

Web System Development by Ruby on Rails



Day 3(4/Oct/2012)

First Project

Internationalization

Today's Goal (Continued)

Run Rails 3 on CentOS, and generate the first project.

Generate the bi-lingual screen using Internationalization(I18n) gem.

The slides are prepared for two languages, Japanese and English. But depending your nationality, you can choose any language, which the locale file is provided.

Today's Original Goal

Learn MVC Structure

Model – Data Schema, Database Access

View – Screen Output, Input from Screen

Controller – Session Control, Data Flow

Split the Project Structure to understand each components.

First Check Point (Recovery)

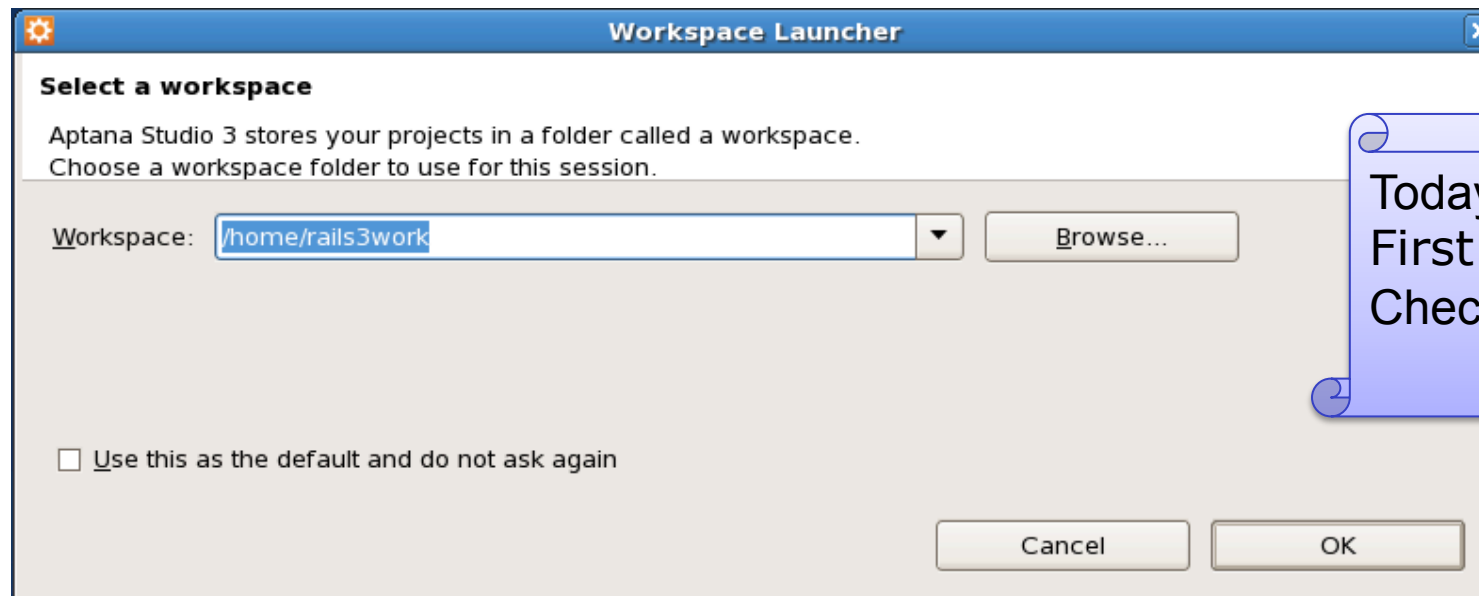
We check if everyone have come to see the following slides of Day 2.

Run CentOS on Windows 7 computer,
Then, double click the pre-installed Aptana.
And see the following slide.

If you are NOT happy with Japanese language screen, please once cancel Aptana.

Entering Workspace (Day 2 slide)

Aptana's Workspace is set to Aptana3Work. IF you want to change the Workspace, do it and keep aware that you have changed the path, when you read my materials.



Today's
First
Check Point

How to edit AptanaStudio3.ini file.

Run vi.

Visit the following site:

