Your weekly intellectual supplement

USE CASE DIAGRAM (ACTIVITIES)

CHAPETER 3

Exercise 1 – Course registration

The following should be textually analysed, and a use case diagram created containing several use cases. Identify the actors, use cases and associations.

At the start of each semester a student can request a prospectus containing a course list. Information about a course is provided, such as the tutor, department and pre-requisites. The new system will allow students to create a schedule, then select four courses. Each student chooses two others in case their first choices become full or are cancelled. No course can have more than 10 students. No course can have less than 3 students, or it will be cancelled. This will be the same functionality as available to other internal users of the system. When registration is complete, the registration system sends a message to the billing system to send out a bill to the student.

Tutors use the system to find which classes they are teaching and who the students are. The registrar will administer the system.

For a period at the beginning of the semester the student can change their schedule. Students must be allowed to access the system during this time to add or delete courses.

Note: If you are expected draw a suitable use case diagram.

Exercise 2 – ATM Banking System

The following should be textually analysed and a use case diagram created containing several use cases. Identify the actors, use cases and associations.

The Automatic Teller Machine (ATM) is the banking subsystem that enables the end-users to interact with the multiple functionalities of the bank like transactions, depositing, etc. The bank has customers that utilizes the ATM for many purposes. Amongst others, the customer needs to check the balance, withdraw cash, deposit funds, and transfer funds. We also have the technician that deals with repairs and maintains the ATM so that customers have no complaints. There is a relationship between the bank and the ATM because the user will only do such acts when the bank authenticates them.

Note: You are expected draw a suitable use case diagram.

Exercise 3 – Car Rental System

The following should be textually analysed and a use case diagram created containing several use cases. Identify the actors, use cases and associations.

Car rental is a vehicle that can be rented for a charge and utilized for a predetermined amount of time. Even if they may not have access to their own personal vehicles, getting a rental car lets folks travel around. The Car Rental System will enable customers to make reservations for their vehicles from anywhere in the world. In order for the business to efficiently run its automobile rental operation, all clients will be forced to register and reserve the vehicle. By entering their personal information on the registration page, users of this application disclose information about themselves. A customer can reserve a car after setting up an account on the website. After registration the customer can then login into they system to be able to see system functionalities. To reserve the car the customer will have to search and select that particular car of their choice before making their reservation. The proposed system is an online system that is fully integrated. It effectively and efficiently automates manual procedures. Customers are aided by this automated method, which allows them to fill in the specifics according to their needs. It contains information on the sort of car they want to hire as well as the location. The system will have an employee of the company responsible for maintaining cars' information and view reports about daily reserved or rented cars. The manager will be responsible for to view monthly rental reports and generate the bill.

Insurance policies are beneficial for anyone who wants to protect their family, their assets, and themselves from financial risk or losses. Insurance policies will help you pay for the costs associated with an unforeseen loss of property or theft. The system also has the insurance to help with bill payment.

Note: You are expected draw a suitable use case diagram.

Exercise 4 – Online shopping System

Online shopping is becoming increasingly convenient for today's customers. It is explained by strong internet penetration in all countries, lower costs than in the retail network, and door-to-door service. Because the internet is so crucial these days, it generates a new market that can be difficult to quantify at times. Online buying differs from brick-and-mortar shopping in that there is no actual presence of items. On the other hand, the internet can sell far more services, and motivation and decision-making processes are directly linked to feedback.

This system allows the consumer to log in after registering. The ultimate goal is for customers to be able to browse or view items and make purchases. The system supports service authentication, which allows users to log in, browse things, and complete checkout.

We have an identity provider in charge of viewing items and completing the checkout. The system also includes credit card payment services, which complete the checkout process for the customer. Finally, it includes PayPal, which allows users to send and receive money all over the world. PayPal should be able to login on the system.

Note: You are expected draw a suitable use case diagram.