Department of Computer Engineering

Faculty of Engineering

University of Sri Jayewardenepura

Course	Software Engineering
Course Code	CO2307
Title	UML Diagrams Assignment
Time	1.5 Hour
Outcomes	Getting Basic Knowledge about Software Engineering

1. Develop an Activity diagram based on the following narrative. The Airline Reservation System is to provide automotive reservation to passengers. Initially, prospective passengers fill out a reservation application, which provides information about the passport details of passengers and departure date/time and Arrival date/time. This information is sent to an agent, who sends it to various Airline companies to get quotes for reservations. When the responses return, the agent then determines the best travelling package and gives the passenger a copy of the travel itinerary.

2. Create a Use Case Diagram for the following description of major services (functionality) provided by a hospital's reception in Hospital Management System. This diagram need to be shown actor and use cases for a hospital's reception. Hospital Reception subsystem or module supports some of the many job duties of a hospital receptionist. Receptionist schedules patient's appointment and admission to the hospital, collects information from the patient by phone and/or upon patient's arrival to the hospital. For the patient that will stay in the hospital ("inpatient") she or he should have a bed allotted in a ward. Receptionists might also receive patient's payments, record them in a database and provide receipts, file insurance claims and medical reports.

3. Create a UML Sequence diagram which shows how Facebook (FB) user could be authenticated in a web application to allow access to his/her FB resources. Facebook uses OAuth 2.0 protocol framework which enables web application(called "client"), which is usually not the FB resource owner but is acting on the FB user's behalf, to request access to resources controlled by the FB user and hosted by the FB server. Instead of using the FB user credentials to access protected resources, the web application obtains an access token. Web application should be registered by Facebook to have an application ID(client_id) and secret(client_secret). When request to some protected Facebook resources is received, web browser ("user agent") is redirected to Facebook's authorization server with application ID and the URL the user should be redirected back to after the authorization process. User receives back Request for Permission form. If the user authorizes the application to get his/her data, Facebook authorization server redirects back to the URI that was specified before together with authorization code("verification string"). The authorization code can be exchanged by web application for an OAuth access token.

Submit your answers to the submission link in the LMS course page.

Date: 03 Feb 2026

Time: 1.30pm - 4.30pm