

Assignment 1:

1. People watch movies. People have name, gender, address and movies are described by movie name, duration, and genre. Make a class diagram for this scenario.
2. Create the use case diagram according to the following elevator control system with following functional requirements.
 - a. The elevator control system allows the passenger to use the elevator and to select the destination floor.
 - b. When the passenger pushes the external button (to use the elevator), or the internal button (to select destination floor) the central control system switches the light button on.
 - c. When the passenger calls the elevator or select the destination floor, the central control system open/closes the elevator.
 - d. When the passenger calls the elevator or selects the destination floor, the central control system moves/stops the elevator to/at the passenger call floor or to/at the passenger destination floor.
 - e. When the passenger leaves the elevator, the central control system switches the button light off.
3. In library system any person can apply for membership. Once the person gets membership, books can be issued. To issue book member must provide membership card. Library system verifies validity of the card and if card is valid book is issued. While returning books library checks due date of the books. Make sequence diagram.
4. You as a developer is requested to Develop a simple console-based application for teachers to create quizzes for the students. Teacher just wants to manage his/her quizzes and questions. System should provide the functionality to add new quiz and then add some questions to that quiz. All the questions would be MCQs. For each question, Teacher will store the question number, question details, options of the question and the right option. Draw Class Diagram for mentioned case.
5. Make Activity Diagram for Library Management system and withdrawal money from bank.
6. Draw a use case diagram for a courier company, Fedex, a customer should be able to track their package in real time basis. The payment for the package should be done at the time of senders end only. The system should acknowledge the sender once the receiver receives the package. The insurance company should pay for any damage or misplace of items as per the rules of the company.
7. Draw a SSD for blood bank system where the donor gets notified for the request of any blood requirement of his/her type. The donor should be able to see their total list of donation made and whether or not they are capable to donate as per the health conditions set by the donor.
8. Create an activity diagram for downloading your favorite ring tone after payment via stripe/paypal. The same ring tone can be downloaded any number of times if the payment for it is already made. In case of new routine, the payment has to be made again.
9. Write a code for singleton, adapter, factory pattern separately.
10. Write a code for a class diagram person with data member id and name with set method() and display using method display(). Derive class from Mobile with data member Number and Brand with method name set and also display using display() method. And also make class with billno, mobile and amount also display this using display method.