

Course Code : **CSE 404**

Course Title : **Software Engineering and ISD Laboratory**

Project name : Bus ticket booking management system

Experiment no: 4

Experiment name: Modeling of our Project: Use case diagrams, Class diagrams,
Sequence diagrams, Activity diagrams, DFDs

Submitted To

Dr. Mohammad Zahidur Rahman

Professor

Dr. Md. Humayun Kabir

Professor

Department of Computer Science & Engineering

Jahangirnagar University, Savar.

Group No : 02

Group members :

| Sl | Class Roll | Name |
|----|------------|----------------------|
| 01 | 342 | Tama Shil |
| 02 | 370 | Prokash Maitra |
| 03 | 374 | Mubasher adnan jihad |
| 04 | 375 | Pritam Saha |

Name: Mubasher Adnan Jihad

Roll :374

Part: Usecase of subsystem 1,2

The use case of the system:

Subsystem-1

Actor: Customer, Admin.

Scenario:

- Customer will Login into system.
- Customer will Register into system.
- Admin will Login into system.

Exception: Login page not found.

Precondition: Login page from web browser.

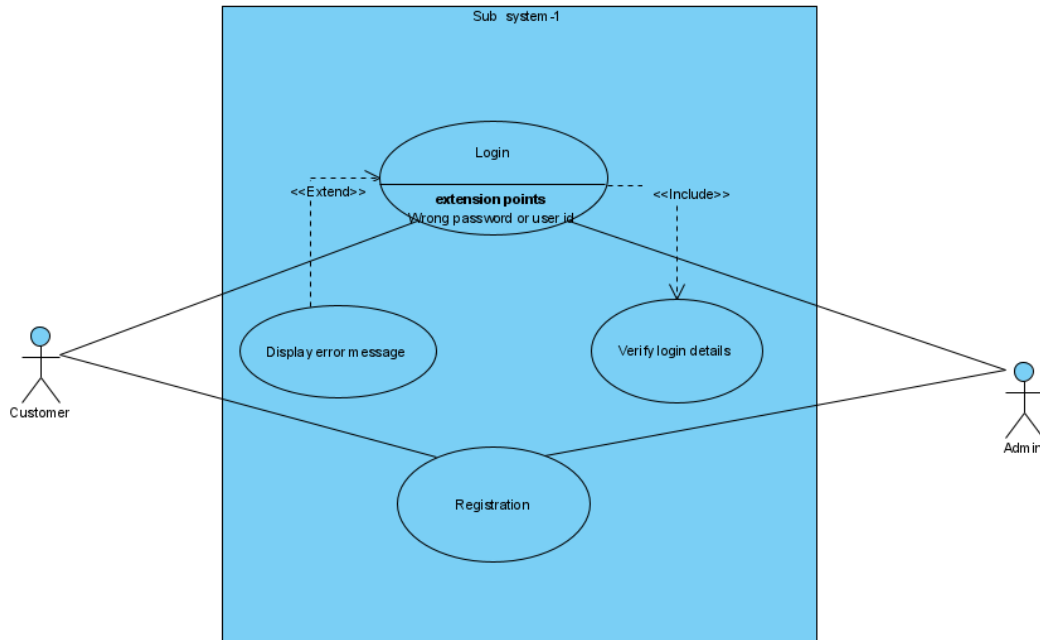
Post condition:

- Successful Login
- Unsuccessful Login
- Page not found.

Use case relation:

1. Include
2. Extends

Use case Diagram:



Subsystem-2

Actor: Customer, Admin.

Scenario:

- Customer will do the reservation of buses.
- Both Admin and Customer can send message to each other.
- Customer will do payment.

Exception: Wrong customer information.

Precondition: Only registered customer can reserve ticket.

