Object Oriented WEB Programming Using Ruby

Day 1: 9/April/2015

guidance

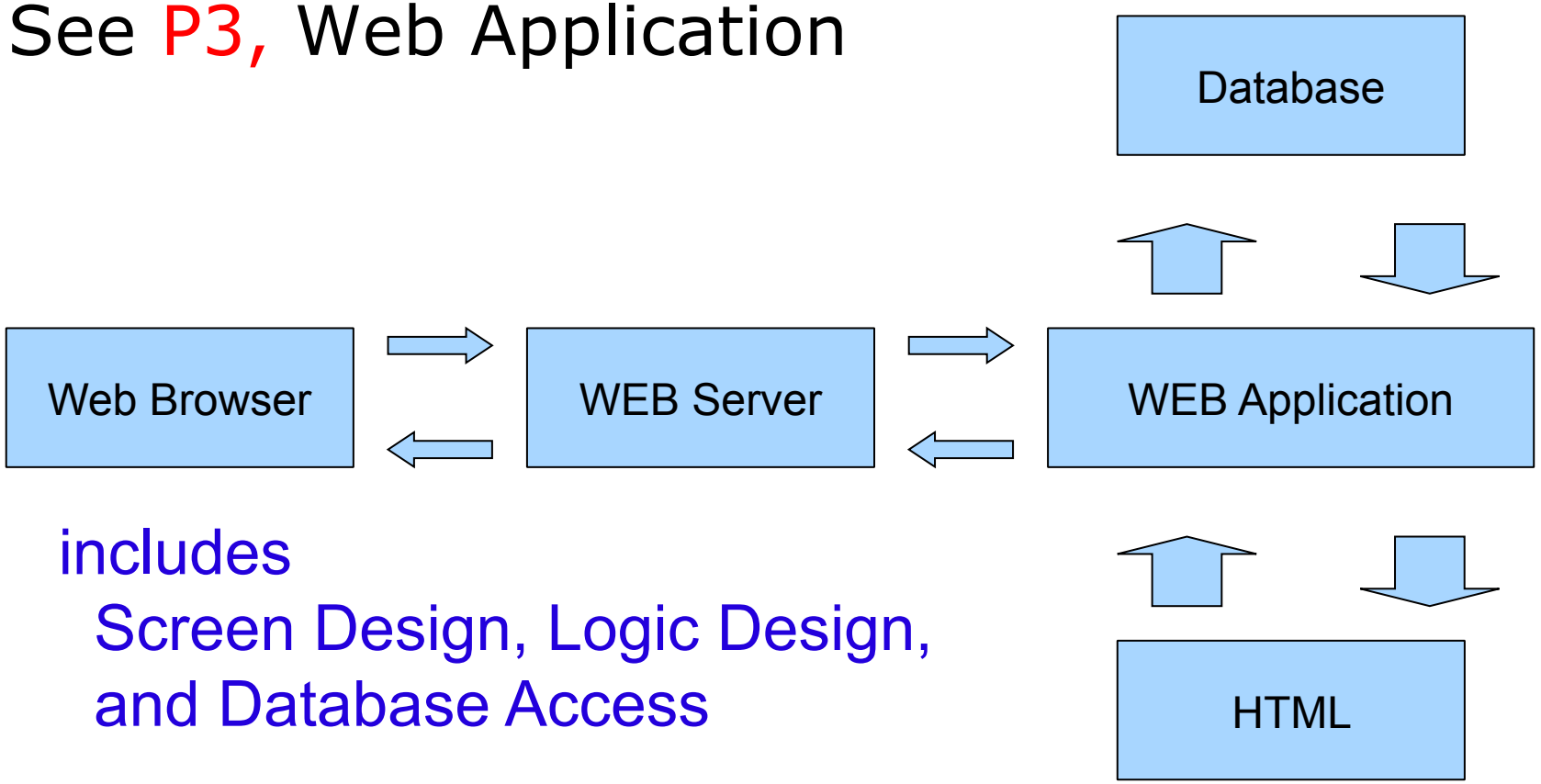
Setting up Ruby on Rails on VMWare

Web System and DB

- WEB – Nest of Spider?
  - Nobody uses and spider has made nest on DB?
- World Wide Web – Internet Connection
- Application Systems
  - access via browsers,
  - to servers on Internet,
  - to the data in DataBase
- Learn how to Build, (not how to Use)

What is Web Application

See P3, Web Application



includes
Screen Design, Logic Design,
and Database Access

… Everything!

