Additional Resources* chapter).

The Easiest Way to Generate Equations

For simple equations, you may be confident enough in your LaTeX skills to write them on the fly. For most of us, however, the chances of making a mistake are high, only to discover this when attempting to review your cards and get ugly "Latex Error!!" messages.

---

[5] To be honest, I don't fully understand what this means. If you don't either, and you're using Linux, you might want to switch platforms.

The easiest way to create complex (or simple) equations for Anki is to use a LaTeX equation generator such as this one from codecogs.com.[6] Once the equation looks right, copy and past the code into your note, and don't forget to wrap it in [$] [/$] or [$$] [/$$].

For example, I used the codecogs.com equation generator to create the large Dirac delta function used at the very start of this chapter in less than twenty seconds. It would be a real pain to write this off the top of my head, without knowing if I made a mistake!

Note that you *could* also drag the LaTeX image produced on the website into your Anki deck, rather than copying and pasting the raw LaTeX code, though this would make it more difficult to add any changes or make any updates in the future.

The internet is full of web sites and documents with complete lists of common LaTeX symbols and math markup, so when in doubt, Google it out.[7]

Using Cloze Deletion in Equations

There are generally two approaches to using cloze deletion with equations.

The first involves manually creating different equations with cloze deletion text in them. For example, the Dirac delta function from the beginning of this chapter could be modified to better suit a card by splitting up the equation:

→ **Front**: [$$]\delta (x-\alpha) = \frac{1}{2\pi } \int_{-\infty }^{\infty } […][/$$]
Back: [$$]e^{ipx}e^{-ip\alpha }dp[/$$]

This would produce a card with the following back of a card (using the Basic card type):

---

[6] http://www.codecogs.com/latex/eqneditor.php
[7] See, for example, http://web.ift.uib.no/Teori/KURS/WRK/TeX/symALL.html and http://amath.colorado.edu/documentation/LaTeX/Symbols.pdf. See also http://www.stdout.org/~winston/latex/latexsheet.pdf for an excellent list of the many commands and options available in LaTeX.

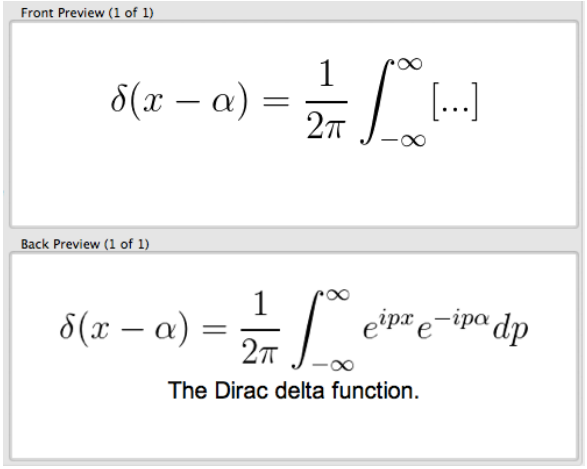
$$\delta(x-\alpha) = \frac{1}{2\pi} \int_{-\infty}^{\infty} [...]$$

$$e^{ipx} e^{-ip\alpha} dp$$

An alternative approach would be to use the standard cloze deletion notation. For example:

→ **Front**: [$$]\delta (x-\alpha) = \frac{1}{2\pi } \int_{-\infty }^{\infty } {{c1::e^{ipx}e^{-ip\alpha }dp}}[/$$]
Extra: The Dirac delta function.

This would produce a front and back of a card (using the Cloze card type) as follows:

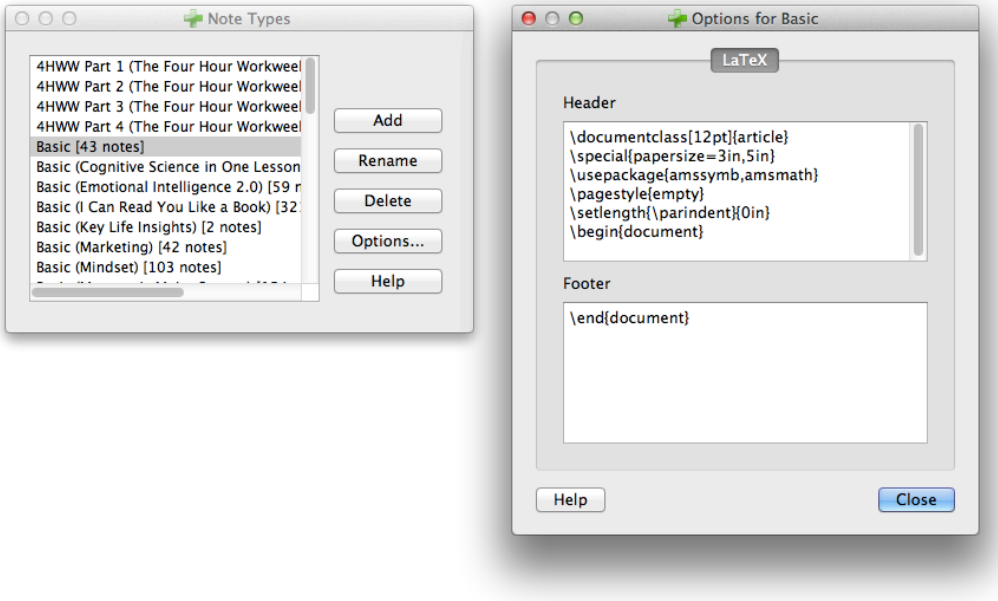


This second technique has the advantage of allowing you to add multiple cloze deletions to a single note, however the tradeoff is that your notes get more complex and harder to change with all the LaTeX math code and cloze deletion code, so beware!

Expanding the Built-in LaTeX Capabilities

LaTeX settings are configured by *note type*. That is, every note type receives the default LaTeX environment settings but can be configured manually if desired.