<http://www.washington.edu/computing/unix/vi.html>

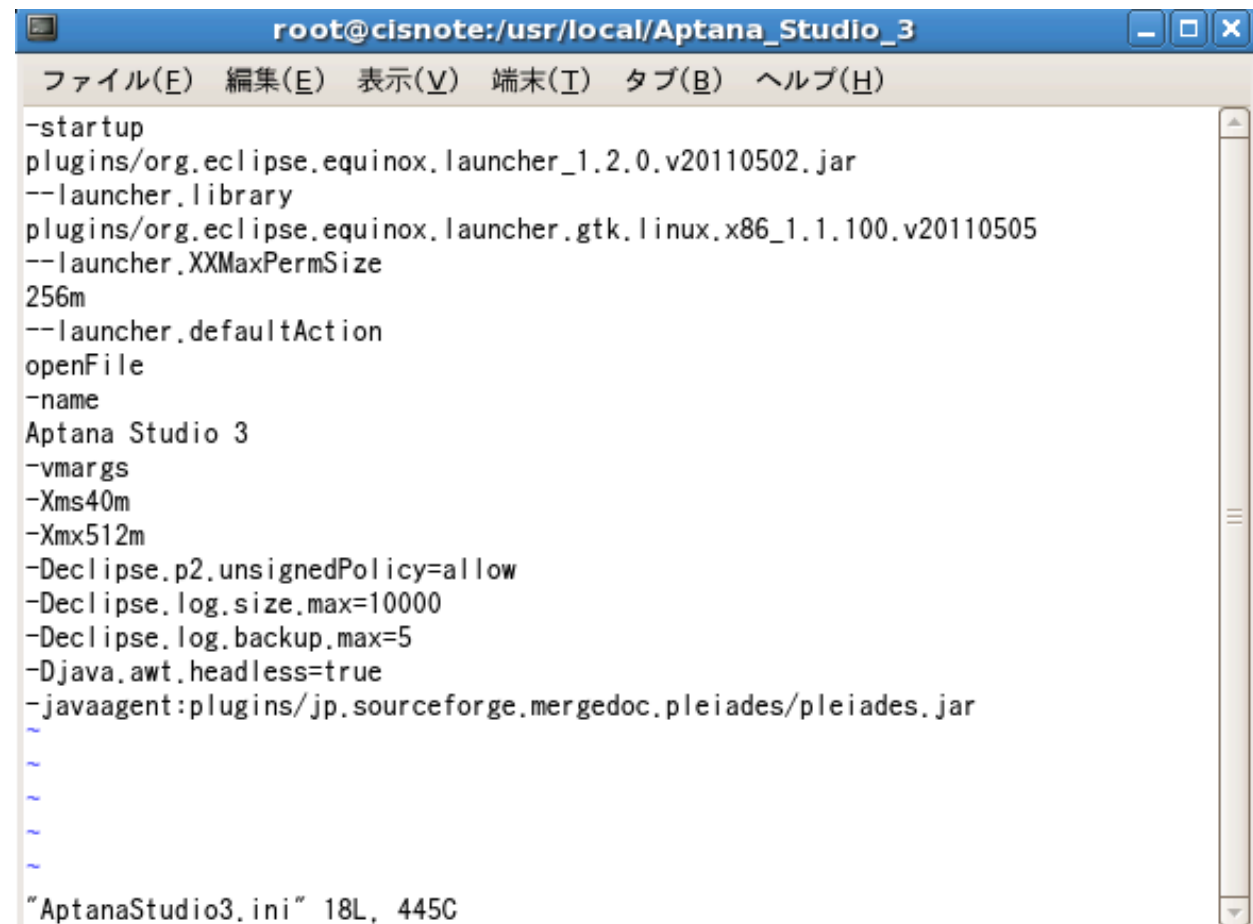
We can use "vi," even when the Window system (GUI) is down, to rescue the system files in LINUX environment. So, I think all systems engineers must know how to use "vi!"

(This is my personal opinion.)

Modifying AptanaStudio3.ini

Remove the last line;

-javaagent:plugins/jp.sourceforge.mergedoc.pleiades/...



```
root@cisnote:/usr/local/Aptana_Studio_3
ファイル(E) 編集(E) 表示(V) 端末(T) タブ(B) ヘルプ(H)
-startup
plugins/org.eclipse.equinox.launcher_1.2.0.v20110502.jar
--launcher.library
plugins/org.eclipse.equinox.launcher.gtk.linux.x86_1.1.100.v20110505
--launcher.XXMaxPermSize
256m
--launcher.defaultAction
openFile
-name
Aptana Studio 3
-vmargs
-Xms40m
-Xmx512m
-Declipse.p2.unsignedPolicy=allow
-Declipse.log.size.max=10000
-Declipse.log.backup.max=5
-Djava.awt.headless=true
-javaagent:plugins/jp.sourceforge.mergedoc.pleiades/pleiades.jar
~
~
~
~
"AptanaStudio3.ini" 18L, 4450
```

How to remove one line in vi editor.

When we open vi editor, vi is in “command mode.”

When in command mode, we can move the cursor with arrow keys, or **h, j, k, l** keys.

Move the cursor to the line which we want to delete. Then, type **dd** to delete whole line.

To save the change, type **:w**. By typing **:`**(colon), a status line will be displayed. To quit the editor, type **:q**.

Get used to LINUX shell command

We often run shell command. Please get used to run the commands.

ls -- list files in the current directory.

cd -- change current working directory.

cd [directory name]

pwd -- print working directory.

(To know where I am in the file system.)

ls | more -- | (vertical line) is a pipe. Output of 'ls' is handed to 'more' as an input.

more -- show the result page by page.

Run Aptana

If you finish modifying the Aptana language environment, then run Aptana.

1, 2, 3, 4 of Rails

Important Slide: Repeat the operation and remember!

We can automatically generate the skeleton of WEB application with 1, 2, 3(, 4) steps.

