Module: COMP 2911: Requirements Engineering
Assignment: Coursework 1
Assignment weighting: 20%

Deadline: Thursday 12th March 2020 - VLE submission

Learning Outcomes

- Put into practice requirements modelling techniques
- Produce appropriate UML diagrams to model part of the activities of a flight booking system

TASK

Context

You have been asked to design a flight booking system for a small travel agency. Interviews have been held with company staff and customers, relevant documentation of the current practices in the company have been reviewed.
Based on this, the following description of the system has been derived:

Airline companies offer various flights. A flight is open to booking and closed again by order of the company. A customer can book several flights for different passengers. A booking is confirmed when there is availability for specified day, time and flight number. A booking can be cancelled or confirmed by providing its reference number. A flight may involve stopover in cities. Customers can be provided with the option to book an hotel with their flight.

Develop a (partial) UML Model of the flight booking system

Task 1: Develop a Use Case diagram for the flight booking system by identifying
(a) the main actors and the use case's corresponding to each actor
(b) possible generalisation between actors or use cases
(c) relationships (<<include>> or <<extend>>) between use cases

Task 2: Create a Sequence diagram for the main success scenario for booking a flight. Consider checking for flight availability, asking for booking confirmation, making the payment, acknowledging the booking.

Task 3: Create an Activity diagram showing the process for validating a booking. Focus on the issues of choosing a flight that satisfied the customer and confirming its availability with the corresponding airline

General Note

There are different models to represent the same world, and each model may impose corresponding constraints on the world. Make sure you check his. Specify any additional assumptions and further constraints defined by your UML models which have not been described in the requirements given above

MARKING SCHEME

40 marks in total

*** Use Case Diagram**

- appropriate actors (including primary and secondary) [2 marks]
- appropriate use cases [2 marks]
- indicating relationships between actors and use cases, including generalisations and dependencies [6 marks]
- compliance with the UML use case diagram notation [2 marks]

*** Sequence Diagram**

- appropriate identification of the steps in the main success scenario [4 marks]
- appropriate UML sequence diagram for the main success scenario [6 marks]
- compliance with the UML sequence diagram notation [2 marks]

*** Activity Diagram**

- appropriate definition of activities and states for the main processes [6 marks]
- appropriate links between activities and states to show the flow of events [6 marks]
- compliance with the UML activity diagram notations [4 marks]