Mid Term Assignment

Q1: Draw Use Case diagram   10 Marks

Consider the following credit granting system for a bank where a customer can apply for different types of credit. The types of customer are:
•Home Owner
•Home Buyer
•Auto Buyer
•Credit Card Applicant
If the customer is a home owner then a loan officer must process the customer's home equity loan application but if the customer is a home buyer then a loan officer must process the customer's home mortgage loan application. In both cases an assessor (independent of the bank) is required to assess the home value. If the customer is an auto buyer then a loan officer must process the customer's auto loan application. Finally, if the customer is a credit card applicant, a loan officer must process the credit card application. For all types of customers (except for home owners) it is required that a credit history check is made on the customer. This information can be obtained by the local credit bureau. Create a Use Case diagram for the above problem.

Q2: Draw Class Diagram   10 Marks

Illustrate Class diagram for ATM Machine. The various Classes involved in the system are: Bank, Account, Customer Info, Debit Card, Current Account, Saving Account, ATM Info, ATM Transaction, Withdraw Transaction, Change Pin, Transfer Money, Check Balance. The Bank maintains personal and ATM information of each customer. The customer can access their account using Debit Card issued by the Bank. In this system there could be two types of Account: Current Account and Saving Account. Both use to share many of the properties and methods. The ATM Machine can perform multiple transactions such as Withdrawing cash, change pin, check balance and Transfer Money to each account.

Q3: Draw Activity Diagram   10 Marks

Create an activity diagram for the following dentist office system.
Whenever new patients are seen for the first time, they complete a patient information form that asks their name, address, phone number and brief medical history, which are

stored in the patient information file. When a patient calls to schedule a new appointment or change an existing appointment, the receptionist checks the appointment file for an available time. Once a good time is found for the patient, the appointment is scheduled. If the patient is a new patient, an incomplete entry is made in the patient file; the full information will be collected when they arrive for their appointment. Because appointments are often made so far in advance, the receptionist usually mails a reminder postcard to each patient two weeks before their appointment.