1. Create project

`rails new (project name)`

2. Modify Gemfile (when necessary)

3. Generate Entry screen by Scaffolding

`rails g scaffold (singular model name) [Field name:type] ...`

4. Create Database

`rake db:migrate`



Next Check point of the Day 2

Follow the operations specified in the Day 2 slides, then come to see the next slide.

WEB Screen (Day 2 Slide)

The WEB screen after the memopad runs is as the following. The URL is

<http://127.0.0.1:3000/memopad>



Today's
Second
Check Point

Internationalization

Please complete the Internationalization by Day 4.

You can choose any two different languages, English and Japanese, Chinese(zh-CN.yml) or whatever.

If you are not clear how to do that, raise your question **RIGHT NOW!**

How to copy zh-CN.yml to my project?

On VMware Firefox, right-click to see the popup and copy the file, we cannot get the target simple zh-CN.yml file.

So, follow the next steps;

- (1) On Aptana, create a new file 'zh-CN.yml' in config/locales folder.
- (2) Copy the content of zh-CN.yml on the WEB.
- (3) Paste the content of the file to the local file.

Test Run (Day 2 slide)

- First you try the display with default locale
- URL should be

<http://127.0.0.1:3000/memos?locale=ja>

or

<http://127.0.0.1:3000/memos?locale=en>

Or you can put locale=XX at your own choice.

Final Test for today (Day 2 Slide)

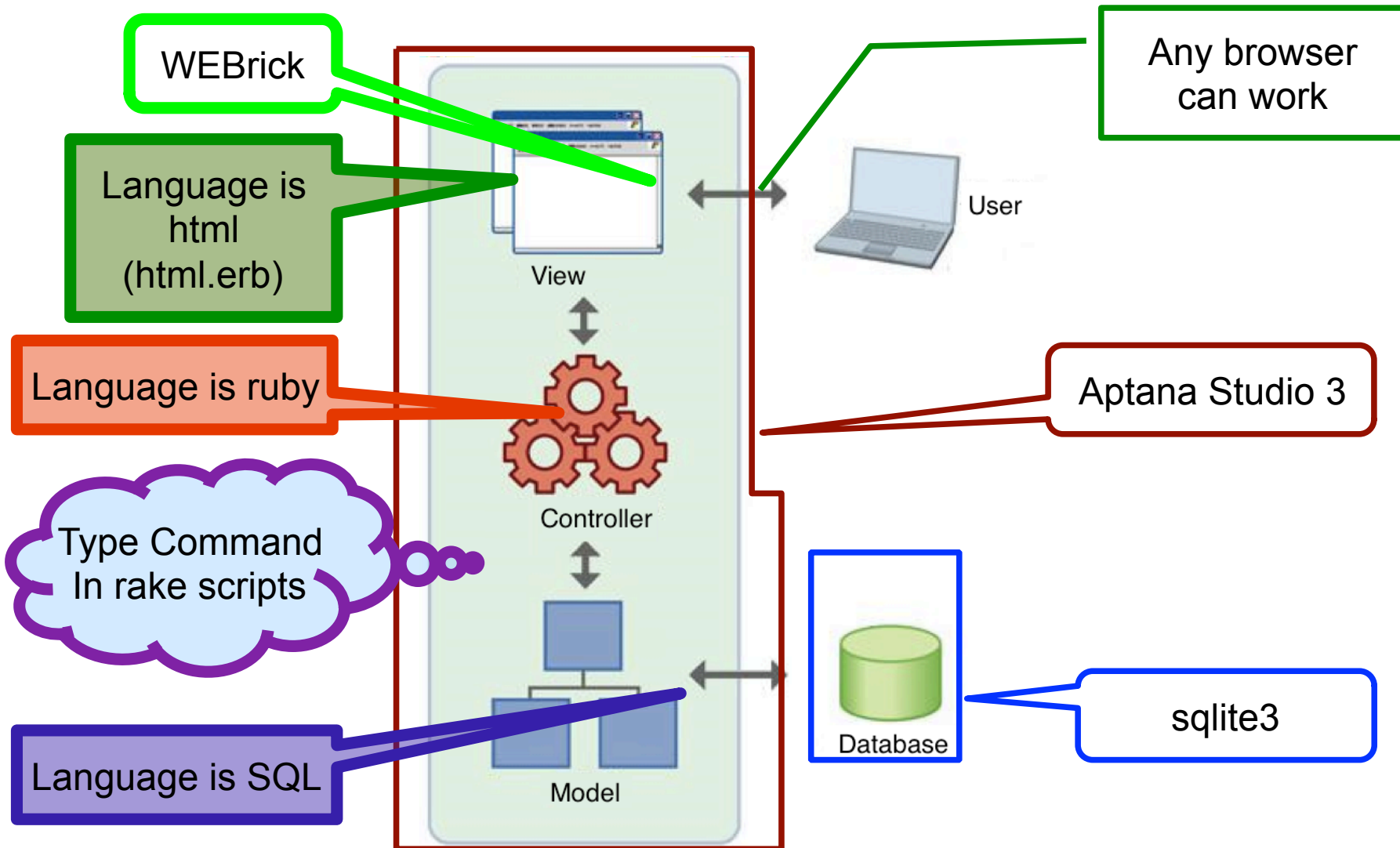
- ❑ If you could switch the language, you had completed the mission of today!

