OBJECT ORIENTED WEB PROGRAMMING USING RUBY

Day 1: 12/April/2012

guidance

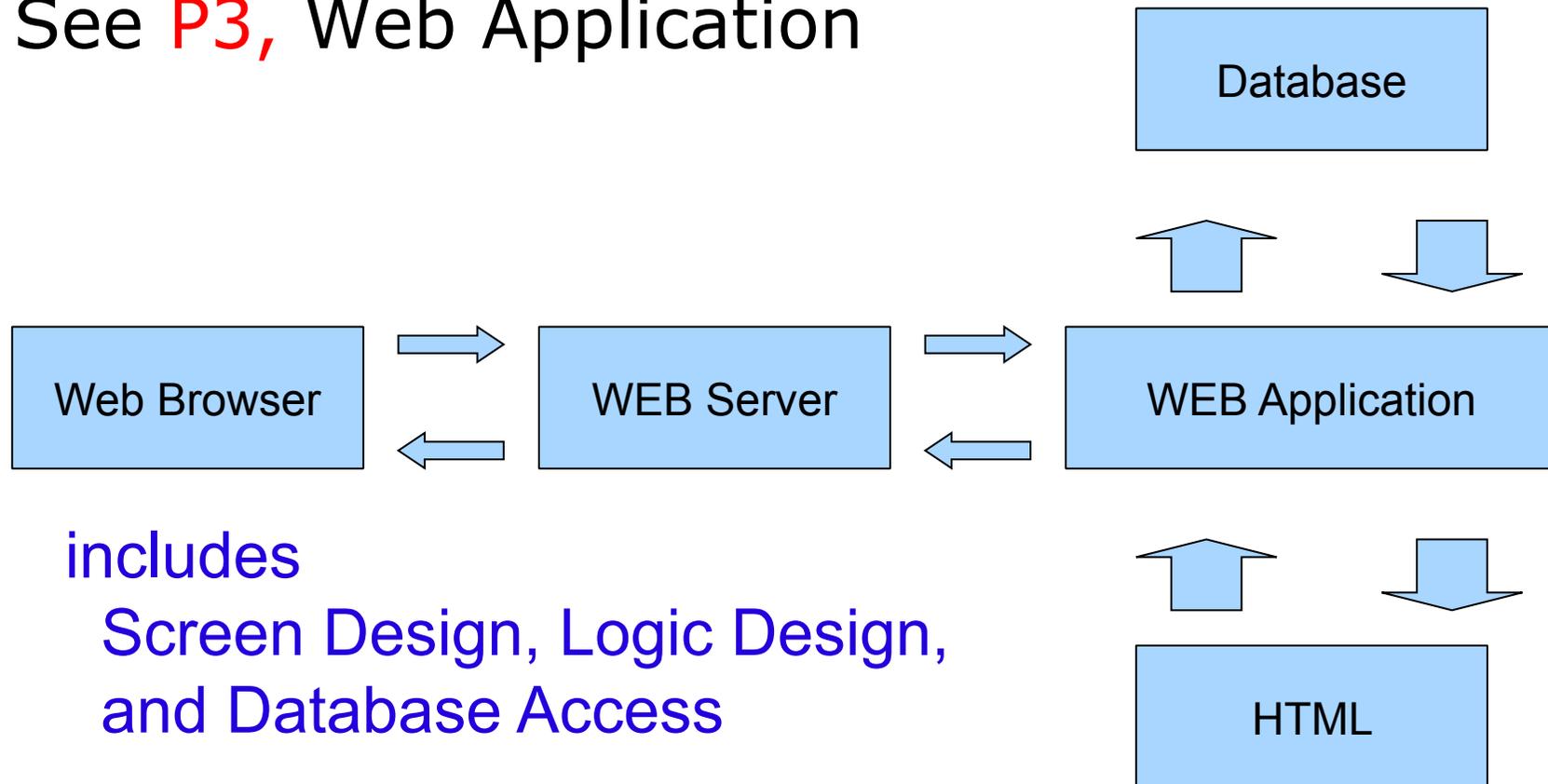Setting up Ruby on Rails on Cygwin

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)
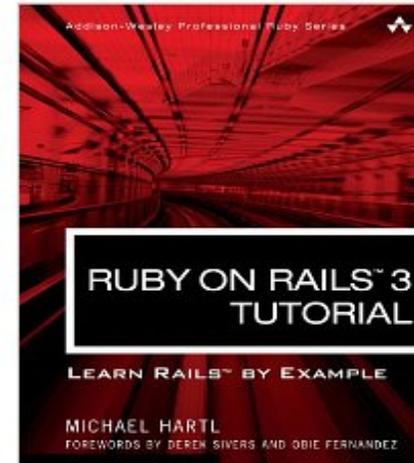
What is Web Application

See P3, Web Application

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┌─────────────┐      ┌─────────────┐      ┌──────────────────┐      ┌──────────────┐
│ Web Browser │ ───► │ WEB Server  │ ───► │ WEB Application   │ ───► │  Database    │
│             │ ◄─── │             │ ◄─── │                  │ ◄─── │              │
└─────────────┘      └─────────────┘      └──────────────────┘      └──────────────┘
                                                  ▲   │
                                                  │   ▼
                                          ┌──────────────┐
                                          │     HTML     │
                                          └──────────────┘
```

includes
Screen Design, Logic Design, and Database Access

… Everything!

Textbook

- Hartl, Michael (2011): Ruby on rails 3 tutorial.
- Boston: Pearson Education
- (USD39.99)
- ISBN-13: 978-0-321-74312-1

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.

Lecture Plan (1/4)

- Day 1: What is Web Application? (today)
- Day 2: Integrated Development Environment(IDE)
- Day 3: Locale and multi-language environment
- Day 4: Learn Test Driven Development

Lecture Plan (2/4)

- Day 5: Hash and Iterators

get used to Ruby Language Expressions

- Day 6: Screen Transition and Parameter Messaging

Learn how to control the screen transition

- Day 7: CRUD of database

How to access to DB from application

- Day 8: Editing Table Structure

How to design relational database tables

Lecure Plan (3/4)

- Day 9: Controlling Screens

Possibly try mailing from application

- Day 10: Image Display and Music Play

Learn how to use media data files

- Day 11: Upload and download files

How to store the attached files

Lecture Plan (4/4)

- Day 12: Login Authentication
  how to manage users

Day 13: Session Management

Learn what is Session

- Day 14: Summary of Second 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?