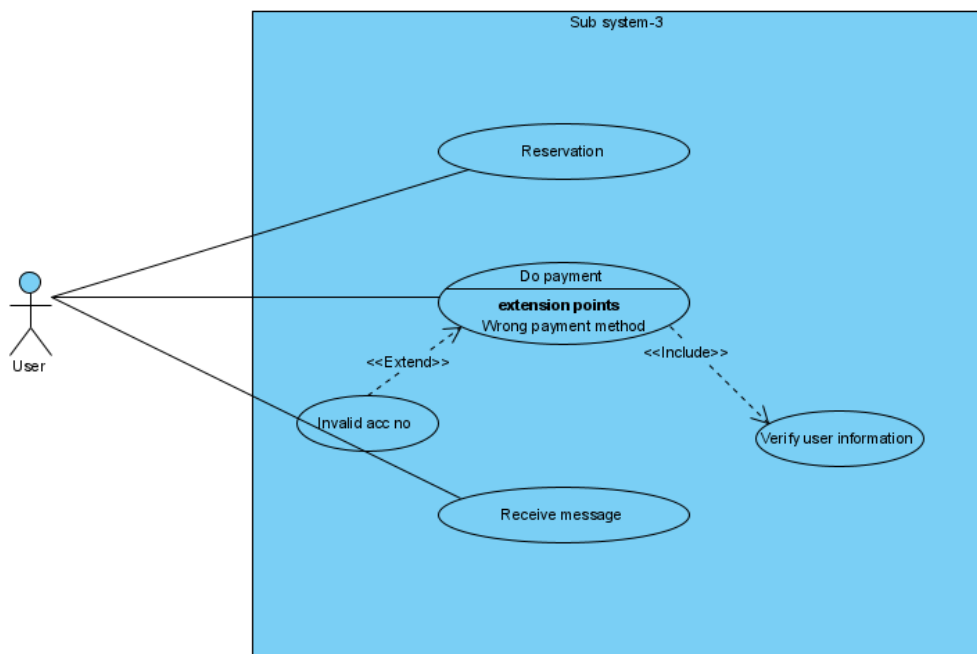
Postcondition:

- Admin will get a notification about a seat being reserved.
- Customer will get a confirmation notification.

Use case relation:

1. Include
2. Extends

Use case Diagram:



Pritam Saha

Id:375

Part: Subsystem-3

Actor: Admin.

Scenario:

- Admin will add bus details.
- Admin will input pickup points of all buses so that customer can select pickup points.
- Admin will input bus route and bus name so that these information can be provided to the customer.

Exception: Web page not found.

Precondition:

- Pickup points must be set according to pick up point and time.
- One time must be provided to one bus at a time.
- Route must be set according to correct route and one bus name must be provided to one bus.

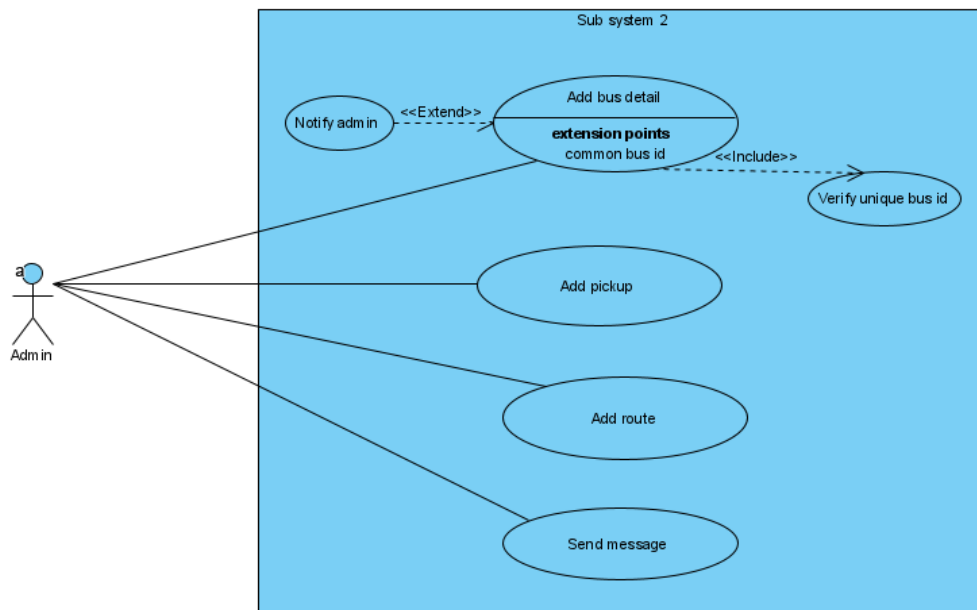
Postcondition:

- Admin can provide one pickup time for one bus.
- Admin can provide one bus name and route at a same time.

Use case relation:

1. Include relation in pickup point about selecting unique time for one bus at a time.
2. Extend relation for notifying about the collision of bus.

Use case Diagram:



Name: Prokash Maitra

Class Roll: 370

Part:Class diagram, Sequence diagram of customer

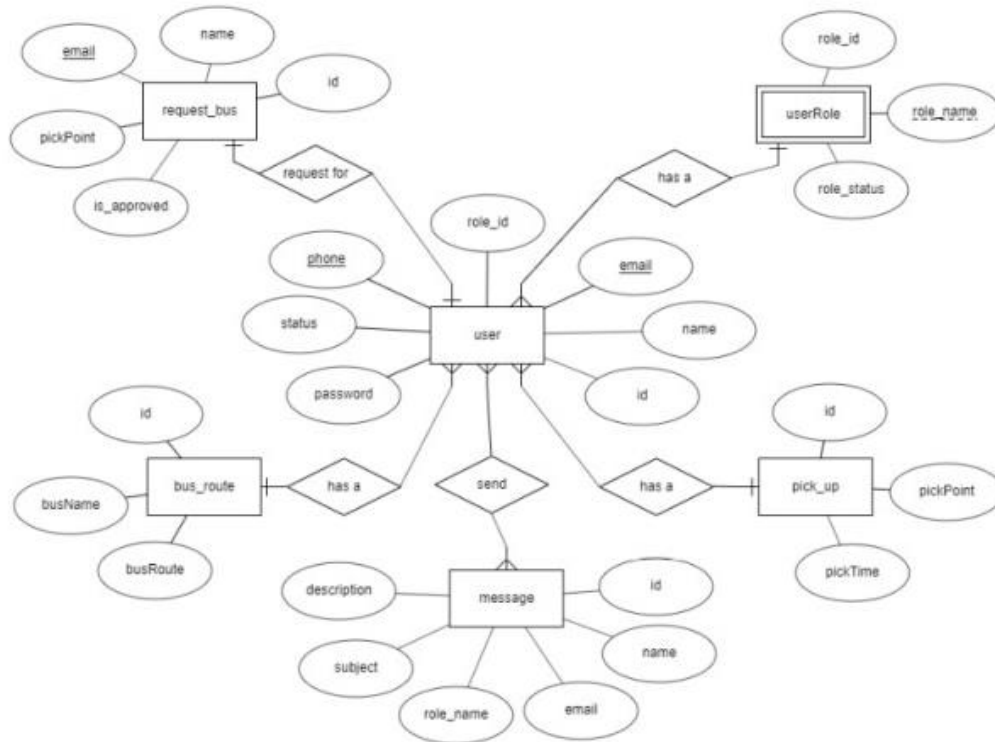


Fig:class diagram of the system

Sequence Diagrams (Customer)