The image shows two screenshots of a web browser. The top screenshot displays the English version of a memo listing page. The browser's address bar shows the URL `http://127.0.0.1:3000/memos?locale=en`. The page title is "Listing memos". The main content area contains a single memo with the text: "今年は、初めて授業2日目にしてこの画面に到達した。でも、本当はインストールを自分でやるのが一番実力養成につながるのだけれど……。あ、独り言だから気にしないでください。". To the right of the text are three links: "show", "Edit", and "Destroy", all of which are circled in red. At the bottom left of the page, there is a link labeled "New Memo", also circled in red. The browser's tab bar shows two tabs: "My Memopad" and "rails-i18n/rails/locale/ja.y...".

The bottom screenshot shows the same page with the language switched to Japanese. The browser's address bar shows the URL `rails-i18n/rails/locale/ja.y...`. The page title is "メモの一覧". The main content area contains the same memo text in Japanese: "今年は、初めて授業2日目にしてこの画面に到達した。でも、本当はインストールを自分でやるのが一番実力養成につながるのだけれど……。あ、独り言だから気にしないでください。". To the right of the text are three links: "表", "編", and "削", which correspond to "show", "Edit", and "Destroy" in English. Below the text, there is a link labeled "新規作成". The browser's tab bar shows two tabs: "私のメモ帳" and "rails-i18n/rails/locale/ja.y...".

Today's Third Check Point

Rails 3 Environment

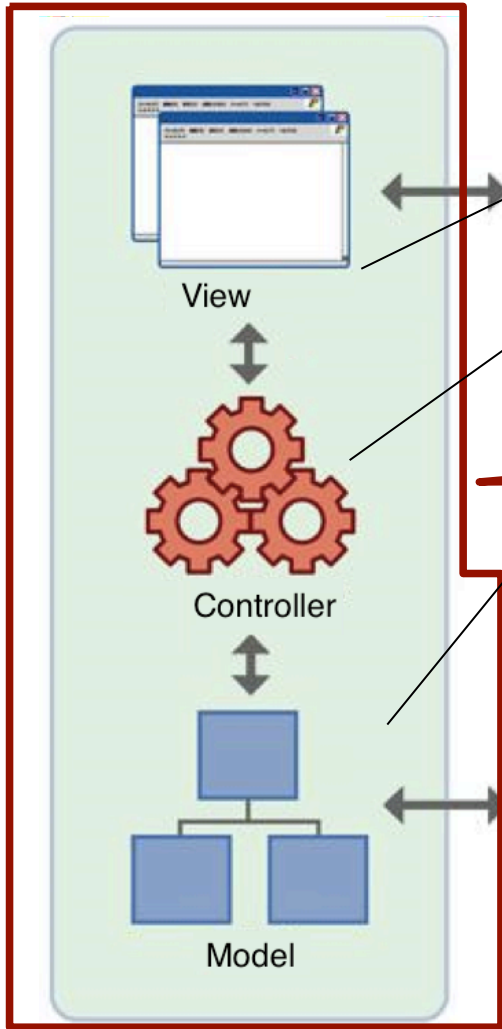


Step 1: Create Project

Step 1
Project Generation

Command:
rails new
memopad

Project 'memopad'
is created.



User

Automatically
generated
the directories

Aptana Studio



Database

rails new memopad

Rails generated the necessary files of the project: memopad.

```
admin@ADMIN-501MOKPBO /cygdrive/c/Users/admin/My Documents/Aptana Studio 3 Worksp
pace
$ rails new memopad
create
create README.rdoc
create Rakefile
create config.ru
create .gitignore
create Gemfile
create app
create app/assets/images/rails.png
create app/assets/javascripts/application.js
create app/assets/stylesheets/application.css
create app/controllers/application_controller.rb
create app/helpers/application_helper.rb
create app/mailers
create app/models
create app/views/layouts/application.html.erb
create app/mailers/.gitkeep
create app/models/.gitkeep
create config
create config/routes.rb
create config/application.rb
create config/environment.rb
create config/environments
create config/environments/development.rb
create config/environments/production.rb
create config/environments/test.rb
create config/initializers
create config/initializers/backtrace_silencers.rb
create config/initializers/inflections.rb
```