- There are some textbooks in the library.
- Please guess the reason why teachers specify textbooks.
  - Please read what we cannot explain in the lecture period from the textbooks.
  - Some sample programs are obliged to the copyright law, so, I recommend you to buy if textbooks for legal reasons.

  - Somehow, you can use the textbooks in the University library.

Scoring

- Regular exams are not performed.
- Scoring is based on the report scores.
- 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.

Reports

- Reports are requested in the Day 4, Day 7, Day 10, and the Day 13.
- Total 4 reports are imposed.

- Also, if you were absent from the lecture, please submit 'Absence Report' for the day. If you submit 'Absence Report', then the attendance is recorded for the day.

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)

Name of the report files

- Please name the report files as
  - Wnn-XXXXXXX.ZZZ
  - Where, Wnn is the number of the day,
  - XXXXXXX is your registration number,
  - And the ZZZ is the file extention

  - ex. W01-08K1234.docx
- The documents format are ;
  - OpenOffice.org Write document (odt) or Microsoft Word document (doc, or docx)

How to submit report

- Access to Hosei University Lecture support system. (授業支援システム）
- Please try to access from Hosei Portal site.

Please use templates

- Please use the file templates
  - For me to read and score report effectively
- Please name files correct
  - To identify the author of the report correctly
- Please attach the screen shots when necessary
  - For you to prove that you actually try the program by yourself.
  - Do you know how to copy the screen?

Excellent Reports are posted

- For privacy causes, the author's name and the id number will be erased, but for other students to study and know good practices, excellent reports will be posted in the web page.

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)

- Follow the instruction in the course material, install rails 3 environment on your PC's Cygwin.

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;
  - your come to the goal of this lecture.

What we do next?

- □ We will setup Aptana, an IDE(Integrated Development Environment)
- □ Setting up multi language Environment