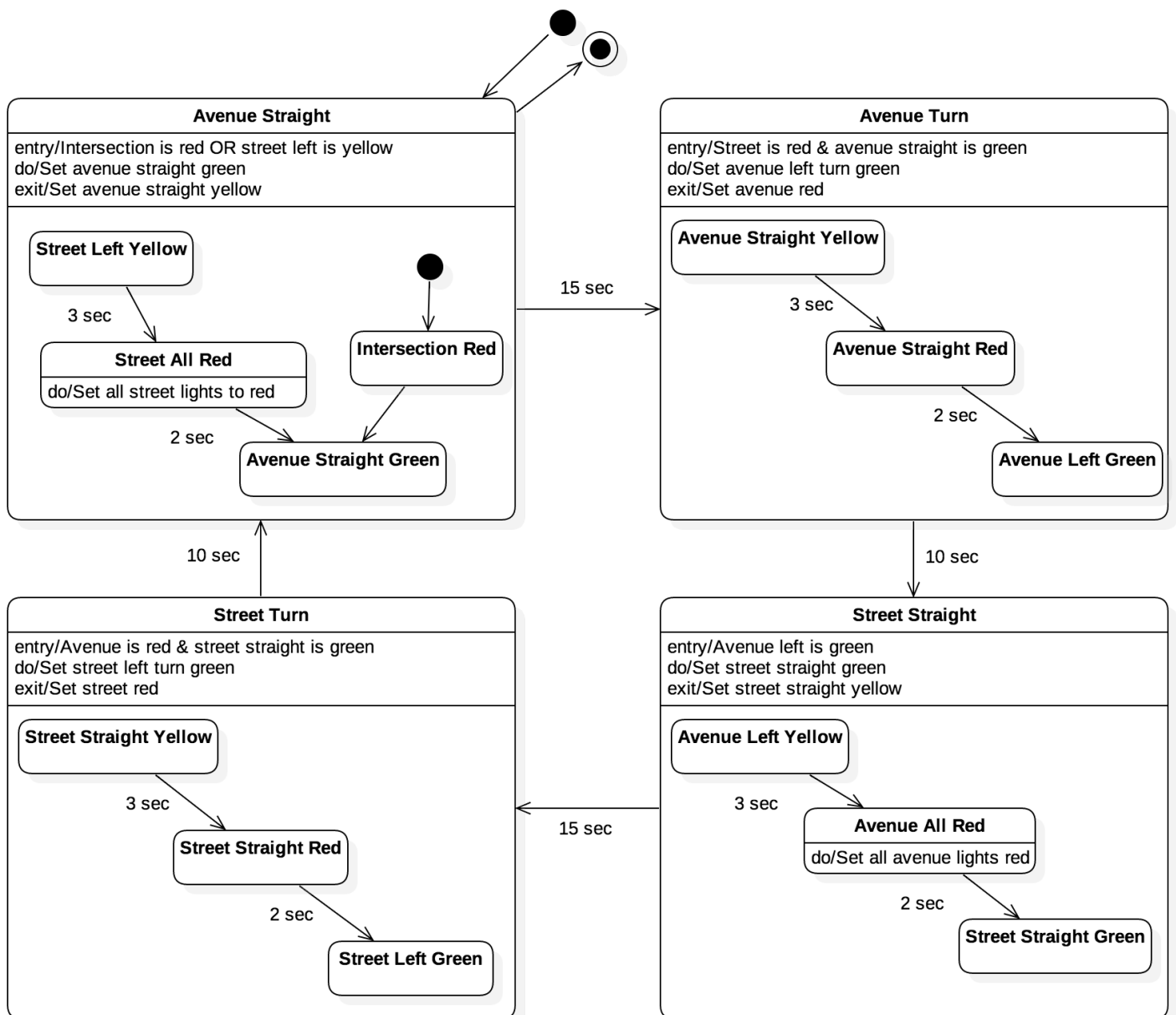


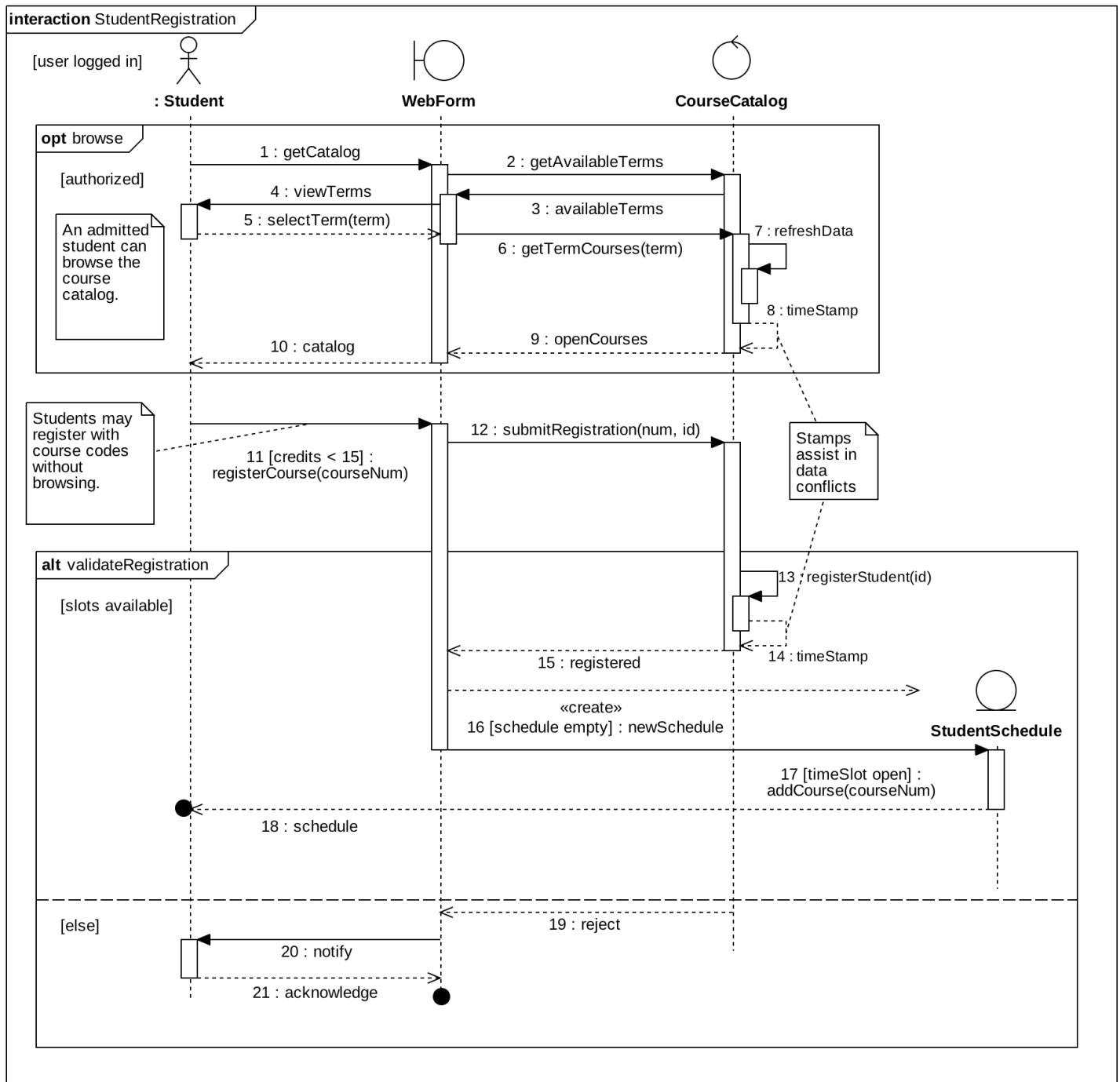
CSC 330 Homework Assignment 3

Due on 11/24/2017 11:59pm

- Consider a traffic light system at a four-way crossroads (e.g., two roads intersecting at right angles). Assume the simplest algorithm for cycling through the lights (e.g., all traffic on one road is allowed to go through the crossroad while the other traffic is stopped). Assume each individual traffic light has five states (i.e. green, green left turn, yellow, yellow left turn, and red). Identify the states of this system and draw a statechart describing them. Your statechart must not allow potentially dangerous light combinations (e.g. all green or green/yellow on crossing streets).



2. Develop a sequence diagram showing the interactions involved when a student registers for a course in a university. Courses may have limited enrollment, 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.



3. Look carefully at how messages and mailboxes are represented in the email system that you use. Model the object classes that might be used in the system implementation to represent a mailbox and an e-mail message. (You need to list all possible attributes and operations)