From the note editor, click on the note type button to bring up the note type browser, and hit Manage. From there, select the desired note type to configure and hit Options. This will display the LaTeX options for this note type, such as that for the Basic note type, pictured below:



If you don't understand what's happening here, don't worry about it—you will likely never need to make any changes here. But in case you *do* need to add a custom package or adjust the defaults, now you know where it is.

Some Things to Keep in Mind

Here are a few important things to keep in mind when creating LaTeX equations with Anki:

1. *Beware of issues with curly brackets.* Remember how cloze deletion uses double curly brackets, such as {{cl1::….}}? Well, LaTeX math also often uses curly brackets, such as \frac{a}{b}. So, keep an eye out for double curly brackets in your LaTeX equations, and simply add spaces between them when they crop up to prevent your LaTeX notes from breaking your card templates.
2. *Formatting within math environments ([$$] … [/$$]) is ignored.* Don't bother getting all LaTeX-formatting-fancy with your math equations, because it will simply be ignored by Anki.
3. *Import custom packages if you have special needs.* If you're using LaTeX in Anki for some advanced chemistry work or music theory, for example, you may need to add a package to your note type's settings, such as `\usepackage{chemarrow}`, to get the commands you need to work.[8]
4. *Generate LaTeX images in bulk for Anki Mobile.* The first time a card is viewed Anki generates an *image* from the LaTeX. Then, when viewed on a mobile device, the image is displayed—the mobile app cannot generate LaTeX images by itself. This means you must view every card with LaTeX content at least once before syncing it to a mobile device. Since this might not be ideal, there is a workaround: in Anki (on a computer) have Anki generate all LaTeX images in bulk by going to Tools > Maintenance > Unused Media. Now sync everything and your decks will have LaTeX images for your mobile devices!

[8] If you simply cannot avoid double curly brackets in your equations, you'll have to add "{{=<% %>=}}" to your card template, and switch the {{FieldName}} in your template to "<%FieldName%>".

Chapter 16

Sharing Decks

In general, it is much better to create your own decks, but sometimes it just isn't practical or ideal. This chapter covers the ins and outs of sharing your decks with others and adding shared decks to your collection.

Using Anki's Deck Sharing System

Some people choose to make their decks available to anyone who may be interested in them. To view all publicly shared decks, either click on the Get Shared button in the Deck List window bottom menu or go directly to https://ankiweb.net/shared/decks/.

Here you can peruse an assortment of shared decks from a variety of categories. When you find something that piques your interest, hit the big green Download button to download the *.apkg file, which you can then import into Anki.

Importing Decks

From the main Anki menu go to File > Import…, or click on Import File from the Deck List window, or press CTRL-I, or simply double-click on an Anki *.apkg file.

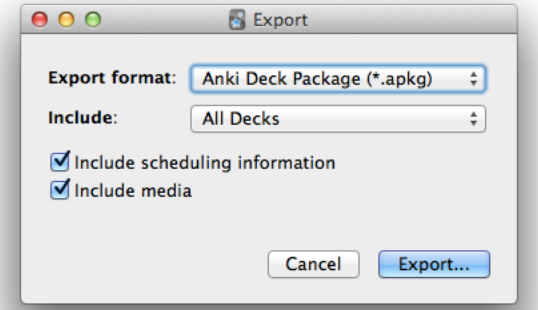
Anki supports importing various types of files:

* Plain text files with fields separated by tabs or semicolons (see the next chapter for details on this),
* Anki 2.0 decks (*.apkg),
* Anki 1.2 decks (*.anki).
* Mnemosyne 2.0 decks (*.db), and
* Supermemo XML exports (*.xml).

Just select the file you want to import and Anki will display details on the import (whether it succeeds or fails, whether it detected any problems, etc.).

Exporting Decks

From the main Anki menu, go to File > Export… or press CTRL-E. This brings up the Export window:



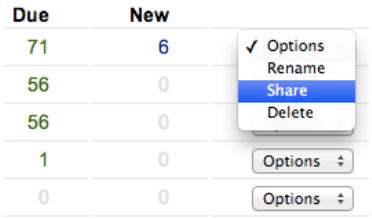
There are three export formats available:

* Anki Deck Package (*.apkg) – the standard Anki 2.0 deck format, which conveniently includes all images and media within a single file.
* Notes in Plain Text (*.txt)
* Cards in Plain Text (*.txt)

When exporting an Anki deck package you have the option to *not* export images and other media with it. You can also choose to export the scheduling information.

Sharing Your Decks on AnkiWeb

To make one of your own decks available to the public on AnkiWeb, go to http://ankiweb.net and log in. On the Decks page you'll se the familiar options drop down next to each deck. However, there is now a fourth option that lets you share a deck:



When you click on Share you're brought to a page where you must enter in a title, optional tags, and description for the deck. After agreeing to AnkiWeb's terms and conditions, hit Share. Now your deck is available to anyone who wants to download it!

Some Sharing Tips

* *Starting over.* Want to start over with a deck from scratch? Export it without scheduling information, delete the deck from Anki, and then import it again. Now it will be completely clean of any scheduling information and you can start from scratch.
* *Make changes.* Try to customize or personalize shared decks in some way to make them more memorable. Tweak some examples, change some card layouts, do *something* to make it more personal and relevant.

Chapter 17

Creating Notes in Bulk

Sometimes it's inconvenient or impractical to create hundreds of notes one-at-a-time. Sometimes you have raw data from your own work or from someone else that you might wish you could magically import into Anki and have it generate all your notes for you. Well you can!

Anki allows for the bulk import of data using plain text (.txt) files.

Creating the Text File

Bulk imports work by defining, in a plain text file, the fields to be used, how they will be separated, and then listing the content for the notes to be created.

Anki uses the very first link of the document to figure out how the fields are separated.

Fields can be separated by commas, semicolons or tabs, as long as the use is *consistent* throughout the text file, and as long as there isn't any confusion about which one you're using.

Every other line in the text document is compared to the first line. If it matches the layout, a note is created with that content.

