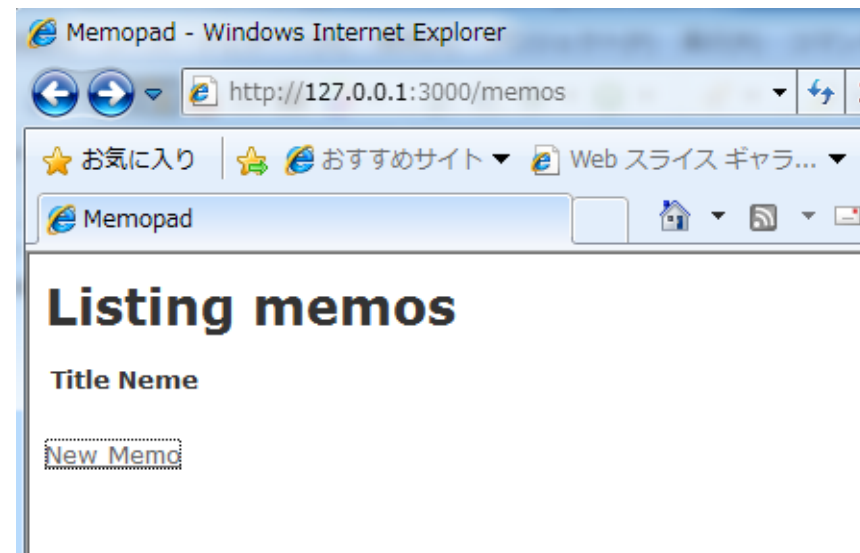# OBJECT ORIENTED WEB PROGRAMMING USING RUBY

Day 3: 26/April/2012

Scaffolding – Generation of Skeletons;

Test run "Memopad"

What we learn today

- Generate WEB screens of the "MemoPad" Database Application
    - Setting up for Database Connection
    - Automatic generation of DB Files
    - Scaffolding
    - Run the Server

Errata of Slides for Day 2

- P19 Slides

- Line No.3 from the bottom;
- "ruby server"
  should be
- "rails server"

Workspace Directory

◻ Open "cygwin" console

◻ Move the directory by typing "cd"

   ◻ cd comands stand for "change directory"

  ◻ In Day 2, We set Apatan Workspece directory as

   ◻ Library¥Documents¥Aptana Studio 3 Workspace

  ◻ The following slides are written with the above premise.

  ◻ If you specify other working directories, please assume the workspace directory as your own one.

  ◻ Change directory with the following command

cd /cygdrive/c/Users/admin/My¥ Documents/Aptana¥ Studio¥ 3¥ Workspace

Generate Project

type

rails new memopad

```
admin@ADMIN-501MOKPBO /cygdrive/c/Users/admin/My Documents/Aptana Studio 3 Works
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
```