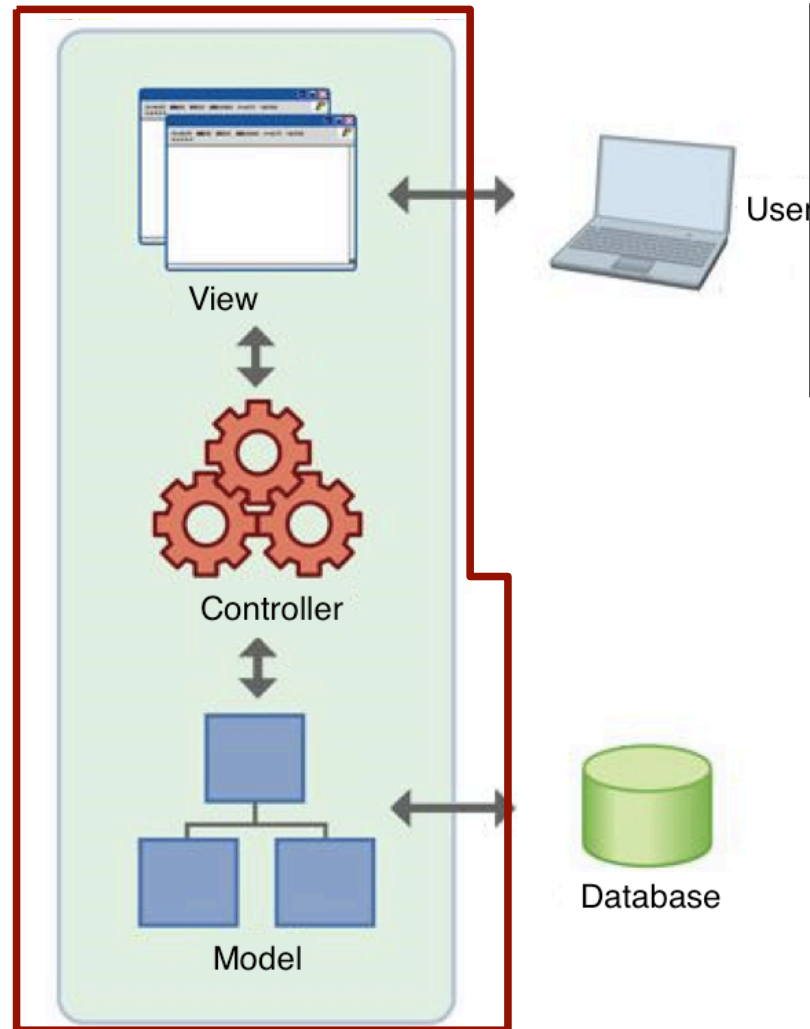
I mis-typed the project name!

If you had made mistakes at this stage, such as wrong project name, we had not typed any body of the project, so discard all the files into trash-box, and then, create the new project again with the correct project name.