For example, the following text file will create four notes with three fields each (assuming I've already created a note type with three fields for me to map these to):

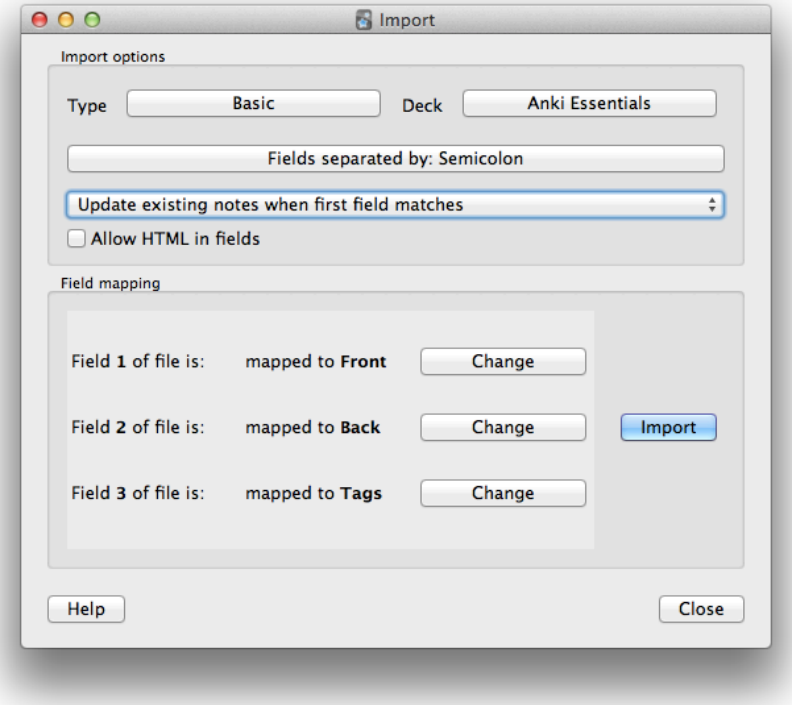
```
Hydrogen; H; 1
Helium; He; 2
Lithium; Li; 3
Beryllium; Be; 4
```

A popular method for creating a text file for importing into Anki is to export a spreadsheet to a CSV (comma-separated values) text file—but be mindful; if any of your content contains commas, this could confuse Anki during the import..

Running the Import

Within the Decks window in Anki, hit the Import File button at the bottom of the screen, or go to Tools > Import, or press CTRL-I.

Browse to and select the text file to import. The Import windows should then appear in Anki:



At the top you can select the note type to use and where to add the generated notes.

You can see that Anki has detected that we're using semicolons to separate the fields. If this is wrong, you can click on this button to correct Anki.

Based on the note type selected, you can then map the fields in the text file to the fields in that particular note type. Since the above image shows me importing to the Basic note type, field 3—which in my text file represents the atomic number—has nowhere to go, and defaults to becoming a Tag. In this example it would make sense to create a new *elements* note type with the appropriate fields and card layouts.

Some Importing Tips

* *Watch out for notes with similar first fields.* If there are multiple notes to be imported that have the same value in their first field, only the last one will be kept (by default)! You can change this by changing the "Update existing notes when first field matches" drop down on the Import page to "Import even if existing note has same first field."
* *Tag imported items.* To have a tag applied to every imported item, add the line "tags:firsttag secondtag thirdtag", and so on, to the very beginning of the file.
* *Use UTF-8 encoding.* If your text contains any accented or special characters, make sure the document is encoded in UTF-8.
* *Add comments using "#".* You can add comments to your text file by prefacing the line with a "#". Any line that starts as such is ignored.
* *Take advantage of HTML styling.* Anki can import HTML styling, such as `<strong>this is bold</strong>`. Just make sure you select the "Allow HTML in fields" checkbox during the import. Also, if your text content contains non-HTML <'s and >'s, you may run into some extraction problems. (This can be avoided by replacing non-HTML special characters with, for example, `<` instead of < and `>` instead of >.
* *Adding newlines.* The easiest way to add new lines to imported notes is to use the HTML "break" tag: `<br>`. (Make sure you enable the "Allow HTML in fields" checkbox during import!) For example, the first line in the earlier example could be changed to:

```
Hydrogen<br>(from the Greek 'hydro' and 'genes'); H; 1
```

Chapter 18

Syncing with AnkiWeb

At this point you've probably made a bunch of changes and additions to your Anki collection. From the Decks window, go ahead and click the sync button (or hit Y).

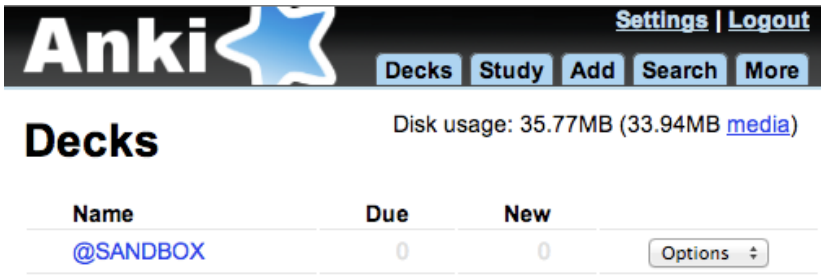
> **Note:** Every time you start up or shut down Anki it automatically syncs with AnkiWeb. This keeps your collection backed-up and always accessible from AnkiWeb.

Assuming Anki doesn't run into any problems, this should only take a second or two. If you have images and large media, it could take a bit longer.

Log In to AnkiWeb

Head over to https://ankiweb.net and log in with your AnkiWeb username and password.

Here you should see a mirror of what is in Anki, with similar menu options and structure:



You are essentially able to do everything online that you can do with the desktop software, though the online version is not as user-friendly.

Conflicts With Multiple Installations

Let's say you have Anki installed on your home computer and your work computer. If you reviewed a deck—call it "Presidents"—while at work, and *didn't sync or close Anki*, then came home and did some more review on that deck, you would have to different records of reviewing the same deck.