Generate Project - Success

With successful result, the screen would be like this.

```
Using sprockets (2.1.2)
Using actionpack (3.2.2)
Using mime-types (1.18)
Using polyglot (0.3.3)
Using treetop (1.4.10)
Using mail (2.4.4)
Using actionmailer (3.2.2)
Using arel (3.0.2)
Using tzinfo (0.3.33)
Using activerecord (3.2.2)
Using activeresource (3.2.2)
Using bundler (1.1.3)
Using coffee-script-source (1.3.1)
Using execjs (1.3.0)
Using coffee-script (2.2.0)
Using rack-ssl (1.3.2)
Using json (1.6.6)
Using rdoc (3.12)
Using thor (0.14.6)
Using railties (3.2.2)
Using coffee-rails (3.2.2)
Using jquery-rails (2.0.2)
Using rails (3.2.2)
Installing sass (3.1.16)
Using sass-rails (3.2.5)
Using sqlite3 (1.3.6)
Using uglifier (1.2.4)
Your bundle is complete! Use `bundle show [gemname]` to see where a bundled gem
is installed.

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

Move Current Directory

- Move to the "Memopad" directory that was just generated with "rails new" command.
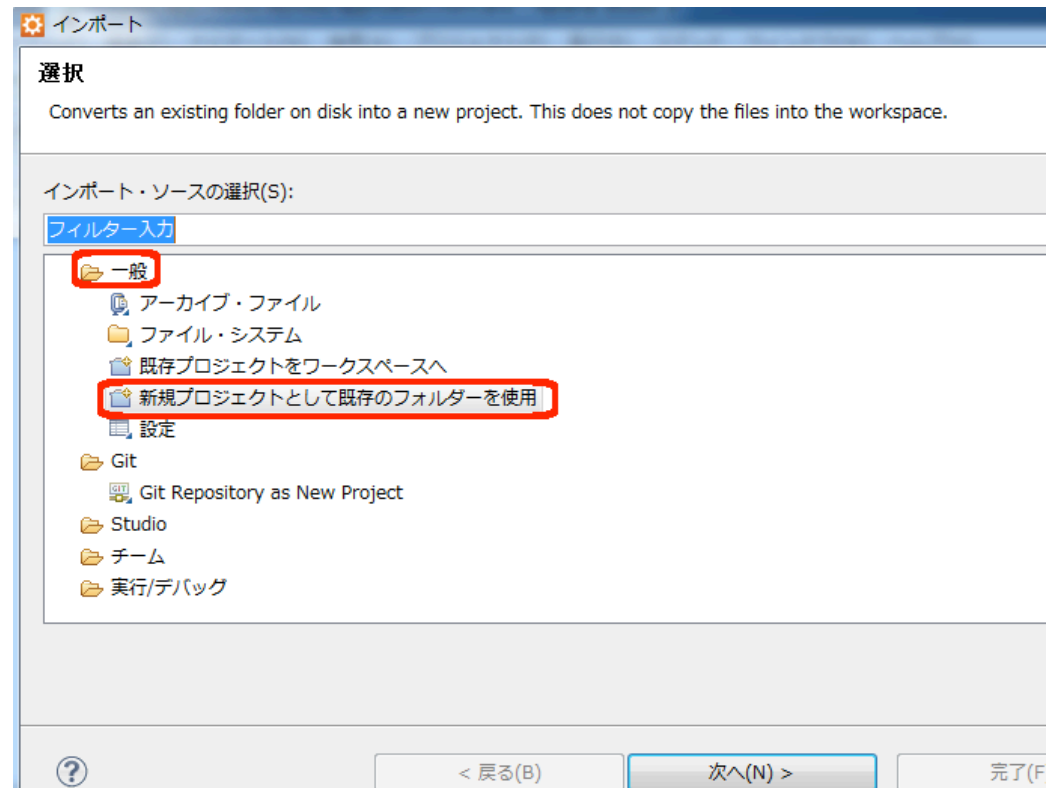
cd memopad

Import projects into Aptana

On Aptana Menu,
Click File ->
   Import..

Import Project (2)

Click "General" and choose