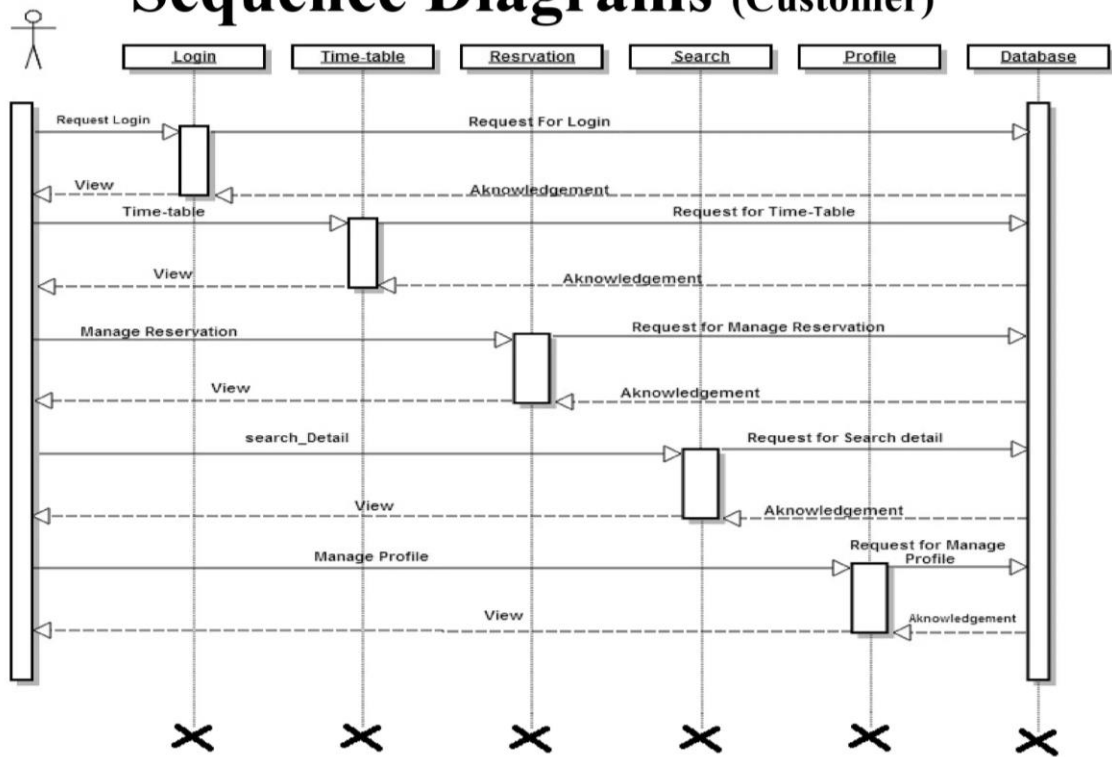


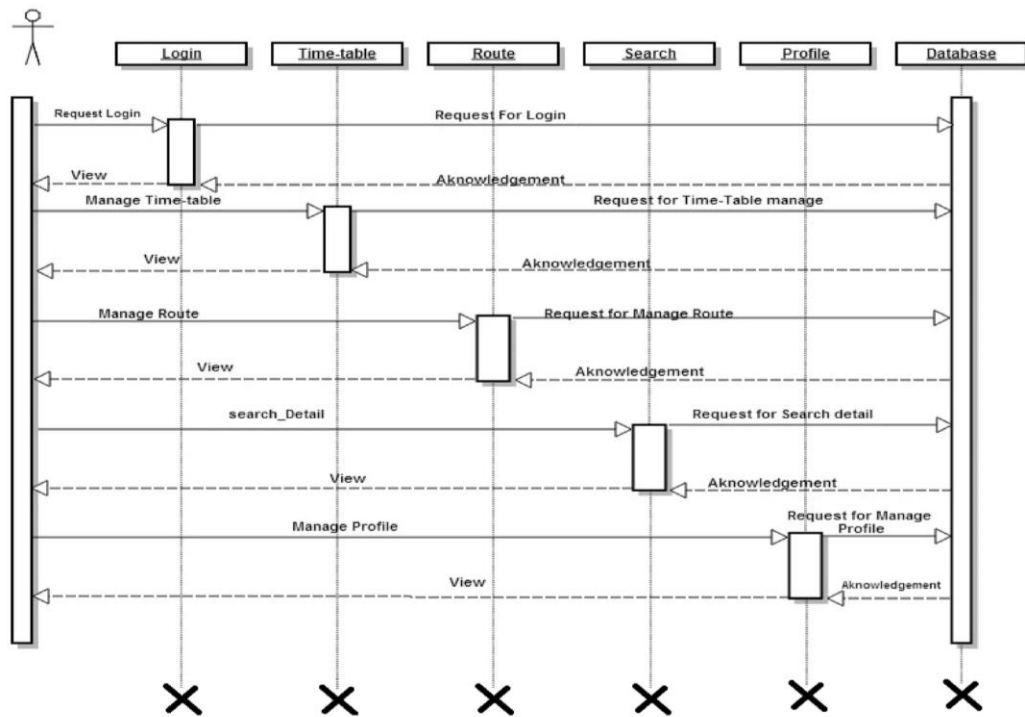
Fig: Sequence diagram of user

Pritam Saha

Id:375

Part:Subsystem for Admin

Sequence Diagrams (Admin)



Name: Tama Shil

ID:342