Anki handles these sorts of conflicts as best it can, but sometimes some review logs must be overwritten by other logs. With the release of Anki 2.0, there is much better handling of conflicts than before, but it can still be a problem. Sync your decks regularly, kids.

To prevent these sorts of situations from happening, simply make a habit of closing Anki (or at least running a sync) after you have finished your reviewing. If you are only using Anki on a single device, this is something you should never have to worry about.

Syncing Media

As of Anki 2.0, all media is automatically synced with AnkiWeb, hassle-free. For the time being, there is no limit to the amount of data you can store on AnkiWeb.

Chapter 19

The Secret to Speed: Keyboard Shortcuts

This chapter is about a particular idea that is invaluable to getting the most from Anki and becoming a memorizing master: keyboard shortcuts. These are those little handy tricks whereby you hit some keys on your keyboard and magical things happen. (Well, actually it's things you could have done with your mouse.)

So what's the big *hoopla* about keyboard shortcuts? One word: speed. Using Anki often involves a lot of clicking, editing, tweaking, moving, selecting, and so on—stuff that takes *time*. This isn't bad; this is a testament to the power and flexibility of Anki. However, sometimes we just want to make a quick change here, a small edit there, a short review elsewhere, as quickly as possible.

Here's an example. When I'm reviewing a deck and I see a typo it bugs me and I want to fix it. But I'm also trying to cram in as many reviews as possible in my short ten-minute break. I don't feel like editing card templates… I'll just do it later, I tell myself. But with keyboard shortcuts, the instant I notice a problem with the particular card layout of the card I'm studying it's as simple as:

1. E (open note editor for this card)
2. ⌘L (open card editor for card used by this note; CTRL-L on a Windows computer)
3. [make quick change to layout, the preview of the current card shows that the change worked]
4. ESC (close card editor)
5. ESC (close note editor)

All in a grand total of five seconds. It's not *lightning speed*, but it *is* fast and easy. When I'm studying my hands are on the keyboard ready to select the difficulty (1 to 4) of the answer, so a simple note edit is as easy as E > [make change] > ESC.

The moral of the story is this: if you take the time to learn the keyboard shortcuts, as you need them, you will find them *extremely* useful. Your whole Anki experience will be much better off when you can whiz through editing and tweaking, rather than lumbering slowly. Almost *everything* in Anki can be done with keyboard shortcuts, so use them to your advantage!

With that said, what follows are the most important keyboard shortcuts for various components and uses within Anki. There's no need to read over these and memorize them. It's enough to realize that they exist, and the next time you want to use one of them just hover your mouse over the desired function (e.g. the Cards… button in the note editor) and the mouse-over text that appears will tell you what the shortcut is for that function.

Note that some of the following shortcuts show the OS X computer symbols. If you're on Windows, just replace ⌘ with CTRL.

The Most Important Keyboard Shortcuts

These are the keyboard shortcuts I find *most* useful. There are many, many more, but here's a start.

Deck List

* / – Produces a popup listing every deck in your collection, start typing to filter the list, and hit ENTER to start studying the selected deck.
* A – Bring up the note editor to quickly start adding some notes.
* B – Open the card browser.

Note Editor

* TAB – Move quickly between fields.
* ⌘ + ENTER – Save and close the current note.

- ⌘ + SHIFT + C – Wrap the selected text in cloze deletion brackets.
- ⌘ + D – Change the deck this note will be created in.

Studying

- SPACEBAR – Show the answer.
- SPACEBAR – Record the *suggested* grading (difficulty) of the answer.
- 1, 2, 3, 4 – Record the difficulty of the answer.
- E – Edit this card.
- FUNCTION + DELETE (or DEL in Windows) – Delete this card.
- R – Replay audio.

Again, just about everything you can possibly do in Anki has a keyboard shortcut. If you take the very small amount of time needed to learn them you will find using Anki quick and easy.

Chapter 20

Beware These Common Beginner Problems

At this point we should take a minute to review some common problems and roadblocks that beginners seem to run into. These are almost all problems I've experienced at one point or another.

Biting Off More than You Can Chew

It's easy to get caught up in the excitement of having a fantastic memory and download every shared deck you can get your hands on. Learn every country's name, capital city, national anthem, average altitude, and gross domestic product! Learn four languages at once! Expert spaced repetition users have claimed decks with many tens of thousands of cards, so why can't you?

Have patience. Start small, and add at a pace that works for you.

Don't overcommit! Be realistic: planning to use Anki for an hour each and every day is not going to happen. For starters, I suggest doing *no more than fifteen minutes* a day, max.

Don't clutter your learning process with useless information. Know what's important and eliminate what's not.

Also, keep in mind that at the beginning the number of items to review may seem large. Stick with it and get over the initial hump! This number will decrease as time goes on, provided you stick to a review schedule.

Only Using Shared Decks

Don't make the mistake of only learning from shared decks. Anki will help you thrive if you take the (relatively little) time to create your own memorable and relevant cards.

Not Making It Personal

Related to the above, Anki decks should be as personalized and self-relevant as possible. This is one of the biggest hazards with sharing decks: you don't make them yourself. When possible, customize decks—even shared ones from friends or from AnkiWeb—to make them more personally relevant and memorable. For your own decks, don't just fill them with plain raw data for rote memorization, use anecdotes, examples, and personally relevant material.

Not Customizing

The basic card and note types that come with Anki are exactly that: *basic*. They are minimal working examples. Don't limit yourself to only the defaults. Play around with note fields and card templates to get the most from your learning experience.

Too Much Customizing

Not customizing, too much customizing . . . which is it?! Yes, Anki has a powerful ability to create custom note types and card layouts, but it's possible to get carried away making complex cards or notes that are *too* fancy. Future changes or updates become complicated when you forget exactly how you had the card structured or what your fields were supposed to be used for. Creating new similar decks is a hassle because you have to tweak your layouts every time.

Keep layouts and fields mostly generic, unless being very specific is absolutely necessary. Don't make a card type for a specific class from a specific semester from a specific year; make one for a semester, the entire year, or perhaps the topic in general. This makes them more flexible to change and more easily available for future use.