Step 2 Gemfile/bundle install

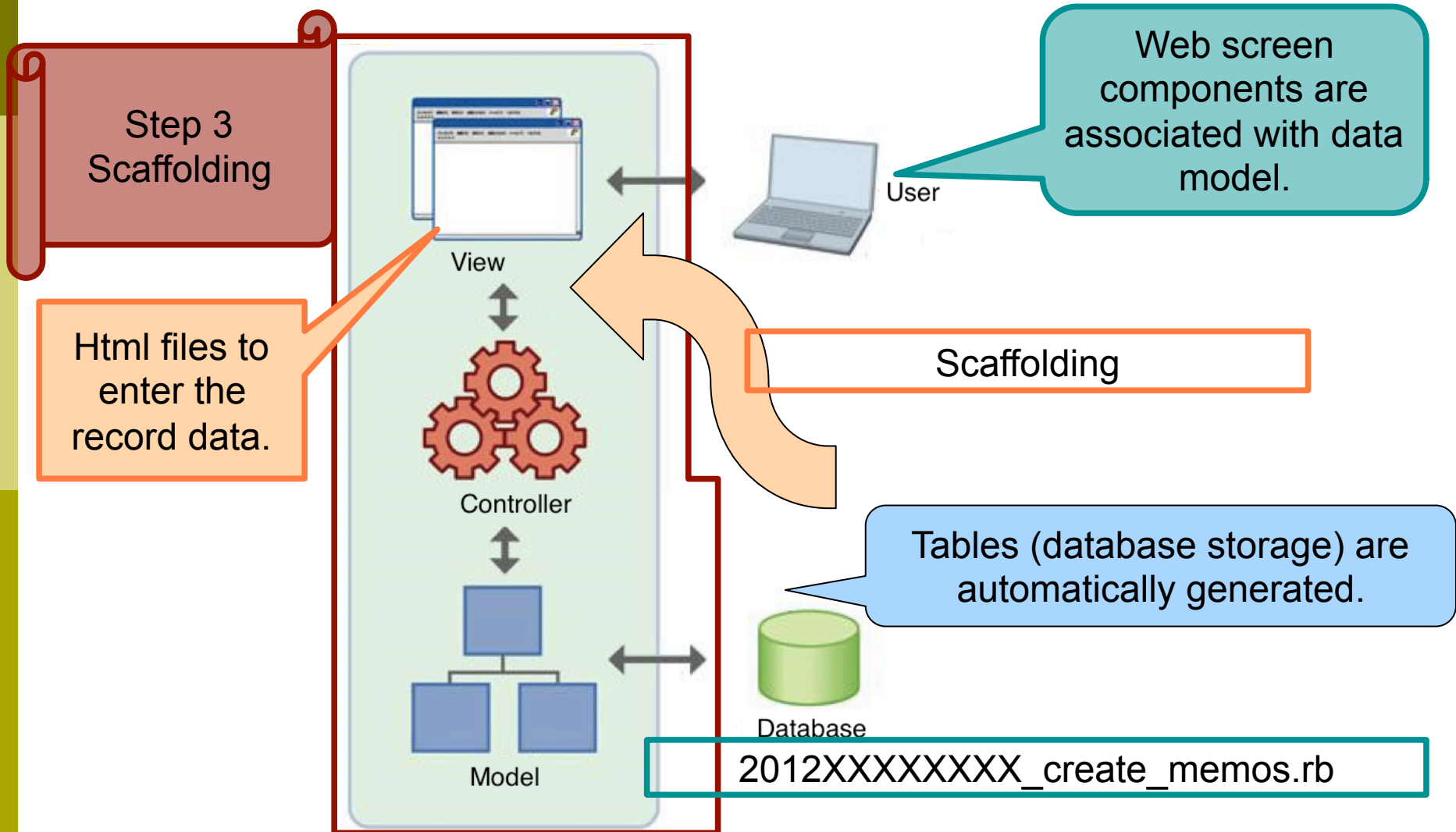
Step 2
Prepare gems

Edit Gemfile,
then, run
'bundle install'



Gems are ruby libraries. By editing Gemfile, necessary gems are installed by 'bundle' command.

Step 3: Scaffolding



Scaffolding Command

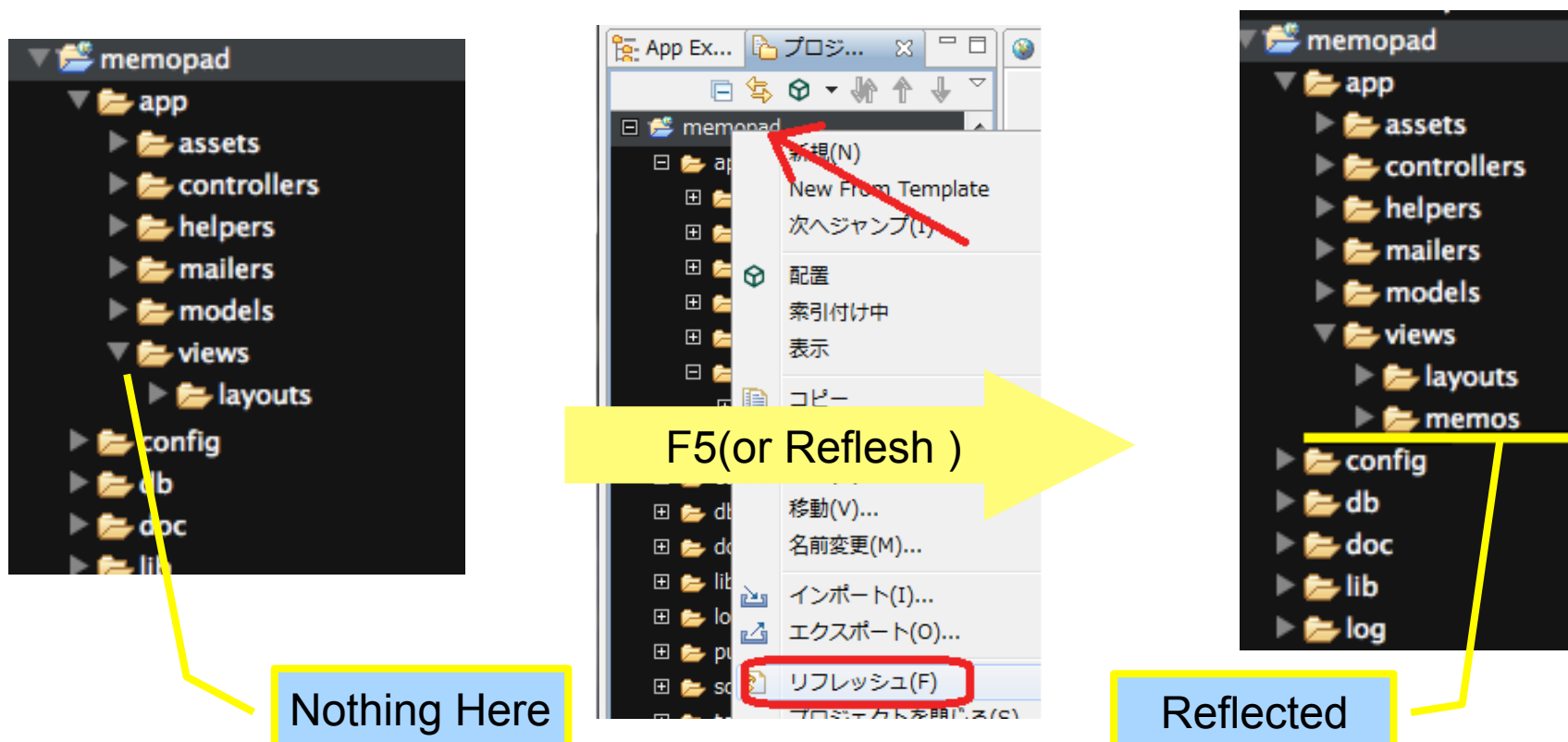
- ❑ In memopad folder, type
rails generate scaffold memo content:text
- ❑ Now, content is a name of data field, and the type is text

```
/cygdrive/c/users/admin/My Documents/Aptana Studio 3 workspace/memopad
$ rails generate scaffold memo title:text name:string
  invoke  active_record
  create  db/migrate/20120425151305_create_memos.rb
  create  app/models/memo.rb
  invoke  test_unit
  create  test/unit/memo_test.rb
  create  test/fixtures/memos.yml
  route  resources :memos
  invoke  scaffold_controller
  create  app/controllers/memos_controller.rb
  invoke  erb
  create  app/views/memos
  create  app/views/memos/index.html.erb
  create  app/views/memos/edit.html.erb
  create  app/views/memos/show.html.erb
  create  app/views/memos/new.html.erb
  create  app/views/memos/_form.html.erb
  invoke  test_unit
  create  test/functional/memos_controller_test.rb
  invoke  helper
  create  app/helpers/memos_helper.rb
  invoke  test_unit
  create  test/unit/helpers/memos_helper_test.rb
  invoke  assets
  invoke  coffee
  create  app/assets/javascripts/memos.js.coffee
  invoke  scss
  create  app/assets/stylesheets/memos.css.scss
  invoke  scss
  create  app/assets/stylesheets/scaffolds.css.scss

admin@ADMIN-501MOKP80 /cygdrive/c/Users/admin/My Documents/Aptana Studio 3 Works
pace/memopad
$
```


