

Assignment 3 - Object-oriented Design

The University of Hong Kong

Department of Computer Science

COMP7201 Analysis and Design of Enterprise Applications in UML

Background

A team of systems analysts have worked out the analysis artifacts of the TSE system. You are assigned to work on the design phase accordingly.

You need complete the tasks defined in the next section. Please refer to the sample solution of Assignment 1 shown on Moodle course webpage as their analysis artifacts passed to you. Your design model should reflect the requirements in Section 2 and at the same time be in accordance with the sample analysis model as in the sample solution of Assignment 1.

Tasks and Deliverables

Please conduct the following standard steps for the part of the TSE system

Part I: Before the Requirement Change

1. Transform the analysis use case documentation of use case “Register” to design use case documentation.
2. Model object interaction and behaviors for the Design Use Case “Register”.
 - i. Identify and categorize design classes;
 - ii. Identify (additional) attributes;
 - iii. Identify behaviors and responsibilities;
3. Communication diagram(s) for the Design Use Case “Register”.

(To ease student workload, low-level interactions with sequence diagram(s) and state machine(s) need not be prepared for this assignment.)

4. Update the class diagram from the one appeared in Assignment 1 sample solution so that it *only* reflects (i) the changes of object classes relevant to the Design Use Case “Register”, and (ii) design class identified above in Step 2.

Part II: After the Requirement Change

The project management team and the executives have reviewed the requirements for OO Analysis. With the consideration of emerging mobile technology, no membership card will be issued after registration. They would like you to send the electronic membership card by email to the members. Therefore, you are asked to re-work the above documentation.

Repeat the above Steps 1 to 4 to reflect the new requirements. The deliverables are design use case description, list of revised design classes with behaviors and responsibilities, an updated class diagram (based on Design Use Case “Register”), and communication diagrams in sketch.

Note: You do not need to redo everything for part 2 of the assignment, but only highlight their changes.

Submission and Deadline

Produce

- communication diagrams using any vector graphics drawing tool such as (but not limited to) MS Office software,
- other UML diagrams using **IBM Rational Software Architect version 9.1.1 (or above)**, and
- other descriptions using MS Word. Consolidate the deliverables into one document (in MS Word or Adobe PDF).

Submit a soft copy of your document through Moodle and a hard copy to Assignment Box A2 on 3rd floor of Chow Yei Ching Building.

Deadline: Tuesday 29 November, 2016 @ 12:00 noon.

Late submission policy: *No* late submission will be allowed. A sample solution will be posted immediately after the deadline to facilitate student revision.