use existing project as "new projects"

Switch our Environment

We type in commands on the Cygwin console window, and

... edit files on Aptana.

Confirm Version numbers

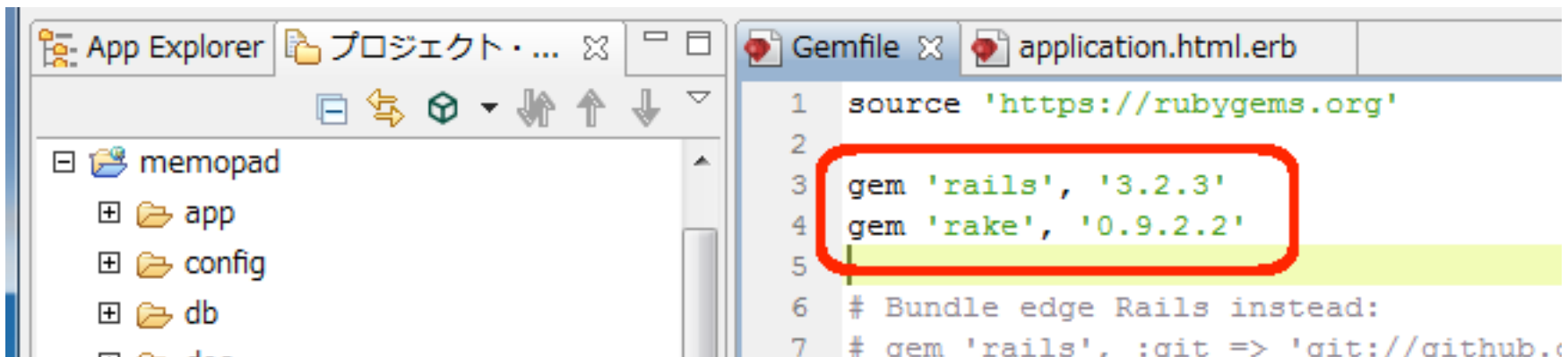By typing the following commands, check versions of Rails and Rake.

rails --version

rake --version

Write version numbers into Gemfile (located in memopad Folder.)

gem 'rails', '3.2.3'

gem 'rake', '0.9.2.2'

Check the above two lines

Reconfirm the Version Consistency

When you have modified Gemfile,

by running bundle again, reconfirm the version consistency.

Type

bundle update

Scaffolding

- Scaffold：footfold for constructing buildings;
- Source program files to develop the database application.

- Generate Skeleton
  - Skeleton? ➜
  - Framework for application independent structure.
  - Charming or not?
    - Difference of only thin skin
    - View → Appearance
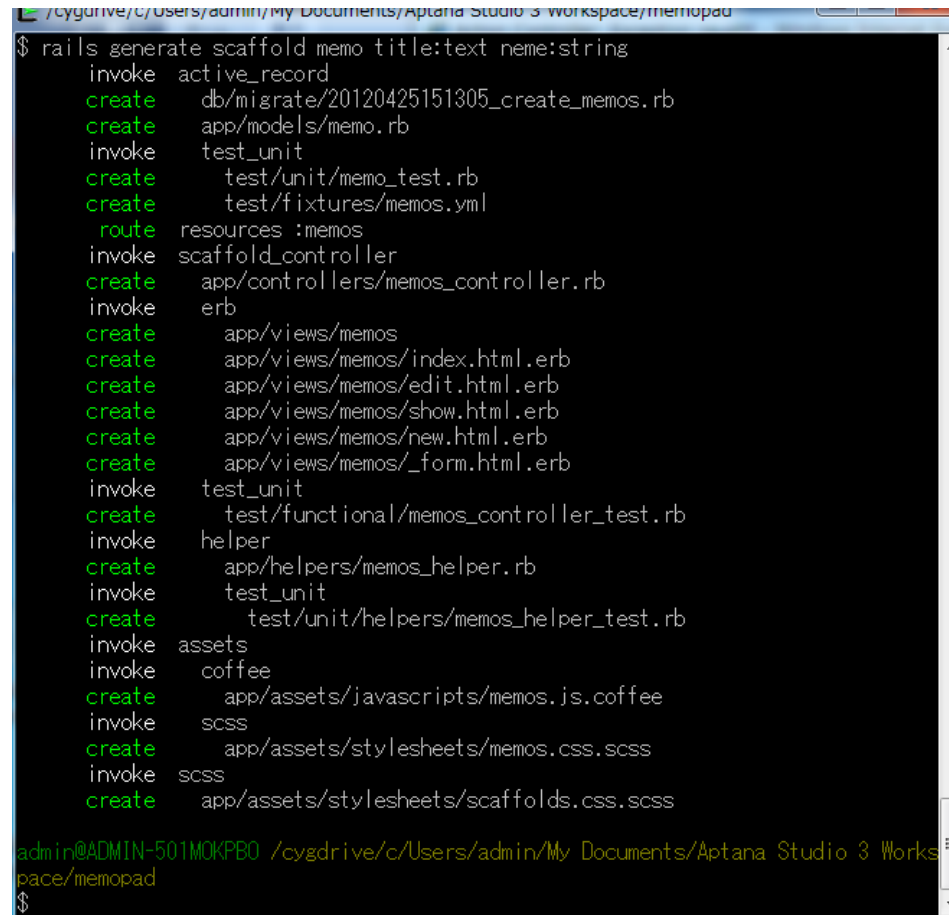   - Model → Framework(Bones)
    - Controller → Muscle

  http://home.a01.itscom.net/iggy/m_san/msan005.htm#kenkyuu056

Skeleton!

Scaffold Generation Command

□ Type in the following command;

rails generate scaffold memo title:text name:string