Customization does help with creating unique and memorable cards, but you have to balance the tradeoffs and find the happy medium that works best for you.

Ignoring the 20 Rules

This is a bit of a "catch all" category. Review the 20 rules from the earlier chapter every now and then (or better yet, make yourself a deck for them as practice). This will save you much time and frustration in the long run.

* * *

Running into your own problems, questions, or concerns? Let me know at contact@ankiessentials.com and I'll update this chapter in future editions of Anki Essentials.

Chapter 21

A Collection of Other Possible Uses for Anki

As I'm sure you've noticed by now, Anki is a very flexible program. The list of possible uses is endless. Here is a collection of just a few ideas of ways to use Anki that I have either already tried or would like to try.

Meeting People Before Meeting Them

I went to a rationality minicamp[9] where everyone submitted a photo of himself or herself before arriving. The organizers made an Anki deck of everyone's face and name with which to practice before arriving. Then, when everyone showed up, we all already knew each other's names and faces without having ever talked or met—a very interesting experience.

Mastering the Mnemonic Major System

The mnemonic major system[10] is a technique used to memorize numbers. This system works by converting numbers into different sounds, and vice versa. The following is a common number-to-sound breakdown (notice that no sound is used for more than one number):

0. *z*, *s*, and soft *c* – These sound like the start of the word *zero* and sound similar to each other.
1. *d*, *t* – These each have a single down stroke and sound similar.
2. *n* – An *n* has two down strokes.

[9] Check out http://appliedrationality.org.
[10] See http://en.wikipedia.org/wiki/Mnemonic_major_system.

3. *m* – An *m* has three down strokes.
4. r – An *r* sounds like *four*.
5. *l* – An *L* is the roman numeral for 50.
6. *j*, soft *"g"* (also: *sh*, soft *"ch"*, *dg*, *zh*) –
7. *k* (also: hard *c*, hard *g*, hard *"ch"*, *q*, *qu*) – A *k* looks like two sevens stuck together, the rest sound similar.
8. *f*, *v*, *th* – A fancy *f* looks a bit like an eight; a *v* sounds similar to *f*.
9. *b*, *p* – A *b* and *p* look like flipped and mirrored nines, respectively.

Given these number-to-sound pairings, we can *convert numbers into words!* Note that none of the numbers equate to vowels or *w*, *h*, *y*, and *x*, because we are allowed to use these as "fillers" between consonants.

For example, the number "21" can be converted to the word "net" by changing the 2 to an *n* and the 1 to a *t*, and then filling in an *e*. The word "net" is easy to *visualize*, so whenever you see the number 21 you can train yourself to instantly picture a net, and vice versa. If you do this with one hundred words for the numbers from zero to ninety-nine, you can develop and impressive ability to memorize any numbers, such as phone numbers, but instantly converting it to a series of visual images which are much easier to remember.

Your different card layouts might look like this:

* letter → associated sound(s)
* sound → associated letter
* number → word
* word → number

If you really wanted to pump this technique up on steroids, try what I did and hand-draw 100 pictures for the numbers from 0 to 99 and use those in your cards. It took a lot longer to make, but it sure was effective.

Inspirations (a.k.a "Sh*t that gets me motivated!")

We're all human. Our motivation ebbs and flows all over the place. Sometimes I'm ready to take on the world; sometimes I'm ready to sleep for a week straight.

Sometimes I need some real inspiration to get me motivated, so I created a deck that simply lists things that inspire me: images, quotes, specific people, major events in world history, genuine long-term goals of mine, etc. Since I'm easily turned off by words like "inspirations" and "motivation", I named my deck "Sh*t that gets me motivated!" When in need, I simply flip through 5–10 cards, dwelling on each for at least a few seconds. Works like a charm.

* * *

What other ideas can you think of? Get creative! And, of course, go ahead and *try* any of these or other ideas that intrigue you.

Chapter 22

Expanding Anki with Add-ons

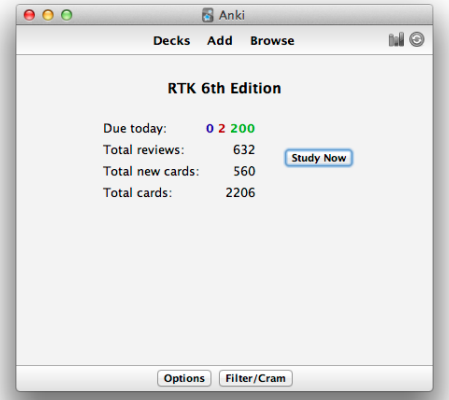
Anki add-ons, a.k.a. plugins or extensions, are small programs written by Anki enthusiasts that add extra functionality and features to Anki. The types of features available range from adding graphic deletion capabilities to customizing the stroke colors of Kanji characters.

My personal Anki usage hasn't required many add-ons, so I don't have much to say about them. However, these are a few add-ons that I have found useful. Explore the Anki add-ons page at https://ankiweb.net/shared/addons/ for a complete list. Note that add-ons are programs written by anybody and are potentially malicious, so you should only download add-ons that you trust; I generally favor add-ons with four or more stars and multiple reviews.

Add-on: More Overview Stats

https://ankiweb.net/shared/info/2116130837

This add-on adds a more info to the overview statistics page for your decks. Specifically, it adds the number of total reviews, total *new* cards (not just today's limit), and total cards.



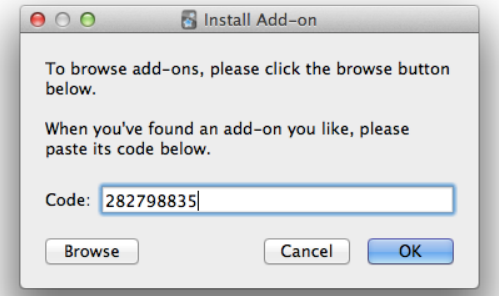
Add-on: Image Occlusion 2.0

https://ankiweb.net/shared/info/282798835

Image Occlusion 2.0 is a fantastic add-on for creating graphic deletion cards. Just like cloze deletion, which omits portions of text, graphic deletion omits parts of an image. Normally this requires creating a bunch of separate images with omitted portions, which can be a time-consuming and annoying task. Image Occlusion 2.0 makes this easy. You'll have to check out the documentation at http://tmbb.github.com/ImageOcc2.0/ to get the hang of using it.

