

# Web Application Development Project

3<sup>rd</sup> iteration due to 24:00 Jun. 12, 2016

In this term, every student has developed two versions of an online Book Store website respectively with PHP and Java EE(JSP and Servlet). The aim of 3<sup>rd</sup> iteration is to refactor your Book Store with **frameworks of ORM(such as Hibernate), MVC(such as Struts) and IoC(such as Spring).**

## ***Functionality of Book Store:***

- For users:
  - registration, login/logout
  - listing, details browsing and searching of books
  - adding books to shopping cart
  - order placement of specific books
  - CRUD of profiles
- For administrator of Book Store:
  - CRUD of books and users
  - sales statistics, the criteria of statistics are provided by the administrator via GUI, including specific users, start and end dates, books and book categories.

## ***Requirements on techniques of development:***

- To apply ORM framework, such as but not limited to Hibernate, to implement the independence between services and data schema in RDBMS.
- To apply MongoDB to store user profiles.
- To apply MVC framework, such as but not limited to Struts, to implement independence among business model, workflow and representation.
- To apply IoC framework, such as but not limited to Spring, to implement the independence between source code and runtime environment.
- To implement book browsing page with Ajax and JSON
  - This page lists the abstract information of all books.
  - When user clicks on a book, the details of this book will be retrieved from server with Ajax and displayed on this page.
  - JSON processing in Browser and Server. In the ajax-based book list page, the book details should be transferred as JSONs.
- To use MongoDB store the user profiles.
  - The details of user profile could consist of photos, videos and rich text.

## ***Submission:***

- source code
- a doc to give the necessary description of your project.
- all the jar files should NOT be included in the submission.

**Grading Criteria:**

- 1<sup>st</sup> iteration: 10%
- 2<sup>nd</sup> iteration: 10%
- 3<sup>rd</sup> iteration: 30%
  - Functionality: 16%
    - ◆ registration, login/logout: 2%
    - ◆ listing and searching of books: 2%
    - ◆ CRUD of profiles, books and users: 2%
    - ◆ adding books to shopping cart and order placement of specific books: 3%
    - ◆ sales statistics, the criteria of statistics are provided by the administrator via GUI, including specific users, start and end dates, books and book categories.: 3%
    - ◆ to implement book browsing page with Ajax and JSON: 4%
  - Application of SSH: 10%
    - ◆ integration of SSH: 5%
    - ◆ structure of project: 5%
  - Application of MongoDB: 4%
- Final examination: 50%
  
- Additional: Database Design 15 points
  - Data schema & normal form: 10%
  - Function, stored procedure and/or trigger: 5%