```
$ rails generate scaffold memo title:text neme: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-501MOKPBO /cygdrive/c/Users/admin/My Documents/Aptana Studio 3 Works
pace/memopad
$
```

Migration

With the result of scaffolding, the files to determine the database structure were generated in the beginning.
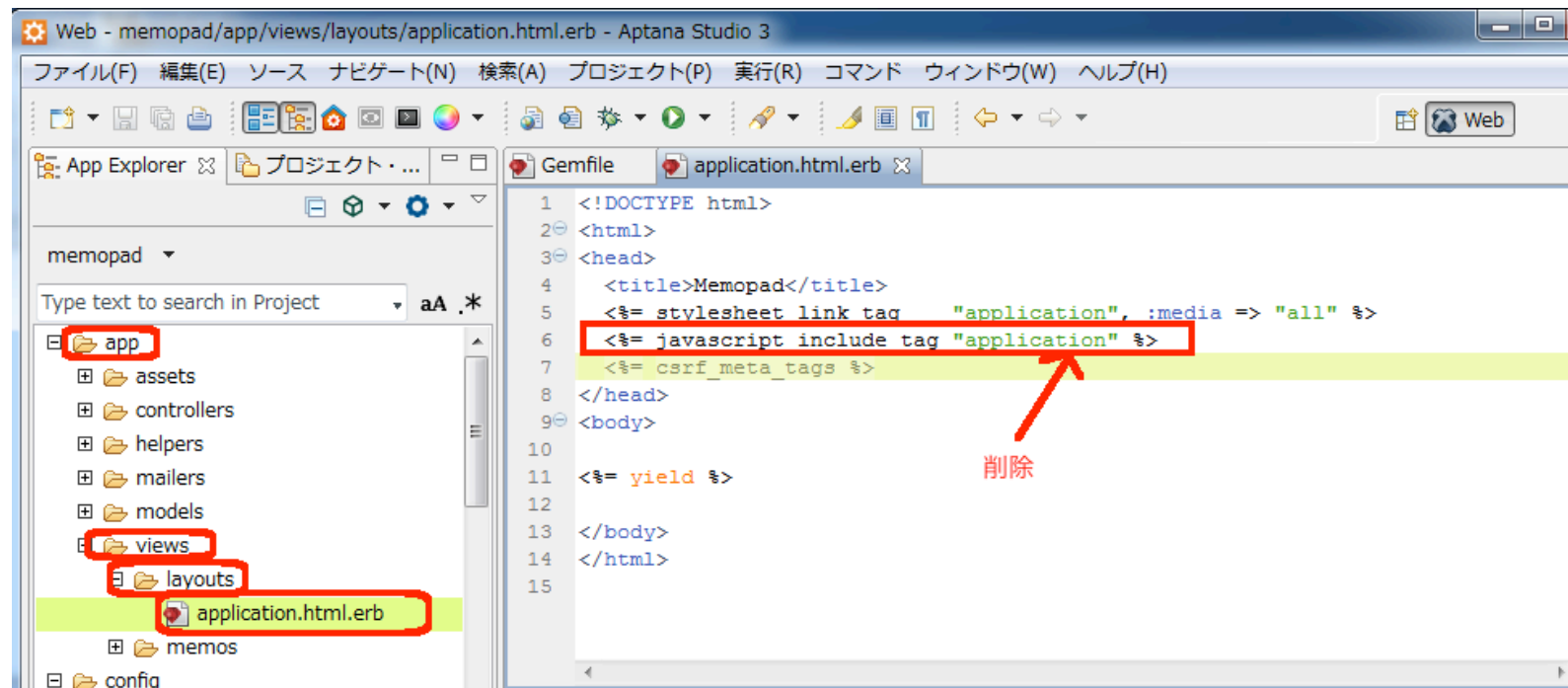
With the above result, generate database on sqlite3.

rake db:migrate
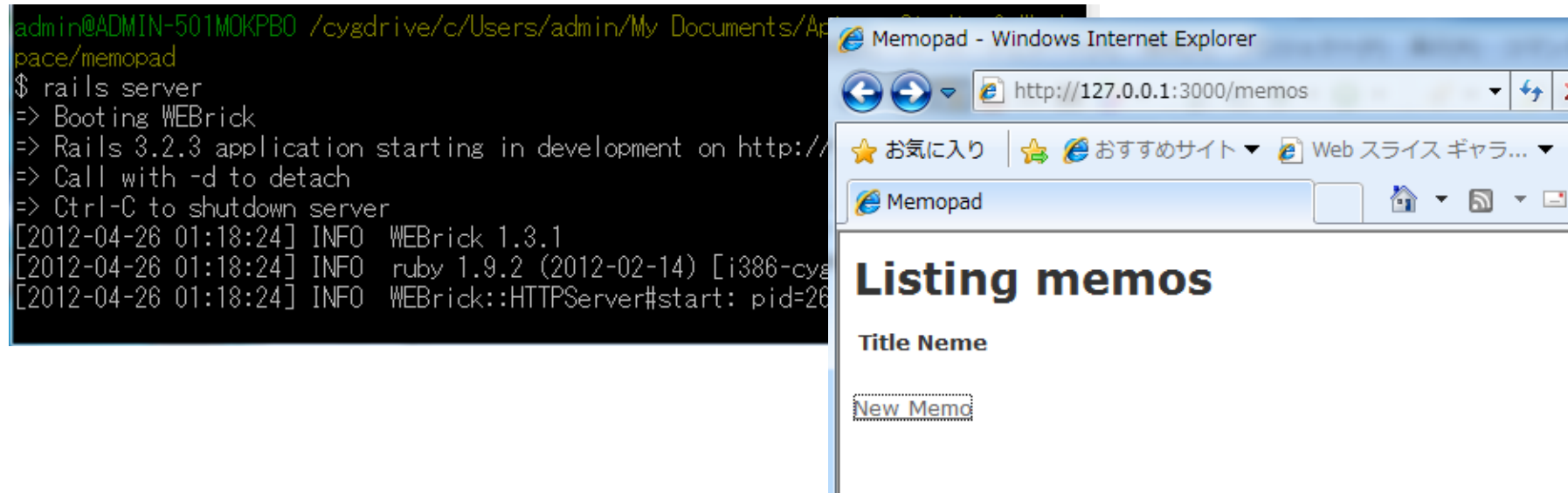
Correct one line

Remove one line which is related with Javascript in the following file.

App/views/layouts/application.html.erb

Run the server

- Type the following command in console

  rails server

- Give the following URL in the browser.

  http://127.0.0.1:3000/memos/

What are those screens for?

- Screen for maintain the memopad DB.
- It is necessary to maintain the data in the database.

Read automatically generated files in Aptana

- Start Aptana:
- "Right Click" memopad(Project Name) Project, and the choose "Refresh"
  - Aptana check the directory and read newly generated files.

memos_controller.rb

- memopad – app – controllers – memos_controller.rb
- There are many primarily important ruby's grammatical sentences generated.

