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13 Development Environment

There Will be Code, but First...

A development environment is a cohesive set of tools for building and deploying software. A development environment for Ruby on Rails requires the installation of a few programs. Properly configuring a development environment can be a challenge for new developers, so follow the instructions carefully. You should ask your mentor if you have problems or questions.

Environment setup can be unpredictable and frustrating. We strongly recommend setting up your environment with your mentor.

Mac and Linux Users

Most tools related to Ruby on Rails (commonly referred to as "Rails") are optimized for Unix-based operating systems, like OS X and Linux. If you are using a Unix-based operating system, we advise you to create a *local* developer environment. This means you'll install software on your computer, and won't use a virtual machine or a cloud service.

Because many installation instructions are dependent on the version of your OS, we'll refer you to the instructions on [Install Rails](#), which will provide you with customized installation steps. Follow the instructions, stopping at the section on Sublime Text.

Tools we will install and use:

Tool	Description
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Git	A version tracking software, essential for tracking and sharing your changes with your mentor and other programmers. We'll use Git on a regular basis.
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RVM	Ruby Version Manager, a tool for installing and switching between versions of Ruby.
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Ruby	The multi-purpose programming language with which Rails is built. Installed using RVM. It comes with the RubyGems software, which allows you to download, install and use ruby software packages ("gems") on your system.
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Rails	One of the world's most powerful and user-friendly web-development frameworks, written in Ruby. Packaged as a gem.
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Only on Mac:

Tool	Description
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Xcode	An integrated development environment (IDE) containing a suite of software development tools developed by Apple for developing software.
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(Mac only)

Homebrew	A software package management system that simplifies the installation of software on the Mac OS X operating system. It is actually written in Ruby!
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(Mac only)

Once you've installed those tools with the help of **Install Rails**, you've completed this checkpoint.

Windows Users

While it's possible to install Rails on a Windows computer, it is *much* more difficult.

Installation bugs on Windows are highly unpredictable and can take many hours to fix - often incompletely. This is not the sort of frustration you want when you're just getting started.

As a consequence, we suggest using Cloud9, which is a browser-based development environment. You can quickly set up a free account with Cloud9. Cloud9 allows you to easily log in, edit, save, and collaborate on code. We **strongly** advise students on Windows computers to get started with Cloud9.

Check out our resource on **Cloud9 with Rails** for instructions on how to set up your Cloud9 development environment.

Recap

Concept	Description
Development Environment	A development environment is a cohesive set of tools for building and deploying software.
Xcode	Apple's Integrated Development Environment (IDE), which includes a large number of generic software development tools.
Ruby	Ruby is a dynamic, open source programming language with a focus on simplicity and productivity. It has an elegant syntax that is natural to read and easy to write.
Ruby on Rails	Rails is a web-application framework that includes everything needed to create database-backed web applications, according to the Model-View-Controller (MVC) pattern.

In addition to giving us compartmentalized independent Ruby setups, RVM allows us to create separate named gemsets. Explore the power of RVM by creating a Rails 4.2.5 gemset:

- Create a gemset for Rails 4.2.5:

Terminal

```
$ rvm gemset create rails425
```

- Switch to the `rails425` gemset:

Terminal

```
$ rvm @rails425
$ rvm current
ruby-2.2.1@rails425
```

- Install Rails 4.2:

Terminal

```
$ gem install rails -v 4.2.5
...
Fetching: rails-4.2.5.gem (100%)
Successfully installed rails-4.2.5
29 gems installed
```

Once your assignment is complete, message your mentor.

assignment completed