How to Install Add-ons

To download a specific add-on, copy the number provided on the add-on's page (e.g. "282798835" for Image Occlusion 2.0). Then in Anki go to Tools > Add-ons > Browse & Install and paste the number into the Code box and hit OK. (You may be prompted to restart Anki before the add-on is available.)



Keep in mind that with every additional add-on you increase the chances of a problem from add-on conflicts or buggy code, so limit yourself to the ones you really need.

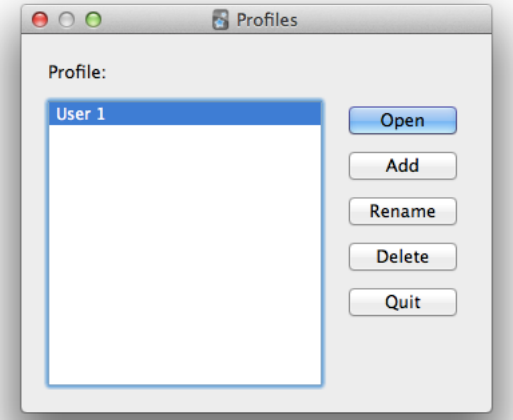
Chapter 23

Creating Multiple User Profiles

Some of you may be sharing a computer. If there is more than one person using Anki on a given system, this can be done by creating separate **profiles**.

By default, Anki is configured with a single profile, created when you first install and log in with your AnkiWeb credentials. To add additional profiles and modify existing ones, you must open the Profiles window.

From the Anki toolbar go to File > Switch Profile (SHIFT-CTRL-P or ⇧⌘P). This opens the Profiles window.



While we're here, feel free to rename your own profile if you wish.

To add a new profile, click the Add button, enter the desired name, and click OK. Then click Open to open up this collection.

Just as when you open or close Anki, every time you switch between profiles your collection is automatically synced with AnkiWeb.

As you can see, a blank collection was created, ready for this user. To connect this new profile with AnkiWeb, hit the Sync button (or press Y) and you will be prompted to enter the account information, just as in chapter 2.

The number of profiles allowed in Anki is limitless. It is not suggested to use multiple profiles to separate or group your decks into different collections. This makes it difficult to move cards and decks around within your collections, and requires you to have multiple accounts configured on AnkiWeb, an unnecessary hassle.

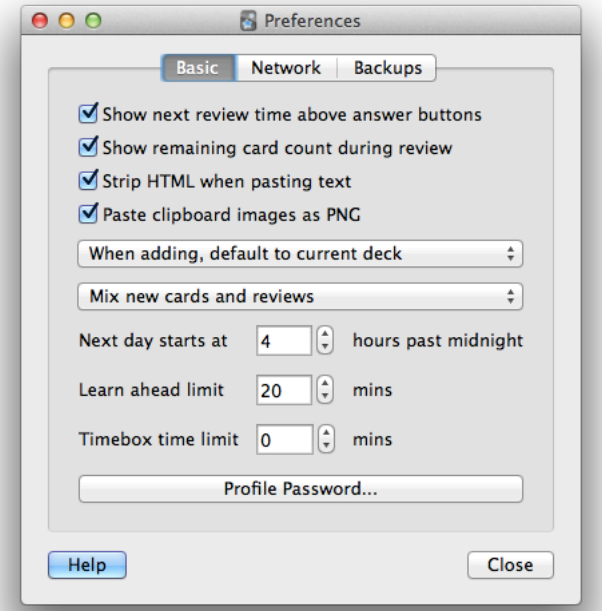
Chapter 24

A Quick Overview of Anki's Settings and Preferences

The Anki software comes with some program-wide settings, all of which are configured through Anki > Preferences (on OSX) or File > Preferences (on Windows). You can see a detailed discussion of these at http://ankisrs.net/docs/dev/manual.html#profileprefs. Here, I want to highlight a few items. If you change any settings be sure to restart Anki to ensure they take effect.

Basic Preferences

I keep *Strip HTML when pasting text* checked, otherwise I run into problems pasting text from websites or documents with underlying styling that gets copied into my note and is a pain to remove afterwards. I also keep *Paste clipboard images as PNG* checked; this results in larger file sizes, but I think it's worth the lossless image format and transparency.



Timeboxing, which is set to zero (disabled) by default, is

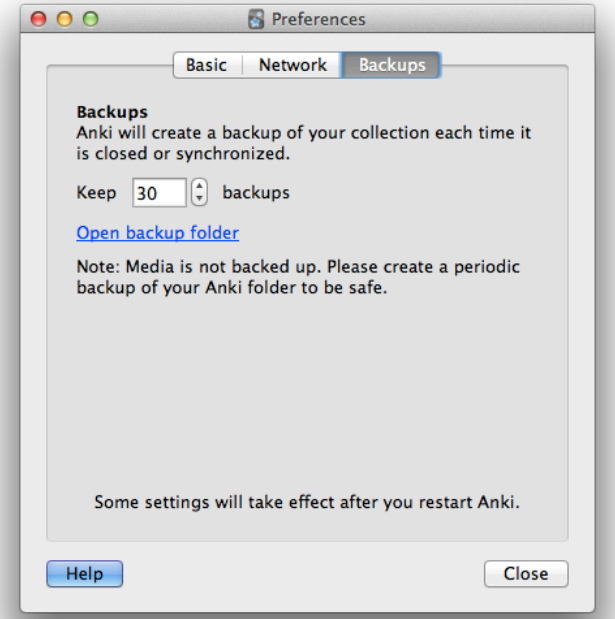
a useful features that shows you how may cards you've studied so far in, for example, ten minute time windows. I have this set to ten minutes to periodically break up my studying with a progress update.

