



Second Exam.

First Semester 2008

OOA&D

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name

Q1:Description: Event Announcement System

In an academic department at a university, three type of events are announced to faculty and students: colloquia by distinguished visitors, Ph.D. and M.S. defense, and news. The talks by distinguished visitors are announced by the colloquium secretary. The Ph.D. and Masters defense is announced by the graduate secretary and any staff member (faculty or secretary) can announce news. These events should also be published on the departmental webpage. The colloquia should also be published on the colloquium webpage.

The announcement for a talk by a distinguished visitor must contain the name, title, affiliation, and a brief bio of the visitor as well as title and abstract of the talk. It must also contain the date, time and venue of the talk. Finally, it should say whether the refreshments will be served or not.

The announcement for a M.S. or Ph.D. defense must contain the name of the student and the major professor of the student as well as title and abstract of their presentation. It must also contain the date, time and venue of the talk.

A news announcement contains a title and a description.

Part 1: Identify the actors in this event announcement system. lassify them into three different types of actors.

Part 2: Write a use case in a casual format as specified in your textbook and in class notes. The use case should at least contain the success scenarios for colloquium secretary posting talk announcement, graduate secretary posting defense announcement, and faculty posting departmental news as well as any failure scenarios that you can conceive.

Part 3: Draw the use case diagram for the use cases in part 2.

Q2: Given the following problem statement, draw a use case diagram showing actors and use cases and their relationships:

A Bank wants you to build a software system for an ATM which will be connected through a network. A Customer will approach the ATM and insert the bank ATM card and enter the pin number. The customer will then be allowed to choose among the accounts that the customer has by displaying the account number and type of the account. Once the customer chooses an account, he/she may check the balance on the account and request for a printed copy (receipt). The customer may also withdraw cash, not exceeding the amount of \$200 per day. Customer may also transfer funds between his/her own accounts. A banker may connect remotely to the ATM and get reports on daily transactions, like the accounts processed, amount dispensed, cash left on the machine, etc. An operator may access the ATM to add money and fill in printer paper at any time.

Q3: What are the various artifacts that you develop in Requirements phase according to Ripple methodology?

Q4: Draw one Activity diagram for the problem described below :

An apartment has a gate entry system. A resident may pull up to the gate, swipe a card. The system will authenticate the card and open the gate if valid. A guest may pull up to the gate and punch in an apartment number. The system will then dial the resident's number and allow the guest to speak. The resident may press a code to open the gate to allow the guest in or simply hang up. The apartment manager may reprogram an access card, disable an access card, and reassign the phone number of an apartment.