Reflect Step 3 result to Aptana

By pressing F5 Function button, or right-click and go "refresh" to reflect the scaffold result on Aptana directory tree.



Mistype the field name while scaffolding

To cancel the following command;

```
rails generate scaffold memo title:text name:string
```

type,

```
rails destroy scaffold memo
```

If you finished migration, the cancel Step 4 migration first, and then cancel the step 3.

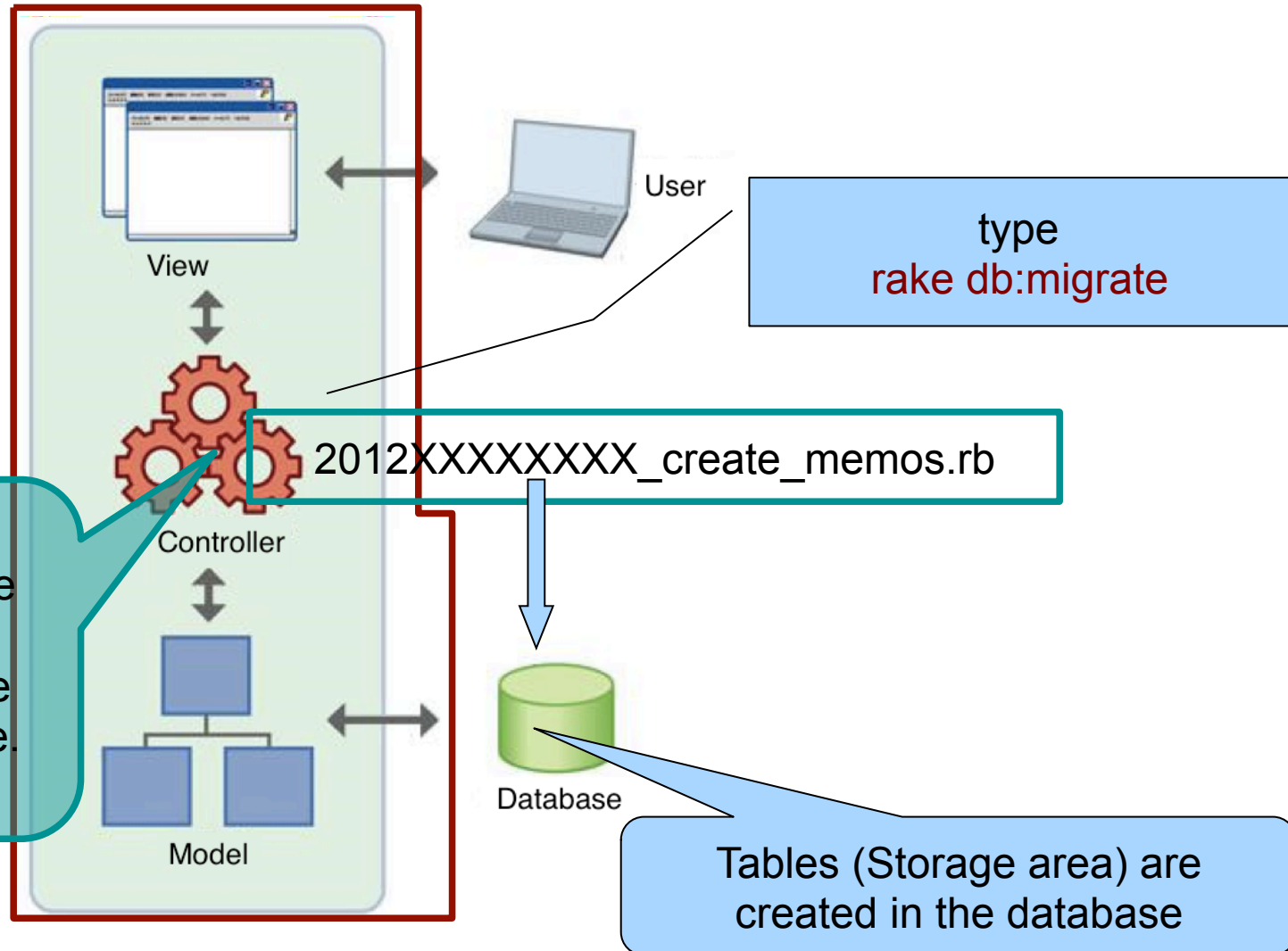
You can see the rails commands by typing;

```
rails -help
```