Network

These are the settings related to syncing your collection with AnkiWeb. Both synchronization settings are on by default and I suggest you keep it that way. You can also deauthorize the current User account, if desired.

Backups

By default Anki keeps 30 backups of your material, but does *not* back up media (except for the latest media which is backed up on AnkiWeb). I keep at least several backups of my Anki collection in my Dropbox folder.



Chapter 25

Keeping it All Clean and Tidy

Now that we're nearly finished with this guide, I want to leave you with a few sage words of advice:

Keep your collection clean and tidy!

We've just about covered all the important aspects of using Anki, but there's at least one more area to cover: maintenance.

Anki decks can grow very large over time—sometimes to the point of becoming "bloated." Regular maintenance is a must for the longevity of your collection and study habits.

Periodically Review *Everything*

Periodically—such as once a month—I highly recommend doing a quick review and cleanup of your entire Anki collection. My process tends to look like this:

1. Open the Anki card browser.
2. Review all of the decks in my collection. Lean towards *simplifying* and *eliminating* everything in your collection:
    a. *Is this still important? Is this worth spending my time and mental energy?* – Let's face it: I'm not spending hours a day using Anki. So, what are my priorities? Am I wasting time on decks that aren't very useful? That goal to learn all the countries and cities in the world? Maybe put it off for now.
    b. *Is this up-to-date?* – Have things changed? Do I need to add or remove any notes? Are there any outdated notes I can delete? There's no sense in memorizing material that is out-of-date or, even worse, wrong.

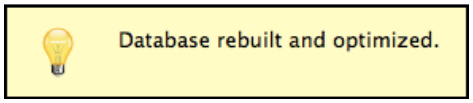
3. Review all *Marked*, *Suspended*, and *Leech* notes. Figure out what the problem was and either:
    a. *Fix it;* or,
    b. *Delete it*.
4. Run all of the Anki Maintenance options (detailed below).
5. Run a full sync with AnkiWeb.

Anki Collection Maintenance

Anki also comes with several useful maintenance tools that you should regularly take advantage of.

Maintenance > Check Database…

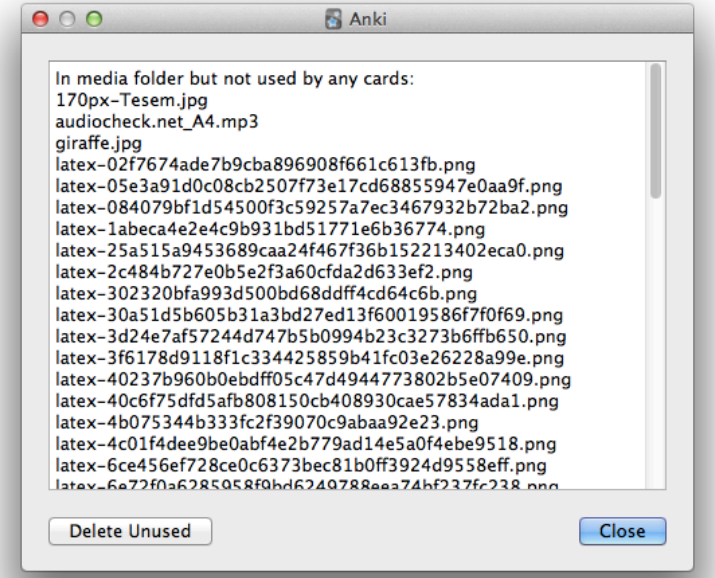
During a collection cleanup, go to Tools > Maintenance > Check Database. Anki will run a set of tests and checks to ensure that everything is fine and dandy in your database. If all goes well you should see a message like this:



If *not*, you will have to address whatever issue Anki detects.

Maintenance > Unused Media…

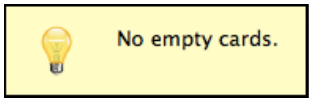
If you go to Tools > Maintenance > Unused Media…, Anki will generate a list of all media items contained in your library that *are not* being used by any of your notes:



Give this list a quick review and, if you're satisfied that those files are no longer needed, hit Delete Unused.

Maintenance > Empty Cards…

Anki is also able to check for any empty cards in your collection by going to Tools > Maintenance > Empty Cards…. If all is well you'll see a message like this:



If not you may need to address whatever empty cards Anki finds.

Chapter 26

Conclusion

Phew! It's been a long ride, but we're finally at the end. What now? What next?

By now you should understand how Anki works—from the big picture to the nitty gritty. We've covered creating note types, note fields, and notes themselves; cards and card templates; studying and cramming; specific applications that you can try out right away; and much more.

If anything, I hope this guide has encouraged you to give Anki a serious try. I hope you enjoy harnessing the power of Anki and spaced repetition software. I know you can become a true *Anki master*.

I've been using Anki for over a year, and I'm still coming up with new and fun ways to get a lot of use out of it. It is one of my most valuable remembering and internalizing tools in my arsenal. (In case you're wondering, the other biggie is mind mapping.)

This entire guide will be for naught if you don't go out and *give Anki a try*. Have some fun with it! Try learning and memorizing that thing you've always wanted to memorize. Impress your friends at school or you boss at work. Crush those entrance exams. Rock your courses. Master piano theory. Internalize all that basic material you've been putting off. Try coming up with new and clever uses of Anki. The options are endless.

Most important of all, have fun with it; no tool you dislike using will last. Also remember: don't *overwhelm* yourself. New Anki users are wont to create hundreds and hundreds of cards in their first week, only to be overwhelmed by how much they have to study! Take it slow, prioritize what's important, and have fun!

And last but not least, don't forget to take a look at the last chapter in this book for a bunch of additional useful resources and links.

Chapter 27

About the Author

Hi, I'm Alex. I enjoy personal development, learning cool stuff, hanging out with cool people, and trying to have a positive impact on the world.

