

Assignment 1: Default simple exercise

Here is the introduction to the exercise

Difficulty: ☆☆☆★★

Learning objectives:

- Learn about swimlanes in an activity diagram
- Apply swimlanes and the uml activity diagram to model a business process

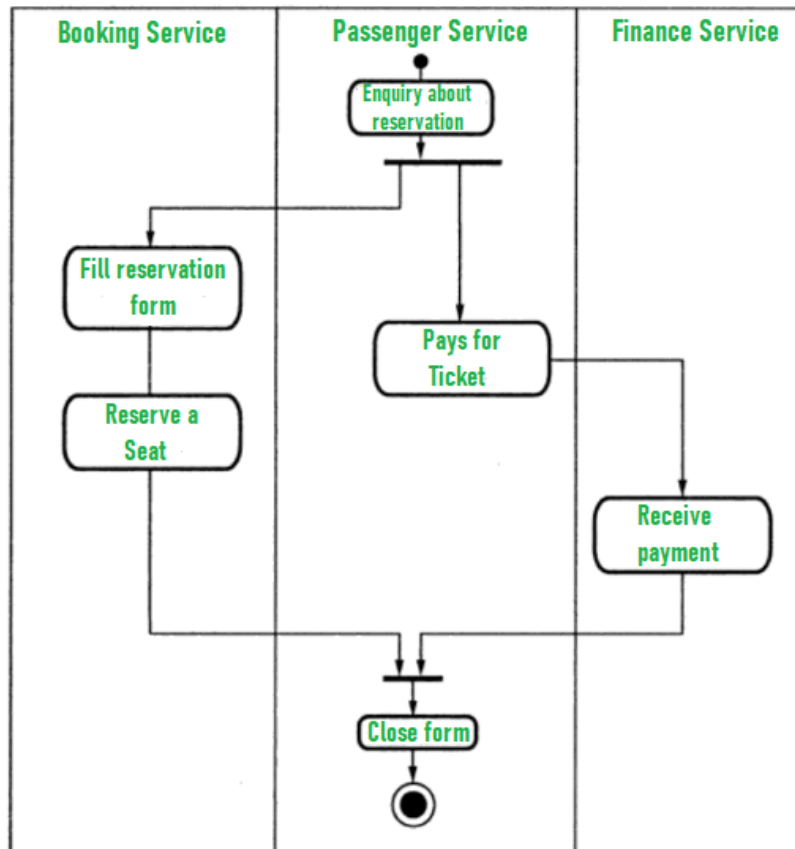
Estimated time required: 45 minutes

Step 1: The swimlane diagram

It is a graphical representation of the System. It simply describes who is responsible for the activities being performed in the activity diagram and how they are responsible. The activity diagram only represents the activities being performed, but Swimlane describes who does what in a process or activity performed.

In the Swimlane diagram, the activity diagram is divided according to the class responsible for working or performing out these activities. It simply shows the connection and strong communication between these lanes and is used to highlight waste, redundancy, and inefficiency in a process of an activity or program.

For example, below is a Swimlane diagram for reserving a ticket.



Swimlane Diagram for Reserving a Ticket

Essential key-points of the above diagram:

- **Fork –**
It is used to represent the multiple parallel flows.
- **Branches –**
It allow the parallel flow within activities.
- **Merge –**
It brings together or combines together multiple branches.
- **Join –**
It is used to control and synchronize various parallel flows.

Step 2: Model a parking garage

Make pairs. Model the below exercise using an Activity diagram with Swim lanes.

In a modern parking garage a camera system is used to monitor an direct cars to available spots. When entering the garage the camera system scans the license plate and the driver inserts their debit/credit card. The system reads this card and links it to the car. The driver then receives a number to park the car in a free spot. The user data is then stored for later use. If there are no free spots the driver is directed to the exit, the garage gate opens and all user info is removed from storage.

When the car is parked and the driver comes back to collect his car he must pay at a terminal with the card used when entering. If so the driver is directed to the exit where the gate opens. If the driver has not paid yet the gates will not open and the driver is directed to a terminal.

If the driver lost his card or there is another error the driver must ring the service number and an employee will open the gate for the driver.

When completed

You will discuss the results of this assignment plenary with your class and teacher. If you are done, start with applying the knowledge in the individual track.