

FAST National University of Computer and Emerging Sciences

Introduction to Software Engineering SE-110

Assignment 1(Use Case Diagram)

Submission Deadline: Thursday, March 26, 2020(@ 2:00 PM)

Q 1: Draw a use case diagram for the hospital reception system. In this system, receptionist can schedule patient appointment, patient registration and patient hospital admission. Both types of patients i.e. outpatient and inpatient can be admitted in the hospital. Receptionist also checks the insurance and claim forms and put them in file. Patient medical report is also filed by the receptionist.

Q 2: Draw a use case diagram for the vehicle sales system. Customer makes offer for the vehicle. Customer can be new customer or old customer. Customer make payment if his/ her offer is accepted. System also maintains the customer information. Management has right to accept or reject the offer by managing the offer. Sales person records the sales contract.

Q 3 Analyze, and Design a USE CASE Diagram for given Software System.

NATIONAL UNIVERSITY of Computer & Emerging Sciences Karachi Campus wants you to build a new software system for spring 2019 that will be used to assist them in the admissions process. The software system will allow application entry personnel to enter the application details, as much as available from an application form filled by a candidate. The financial processor will then check to make sure that the application processing fees has been accepted and the payment by check or credit card has been cleared and will mark the application as eligible for further processing. The application entry personnel may also at any time update the scores (like **GRE, TOEFL, IELTS, GPA** etc.) for the student. An application evaluator will be able to view all applications that are ready to be evaluated. An application is ready for evaluation if all scores have been received and the application fees have cleared. The evaluator may evaluate the student based on several criteria like GRE score, TOEFL score, IELTS score, GPA, etc. More criteria may be added to the system later and an evaluator can select between these. Some of the criteria may be marked as core, meaning one of these will be required. Other criteria may be optional and any number of these may be used in evaluation. Once an application is evaluated, the personnel may either accept or reject the applicant. A letter as appropriate may be printed at any time with the date of approval or rejection. At any time, administrative personnel may check the status of an application. While checking the status of an application, they do not have the privilege of modifying any information. A given

university employee may work in one or more of the above capacity and will have different privilege in the system. New employees (account id and password) may be added, their privilege or access level may be changed or their accounts disabled by an administrative account (which again is a privilege in the system, i.e., anyone could be assigned that status). Whenever an entry is modified, the time of modification and the person modifying it is noted automatically by the system.

Q 4 Analyze, and Design a USE CASE Diagram for given Software System.

Consider the following features of an **Online E-Commerce Alibaba Group Holding Ltd Shop**: Customers should be able to search for products by Title and Category. Once they find a product they like, they can add the product to their shopping cart. This requires that they are logged in, therefore if they do not yet have an account, they should be able to create one. When creating an account, a username and password should be chosen, and optionally, they can enter their home address and/or the credit card information they want to use for paying. Credit card information consists of the name on the credit card, the credit card company, the credit card number, and the expiration date. They can add as many products to the shopping cart as they want, and they can also remove products. If they decide later at some point to check out the shopping cart, then they are asked to check the shipping address and credit card information supplied, and if either of those was not supplied, they are asked to supply it. Next, they can review the contents of the shopping cart, and if they agree, they can send the order. Then, the credit card information is sent to the bank, and, if approved, the order is finalized. If the information was not approved, then the customer is made aware of this, so he/ she can change the payment option. A delivery agent can check the status of online orders, and process an order, meaning that it changes its status from “pending” to “delivered”. They can also add products to their favorite list for purchasing items in future. The administrator is responsible for the products inventory. He can check the current inventory, order new products from the supplier, and add products to the inventory.