CS550: Introduction to Software Engineering

Spring 2016

Homework 1

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(The purpose of homeworks is to stimulate students to think about the questions and read the textbook and other relevant materials to answer them. So you may discuss homework with classmates to understand the problems.

Warning: But it is strictly forbidden to duplicate part or whole of the solutions of other people or to let other people duplicate it. The solution should be yours and your own work.)

- 1. How do software characteristics differ from hardware characteristics?
- 2. What is the difference between a customer and an end-user?
- 3. Describe the differences between software construction and software deployment.
- 4. Develop a sequence diagram showing the interactions involved when a student registers for a course in a university. Courses may have limited enrolment, so the registration process must include checks that places are available. Assume that the student accesses an electronic course catalog to find out about available courses.
- 5. Based on your experience with a bank ATM, draw an activity diagram that models the data processing involved when a customer withdraws cash from the machine.
- 6. Why is it that many software developers don't pay enough attention to requirements engineering? Are there ever circumstances where you can skip it?
- 7. Why do we say that the requirements model represents a snapshot of a system in time?
- 8. How does the navigation model for Web applications differ from their interaction model?