Website (Text)

http://ruby.railstutorial.org/ruby-on-rails-tutorial-book

Lecture (of First Semester)

- Learned
  - WEB Screen Structure(HTML, CSS)
  - Database of MySQL, and SQL
  - Controlling Program on Ruby Language
- As a Rails Application
- Experienced how easy to build database application with Ruby on Rails
- For the Second Semester, we are going to learn much more practical application

Lecture Policy

- Read and understand Sample Applications
  - rather than write original programs

- trace the instructions then run the codes, to know how to realize many functions by ruby
- When you understand the key concepts, then modify the samples to see what happens by changing settings.
- OK, then the final target. Design your own system, and write your original program.

Lecture Plan (1/4)

- Day 1: Introduction (today)
  - VMWare virtual computer files.
- Day 2: Locale and Internationalization
  - To support multi-language environment.
- Day 3: Version management using Git
  - Introduce Version management and backup tool.
- Day 4: Validation and Error messages.

Lecture Plan (2/4)

- Day 5: Log-in Authentication and user management
- Day 6: Test Driven Development
  - Introduce RSpec to support the TDD.
- Day 7: Test Data
  - How to give proper test data for TDD
- Day 8: Screen Transition and the Parameter Delivery
  - Trace how the system works.

Lecure Plan (3/4)

- Day 9: Session Management
  - Introduce several scopes of variables
- Day 10:Program structure and the screen design
  - How to design good looking Web views.
- Day 11: Upload and download files

How to store the attached files

Lecture Plan (4/4)

- Day 12: Project –(1/3)
- Day 13: Project –(2/3)
- Day 14: Project –(3/3)
- Day 15: Summary of the Semester

- There are so many things...
  - Basic lecture plans was 'reset everyday'
  - But we will pile on the former designs.
    - So if you would be absent one day, please read and try what would have been done on the day.

Do I have to buy textbook?

- Required information is all available in the WEB sites. So, you do not have to buy textbook.
  - Please read what we cannot explain in the lecture period from those web sites.

Scoring

- Regular exams are not performed.
- Scoring is based on the presentation.
- Scoring Criteria
  - S Rating : excellent in original ideas, designs, and/or the descriptions of the software behaviors.
  - A rating : All the requirements of report aims have been covered.
  - B rating : Some of the report aims have been covered, and minimal trials have been done.
  - C rating : Only software and its screen have been reported.

Attendance

- You are supposed to attend more than 66 percent of the lectures. (10 days)
- If you are absent from the lectures more than 4 days, your record will be automatically scored as 'E'. (Failure because of absence)

Do I need to bring my PC?

- Yes, Absolutely.
- This is a practicing subject.

- Also you are strongly recommended to bring USB memory to record your course materials and your own reports and software. (In case your PC crashes.)

Today's Practice (by next lecture day)

Check the VMWare License, and copy the Virtual PC (Cent OS) disk to your PC.