Step 4: Migration of table

Step 4
Write onto
database

Design the table
what kind of
fields should be
on the database.



```
type  
rake db:migrate
```

```
2012XXXXXXXXX_create_memos.rb
```

Database

Tables (Storage area) are
created in the database

Migrate

Type

rake db:migrate

```
1 class CreateMemos < ActiveRecord::Migration
2   def change
3     create_table :memos do |t|
4       t.text :title
5       t.string :name
6
7       t.timestamps
8     end
9   end
10 end
11
```

```
Ikuo@DELL-E5500-KOBA ~/aptana3Work/memopad
$ rake db:migrate
== CreateMemos: migrating =====
-- create_table(:memos)
   -> 0.1716s
== CreateMemos: migrated (0.1716s) =====

Ikuo@DELL-E5500-KOBA ~/aptana3Work/memopad
```

Wrong migration!

To cancel the
command;

```
rake db:migrate
```

type

```
rake db:rollback
```

By typing

```
rake -T
```

You can see the list of
commands.

To check the condition,
type

```
rake db:migrate:status
```

Step back migration in the database

Check the Migration ID by typing the command;

```
rake db:migrate:status
```

Count how many steps the migrations are committed, by checking time and date. Then rollback the migration.

```
rake db:rollback STEP=1
```

command let us cancel the last migration one step. (the Default is STEP=1, so if step is 1, you do not have to write STEP=1.)

```
kobayashi-ikuo-no-MacBook:memopad kobayashi$ rake db:migrate:status
```

```
database: db/development.sqlite3
```

Status	Migration ID	Migration Name
up	<u>20120503092307</u>	Create memos

Step 5: Test run

- On the command console, type

`rails server`

then, specify the URL as

`http://127.0.0.1:3000/memos`

in the browser.



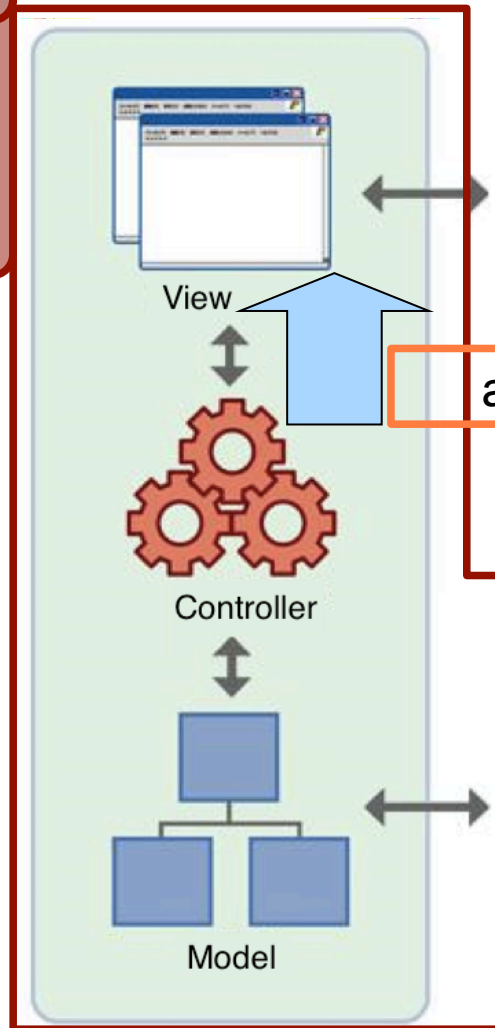
New memo

Create

[Back](#)

Main Controller for 'memos'

Main Controller for 'memos'



Describe the 'behaviors' of each heml.erb files in views/memos.

`app\controllers\memos_controller.rb`



Now main framework is established.

Absence Report of Today

Write a report about the following.

In MVC framework, what is the role of model part. Also what about view part, and the controller part.



The Preview of next week.

Study HTML; Hyper-Text Markup Language,
and basic description of WEB pages.