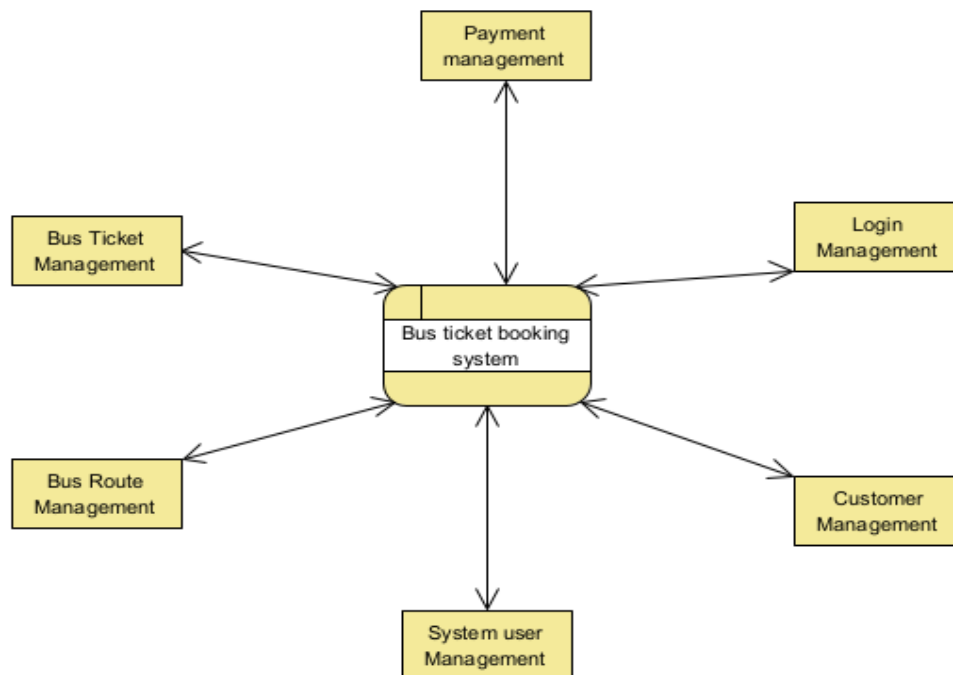
Part: DFD and Activity diagram for admin

The Data Flow Diagram (DFD) of the system:

Zero Level DFD:

High level entries and process flow of Bus ticket management system:

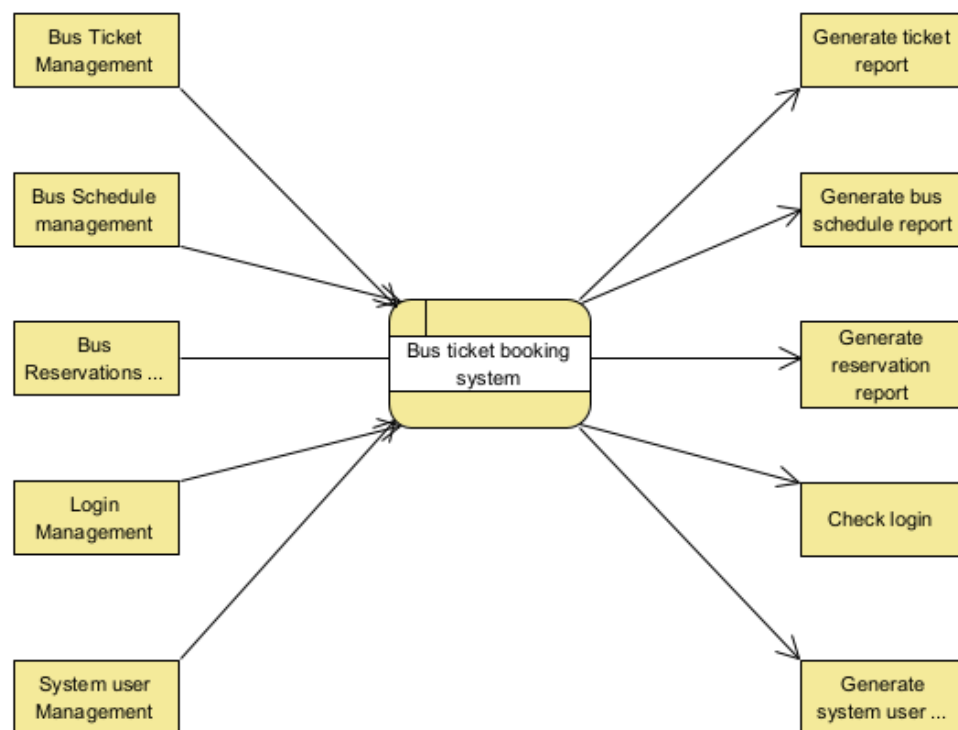
- Managing all bus schedules
- Managing all bus reservations
- Managing all bus tickets
- Managing all bus customers
- Managing all bus routes



First Level DFD:

Main entries and output of first level DFD:

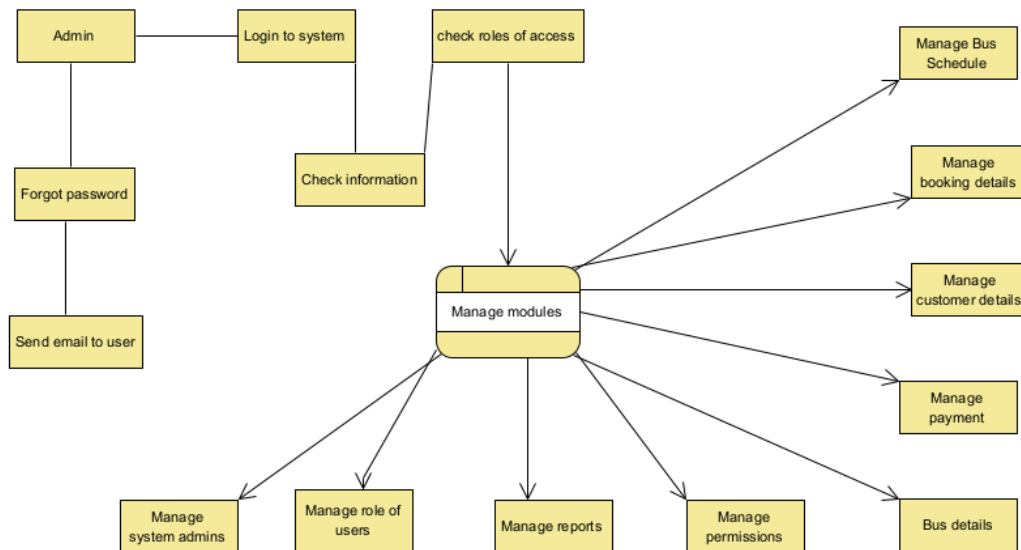
- Processing bus scheduling and generating reports
- Processing bus records and generating reservations reports
- Processing ticket records and generating reports
- Processing customers records and generating reports
- Processing bus routes records and generating reports
- Processing payment records and generating reports