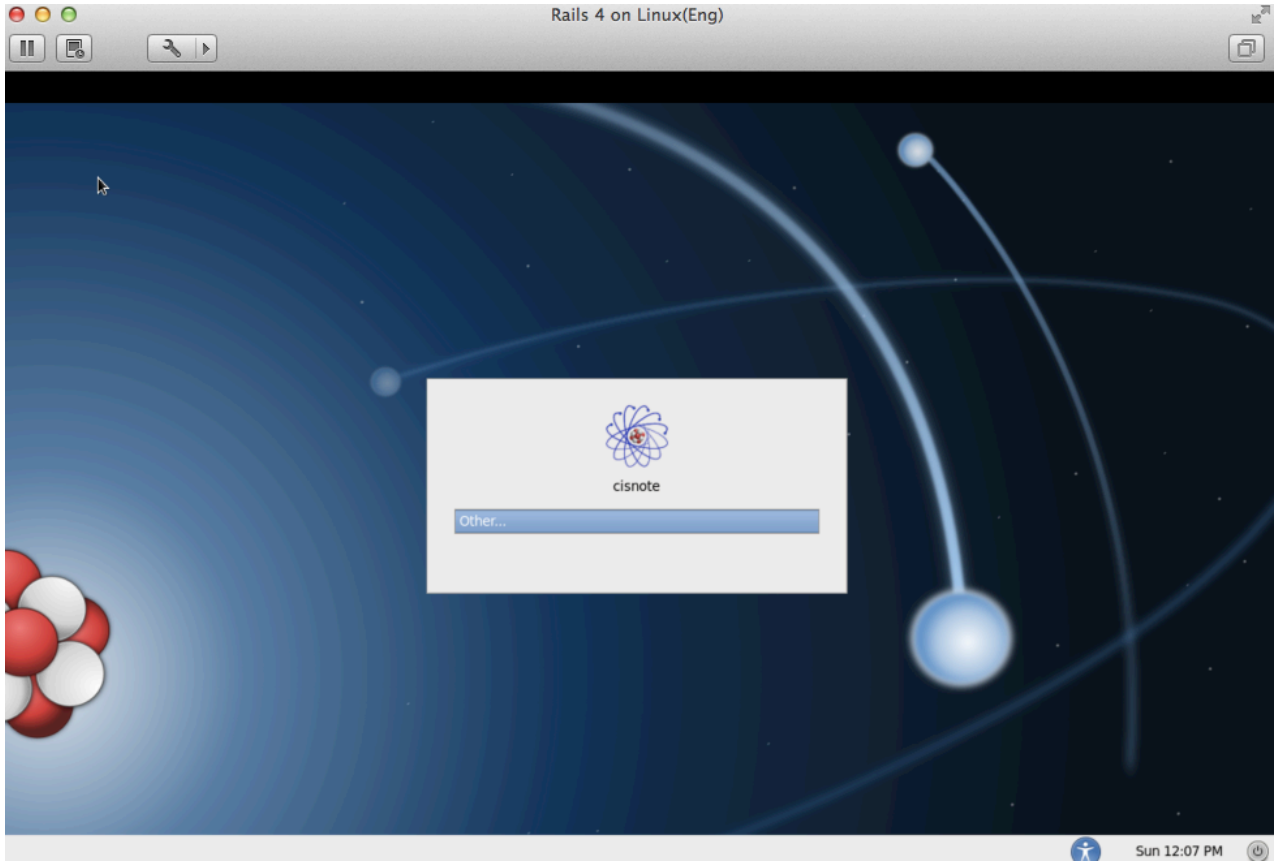
Unzip the file, and double click the file

"Scientific Linux 6.x.vmx,"
to run the virtual PC.