I first stumbled on Anki while researching better ways to remember and internalize the vast quantities of information I was *trying* to remember. In general, I love reading and learning about just about anything, though I tend to focus on cognitive psychology, neuroscience, rationality, and philosophy. I do a diverse array of freelancing jobs from web development and copyediting to eBook formatting and research writing.

As of this writing I split my time between the following:

- http://alexvermeer.com – This is my personal blog. I write about what I'm currently reading and researching, when I can find the time. I mostly research ways to improve my thinking and decision-making skills, low-hanging productivity and organization hacks, and general self-improvement. Currently my most popular work is an anti-procrastination poster, available for free at http://alexvermeer.com/getmotivated/.
- http://intelligence.org – I work remotely for the Machine Intelligence Research Institute, a non-profit research group trying to ensure that things turn out right for us human when machine intelligence surpasses human intelligence.
- http://universityboulderingseries.ca – I'm addicted to bouldering (rock climbing sub-twenty-feet without rope), and I'm part of a team creating a University-based bouldering competition in Canada.

Feel free to get in touch with me for any reason by shooting an email to alex@alexvermeer.com.

–Alex

Chapter 28

Acknowledgements

This was not a solo project. This guide would be a big pile of lard if it weren't for the generous help of a few generous people.

My good friend David Jacques provided much content feedback and was my first and guinea pig test subject for the content of this guide. My good friend Jimmy Rintjema provided endless feedback about the contents and design of this guide, as well as steady motivation. Many thanks to the numerous people who accepted and reviewed earlier versions of this guide and provided invaluable feedback and criticisms.

I wanted to write an Anki guide for a while, but the real inspiration that got me started was Brett Kelly's *Evernote Essentials* (http://nerdgap.com/landing/evernote-essentials/) a similarly styled guide for the popular Evernote capturing tool (http://evernote.com/). I thought to myself, *"Man, this is awesome… Anki needs something like this!"* and Anki Essentials was born. Thanks Brett.

Last but not least, thank *you* for buying and reading this guide. I hope you've enjoyed reading it as much as I enjoyed writing it.

Supporting Damien

Taken right from Anki home page at http://ankisrs.net:

> Thousands of hours of work have gone into developing and supporting Anki. Please consider supporting the author so that Anki can continue to improve.

Please consider donating to Damien Elms and supporting Anki at http://ankisrs.net/support/. (This is not a self-endorsement. I receive none of this money. Your entire donation goes to supporting Damien in the ongoing development and support of Anki.)

Chapter 29

Additional Resources

With over a hundred pages in this book we've covered a lot of ground. Despite this, you may still have questions or issues when using Anki, or question and curiosities about spaced repetition software and memory. Where else can you go for more information?

Further Reading

There are numerous great posts around the internet with lots of good information on spaced repetition, memory, and learning in general. Here are a few I enjoy:

* *Spaced Repetition.* http://www.gwern.net/Spaced%20repetition An *excellent* article by Gwern (http://www.gwern.net). I already mentioned this one at the start of the book but it's worth mentioning again. This is far an away the best, most in-depth article on the topic. A must read for anyone interested in knowing *why* spaced repetition works so well.
* *Want to Remember Everything You'll Ever Learn? Surrender to This Algorithm.* http://www.wired.com/medtech/health/magazine/16-05/ff_wozniak A Wired article by Gary Wolf.
* *QS Primer: Spaced Repetition and Learning.* http://quantifiedself.com/2012/06/spaced-repetition-and-learning/ An article from Quantified Self that's jam-packed with useful and cool information.
* *Memorizing a programming language using spaced repetition.* https://sivers.org/srs An article written by Derek Sivers, who calls spaced repetition "the most helpful learning technique I've found in 14 years of computer programming."
* *Janki Method.* http://www.jackkinsella.ie/2011/12/05/janki-method.html An article written by Jack Kinsells about **Janki Method**. The goal is to "achieve proficiency in a given field of programming . . . in less than 12 months."

* *The 20 rules of formulating knowledge in learning.* http://www.supermemo.com/articles/20rules.htm I wrote my own summary of these rules earlier in the book, but I still highly recommend reading the original classic by Piotr Wozniak.
* *Memory and Learning: Myths and Facts.* http://www.supermemo.com/articles/myths.htm Another great article from Piotr Wozniak. I love this guy!
* *The roots of creativity and genius.* http://www.supermemo.com/articles/genius.htm An attempt by Piotr Wozniak at "formulating a prescription for genius and creativity." A long but interesting read.

Anki Essentials Resources Page

For starters, I set up a resources page on the Anki Essentials homepage at http://alexvermeer.com/anki-essentials/resources/. Here you will find links to much of the content linked in this book. (The internet has a funny way killing off links left, right, and center; this way I can update the links on the resources page without having to update the book every time one changes.)

Official Anki Support and Documentation

Anki has a several official resource pages, as well as two official forums (links can be found at http://alexvermeer.com/anki-essentials/resources/):

- *The official "Getting Help" Page* – Damien has a "Getting Help" page at http://ankisrs.net/docs/help.html to help direct people to various resources.
- *Anki Help Google Group* – A group for posting general help requests and bugs. Make sure you search through the forum history and read through the Anki FAQ before posting your questions!
- *Anki Users Google Group* – A group for discussing learning techniques, hearing about the latest Anki updates, and other general announcements.
- *Anki FAQ* – A collection of frequently asked questions about using Anki.
- *The official Anki 2.0 User Manual*, written by Damien Elms himself.

Anki Essentials Support

For questions specific to this book, please feel free to contact me at contact@ankiessentials.com or at http://alexvermeer.com/anki-essentials/contact/. General help should be directed to the Anki forums, where others may have already solved your problem, and where others will benefit from you getting a solution.

Contributing to Anki's Code

If you're a bit of the code-monkey type and want to see the inner workings of Anki—and possibly contribute some code changes or bug fixes—you can find Anki's source code at http://github.com/dae. Be sure to take a look at the License file, and if you agree to the license, drop Damien an email or a Github pull request—http://ichi2.net/contact.html.