

Activity Diagram and Sequence Diagram

Example-1:

Consider an online reservation for a Bangladesh Railway Ticketing System. The train ticket can be booked by customers on the web site of Bangladesh Railway. The customer has the option to directly pay for the ticket through the website. In that case, the ticket cannot be cancelled (neither by the customer nor by the railway system). If the customer has not paid for the ticket, the railway system can cancel the seat if the customer does not show up one hour before the trip. When the reservation is cancelled, the seat will become free and can be sold to another customer. Both the customer and the railway system authority must authenticate themselves for performing operations with the system.

Draw the activity diagram for ticket booking and Draw the sequence diagram for the given system.

Example-2:

Create a set of use cases for the process of buying glasses from the viewpoint of the patient, but do not bother to identify the steps within each use case. (Just complete the information at the top of the use case form.) The first step is to see an eye doctor who will give you a prescription. Once you have a prescription, you go to a glasses store, where you select your frames and place the order for your glasses. Once the glasses have been made, you return to the store for a fitting and pay for the glasses.

Provide Activity diagram and Sequence diagram for prescription process of a doctor.

Example-3:

“**Amar Bazar**” is an E-commerce website is a virtual market place for all buyers and sellers. In this web portal any user can register themselves either as buyer or seller. While registering as buyer or seller, the user just fill the registration form and upon activating from the email the user receives a valid login ID and password to do the online business on this virtual market place.

Seller sale product but need to login. While selling the product, the seller may add product or delete product. The add product must take picture of the product for the upload. In the selling of the product, the seller provide product name, feature of the product, select product type, product quantity and product status. Finally the seller clicks the button Sale.

On the other hand, Buyers buy product and also need to login. While buying product, the buyer may pay by cash or pay by credit card. In case of pay by credit card, this must check the validity of the card to the bank. In the buying of the product, the buyer select the category of the product and select the product which then display the feature, quantity and status of the product selected by the buyer. The buyers then enter the quantity of the product and finally click the button buy.

Provide Activity diagram and Sequence diagram for add a product and buying a product with payment.

Example-4:

Suppose you are a Software Engineer. A client has come to you to build a software for his banking business. He is already using a software but it is not compatible with his changing business logics. So he needs a new software that implements all the new business logics as well as the old functionalities also. So, basically he wants an up gradation of his previous system. In this system there is an activity in where customer can withdraw money from ATM. User inserts his Card into the machine. Then ATM reads the chip data and requests the user to input his valid key. Then ATM checks the key's validity by communicating with the bank server.

If the key is valid then ATM lets the user to withdraw money by asking the amount. But if the key is not valid then ATM asks again for valid key for three times. After three times, ATM rejects the card and releases it. When user inputs the amount then ATM checks if that amount is available or not. If available, then pays the money. But if not, then notifies the user. At last, ATM releases the card.

Provide Activity diagram and Sequence diagram for “Withdraw Money” and “Check the Amount”.

Example-5:

Jalalabadh International Airport is using an online Airline Ticketing System (ATS) system. This software system allows passengers to check-in and fly to their destinations. To board a plane, a passenger must have a boarding pass. A passenger may obtain his/her boarding pass using the ATS as an automatic self-check-in terminal or instead go to a counter where an agent can provide the services provided by ATS.

For Issuing a boarding pass, the passengers identify must be verified. Now, suppose there is a software system that can verify the passenger's information (using identification card) against the existing database. Call this system Passenger Verification System (PVS). Its functionality is to guarantee that passenger's information (i.e., a Person's name, National ID number, Address and Age) matches what is contained in a database.

A passenger may check-in his/her luggage and change seat assignment prior to his/her boarding pass being issues. Assume every passenger uses an official identification card (e.g. Driving License or Passport) for identity validation.

Provide activity diagram and sequence diagram for “Boarding Pass” and “Passenger Verification”.