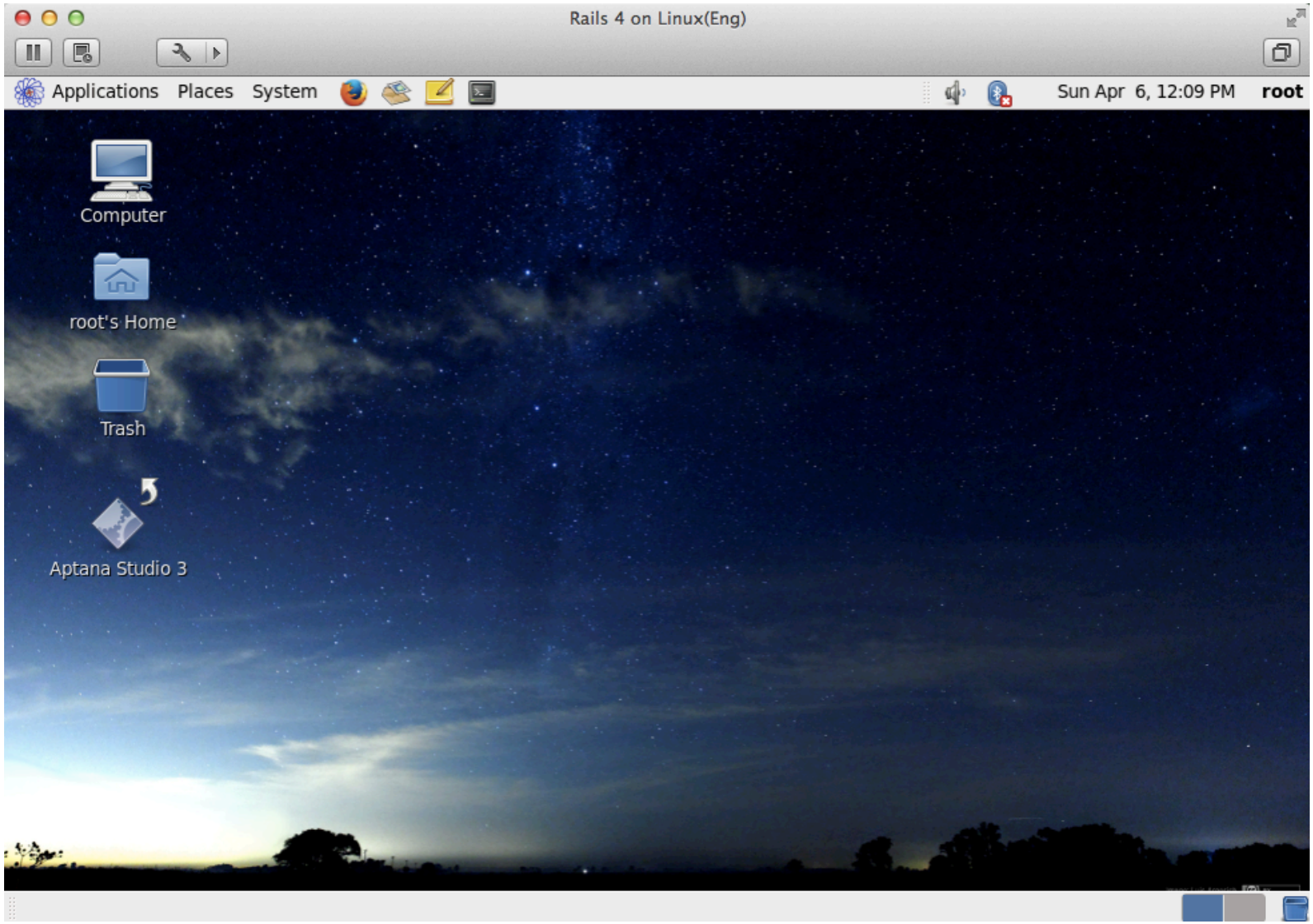
Scientific Linux on VMware

Login as root.

Password? Listen in the lecture.



Our course platform



Installation Guide

Start up Vmware, and run Scientific Linux.

According to your language, switch the language environment.

Install ruby from https://www.ruby-lang.org/ja/downloads/

Copy ruby-2.2.1.tar.gz from Download Folder to /usr/lib/ruby

Ruby installation

For the environment, run the following command

```
sudo yum install -y gcc openssl-devel libyaml-devel
   libffi-devel readline-devel zlib-devel gdbm-devel
   ncurses-devel
tar xvzf ruby-2.2.1.tar.gz
cd ruby-2.2.1
./configure
make
make install
```

