



The University of the West Indies, St. Augustine
COMP 3607 Object Oriented Programming II
2018/2019 Semester 1
Assignment 1

Release Date: September 17, 2018 at 3:00 p.m.

Due Date: September 28, 2018 at 11:50 p.m.

Problem Scenario:

You have been tasked to develop the architecture for a rental system that lets clients rent one or more vehicles from a dealer. There are two categories of vehicles that can be rented: cars and SUVs. All rentals are priced by the hour: cars at a standard rate and SUVs at a premium rate.

The dealer has two physical car depots and one head office. A vehicles can be collected from and returned to any of the three locations. Payments and deposits are made for a rental only at the head office.

Vehicles are rented to clients who are 25 years or older, and who have a valid driver's license. A valid credit card is also required for all rentals. A client is allowed to collect a vehicle only after a deposit has been made, after all licenses have been verified as valid, and after the client is confirmed to be of age to rent the vehicle. The full payment for the rental is charged to the credit card when the vehicle is returned in good condition by the client.

Question 1

For the problem scenario above:

- (a) Develop a set of high level and expanded use cases that describe the processes in the problem scenario.
- (b) Develop a conceptual model that identifies the concepts, attributes and associations in the domain.
- (c) Develop sequence diagrams to represent the flow of control from a given actor(s) and the execution of the operations for those activities that you have identified as relevant for your emerging model.
- (d) Develop UML class diagrams that will document the classes and their relationships in a more formal manner.

Submission Instructions

- Ensure your student ID is documented in your submission. Label all answers and diagrams appropriately based on the question part answered.
- Upload a zipped file of your submission to the myElearning course page by the deadline.
- If you are using your credit day, please indicate on your submission.