```ruby
class MemosController < ApplicationController
  # GET /memos
  # GET /memos.xml
  def index
    @memos = Memo.find(:all)

    respond_to do |format|
      format.html # index.html.erb
      format.xml  { render :xml => @memos }
    end
  end

  # GET /memos/1
  # GET /memos/1.xml
  def show
    @memo = Memo.find(params[:id])

    respond_to do |format|
      format.html # show.html.erb
      format.xml  { render :xml => @memo }
    end
  end
end
```

edit.html.erb

- memopad – app – views – memos – edit.html.erb
    - ERB is Ruby's implementation of eRuby
    - eRuby is "embedded ruby," which can be embedded in any text file format.
    - Just like the Ruby version of JSP, and ASP.
    - Mark Ups are as the following;
- <% ... %> --- Execute the ruby script immediately.
- <%= ... %> --- Insert the result of the evaluation of sentences

What we tried, Today!

- Model: Generated Skeleton, and see the contents result.

- View: Read files for WEB screens.

- Controllers : Checked if there is any original controller for Action.

- Now we know, where is the generated files, and what names are those, at the very beginning.
  - We analyze the files one by one.

Report Themes for absence

- Generate the Scaffold for "memopad", and report "what is the result of scaffolding, " with screen shots.

- If the above is reported, those who were absent from the course, will get the record of "attendance."

What we learn the next

- Now the Introduction is finished!

- We introduce Locale settings into our WEB system.

- TDD: Test Driven Development
  - We study the concept of Test Driven Development and the verification of inputs. Learn system integrity.