commands

gem update --system

gem update

gem install rails

From http://www.aptana.com/downloads

Download Aptana Studio 3.6.1

Aptana_Studio_3_Setup_Linux_x86_64_3.6.1.zip

Installed Result

Git -- 1.7.1

rubygems(gem) – 2.4.6

Ruby – 2.2.1p85

Rake -- 10.4.2

Rails -- 4.2.1

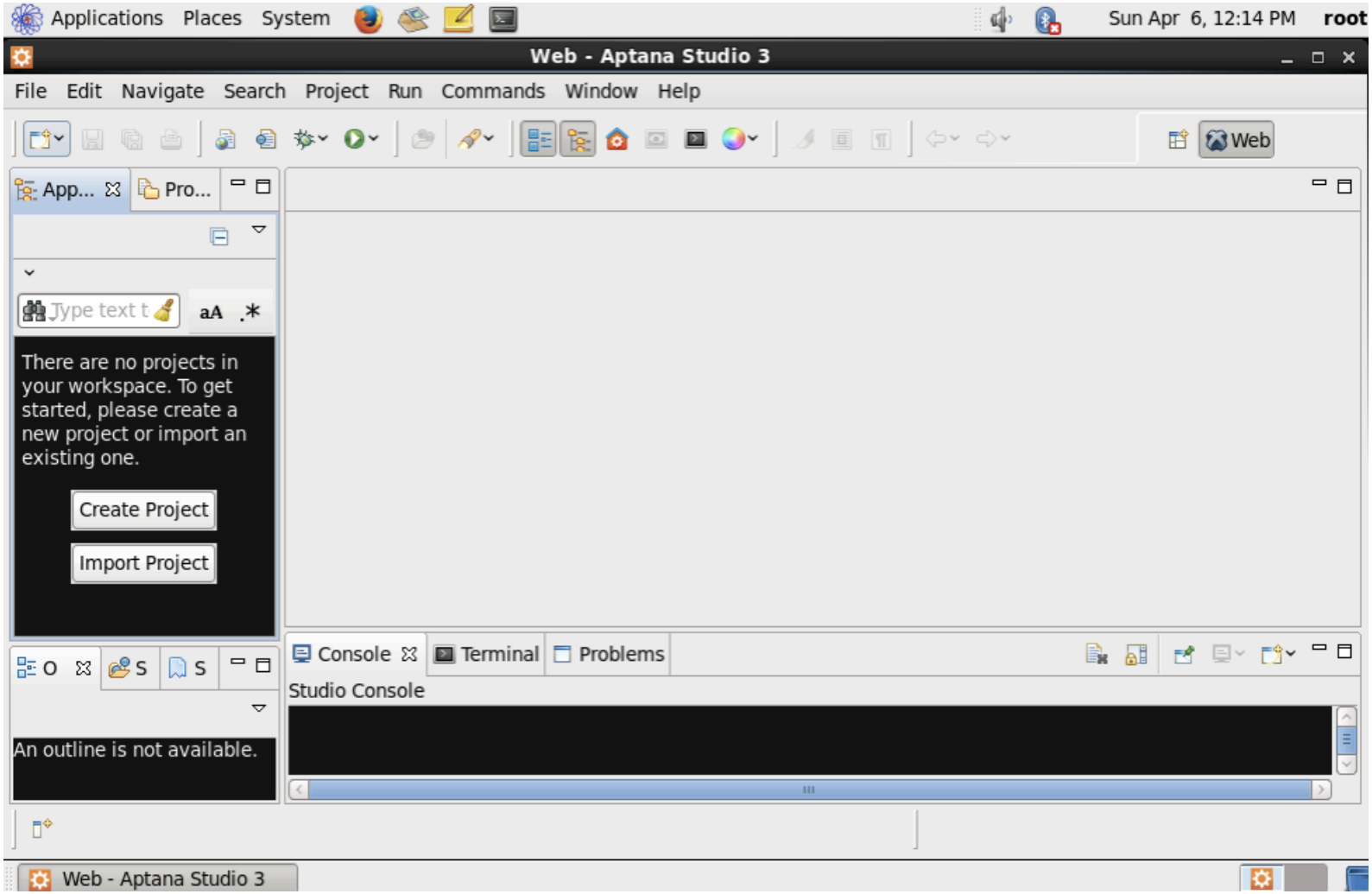
Aptana Studio 3 -- 3.6.1

Work of Today

Prepare the Rails environment.

Command sequence is shown in the previous slides.

Aptana Studio 3 on your PC



Give low priority to Theories!?

- Try first!
  - Just experience the followings:
    - By doing like this, then get the result like this!
    - Writing programs like this, the the screen has become like this!
  - By doing the above practice repeatedly, please make concrete image of Ruby on Rails, and if you feel;
    - Well then, if I want the software to work like this, I should write the program like this;
  - Then you come to the goal of this lecture.

What do we do next week?

- Setting up multi language Environment.
- And run the first application.

Absence Report for the day

Prepare VMware, install the virtual PC on your PC, and confirm running Aptana 3.

Report the screen shot of Aptana Studio 3 application window running on the LINUX, together with the wallpaper of your desktop.