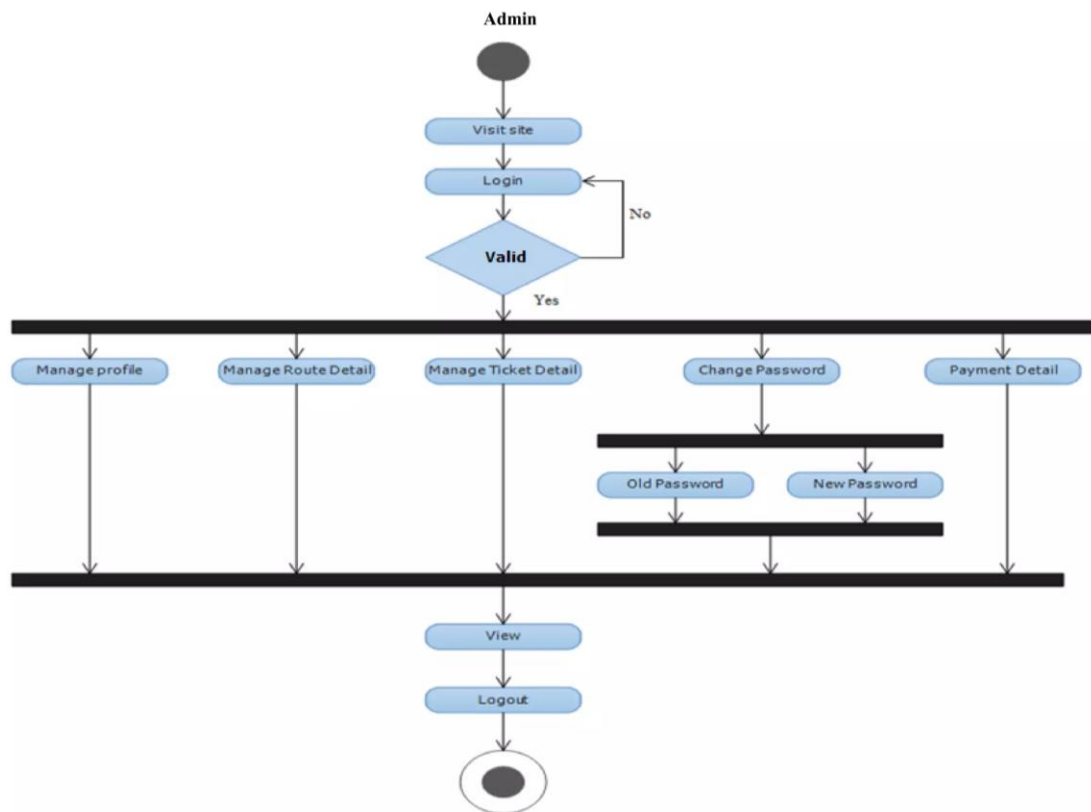
Second Level of DFD (Level 2 DFA):

Low level functionalities of bus ticket booking management system:

- Admin login to the system and manage all functionalities of bus system.
- Admin can add bus route, edit schedules, delete schedules and even view schedules.
- Admin can manage all details about ticket payments, reservation cancellations, booking details, customer details.
- Admin can search the details of booking customers details
- Admin can track detailed information of booking, tickets and customers



Activity Diagram for admin:



Activity Diagram for user:

