

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

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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.

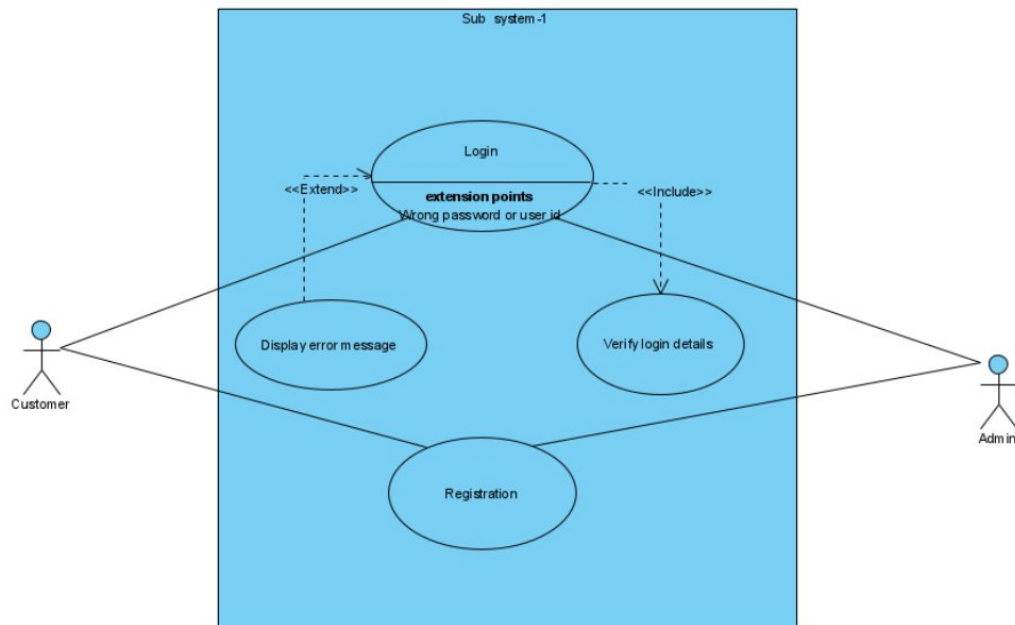
Post condition:

- 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.

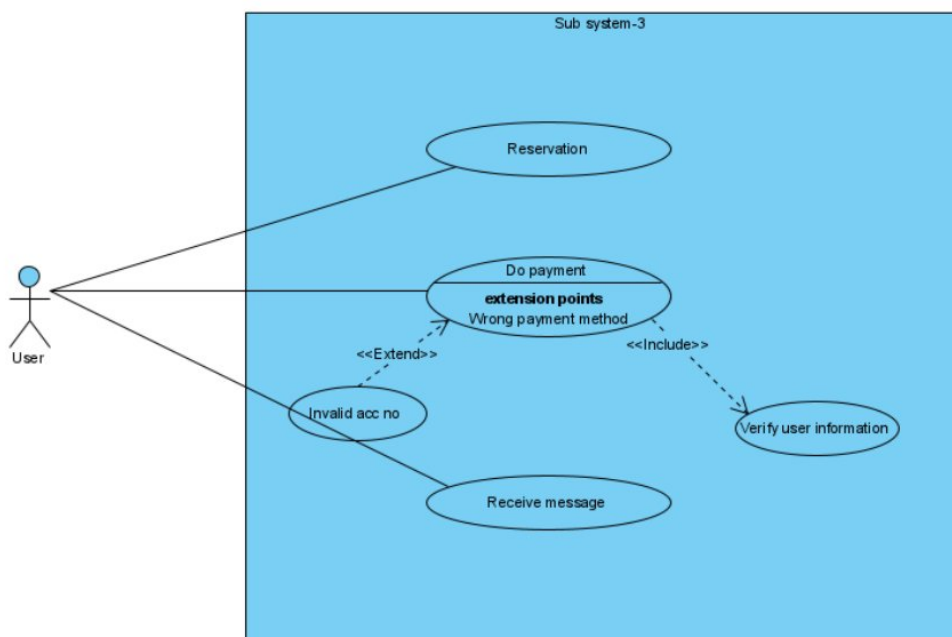
Postcondition:

- 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.

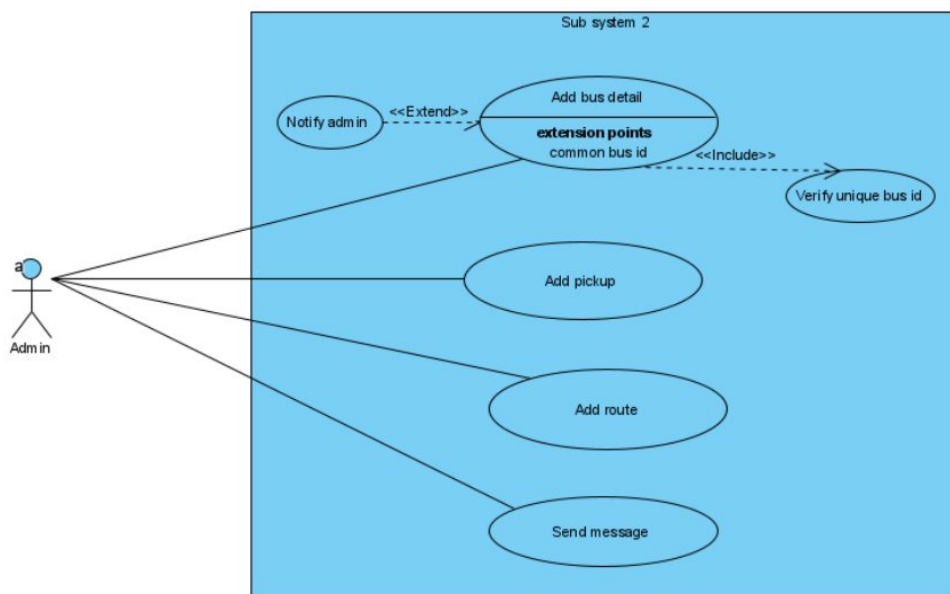
Postcondition:

- 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

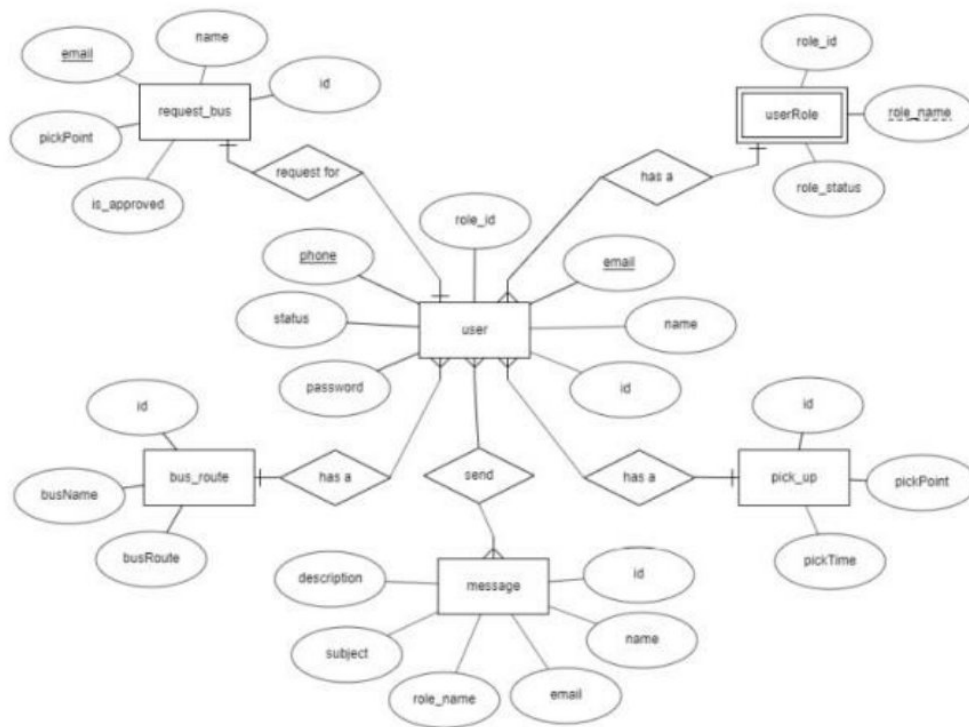


Fig:class diagram of the system

Sequence Diagrams (Customer)

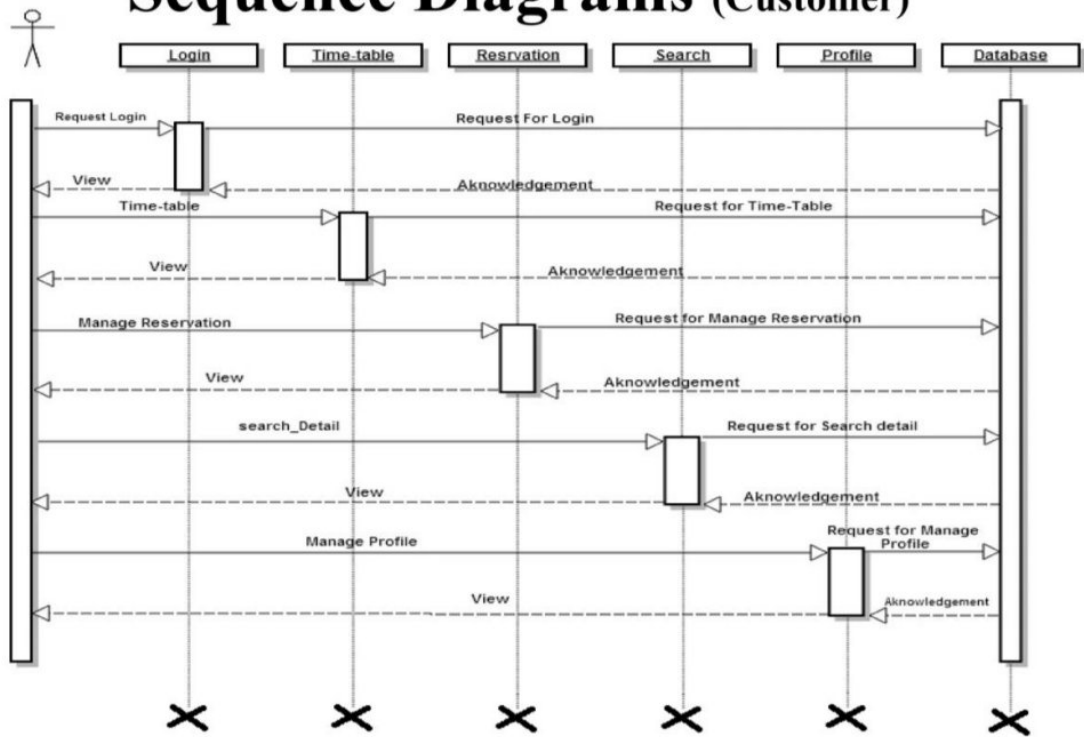


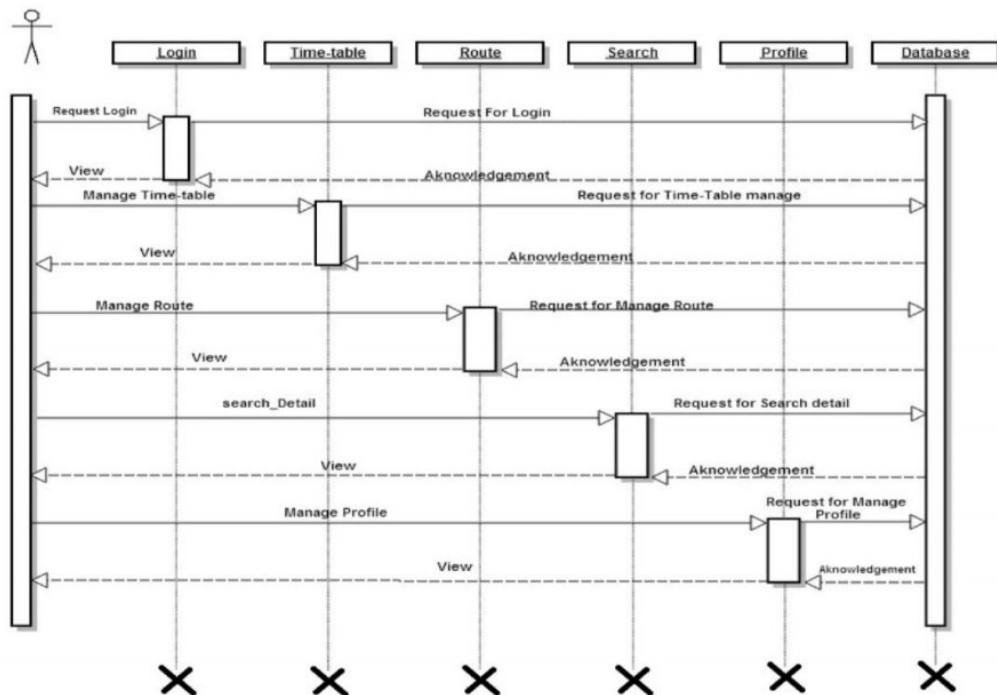
Fig: Sequence diagram of user

Pritam Saha

Id:375

Part:Subsystem for Admin

Sequence Diagrams (Admin)



Name: Tama Shil

ID:342

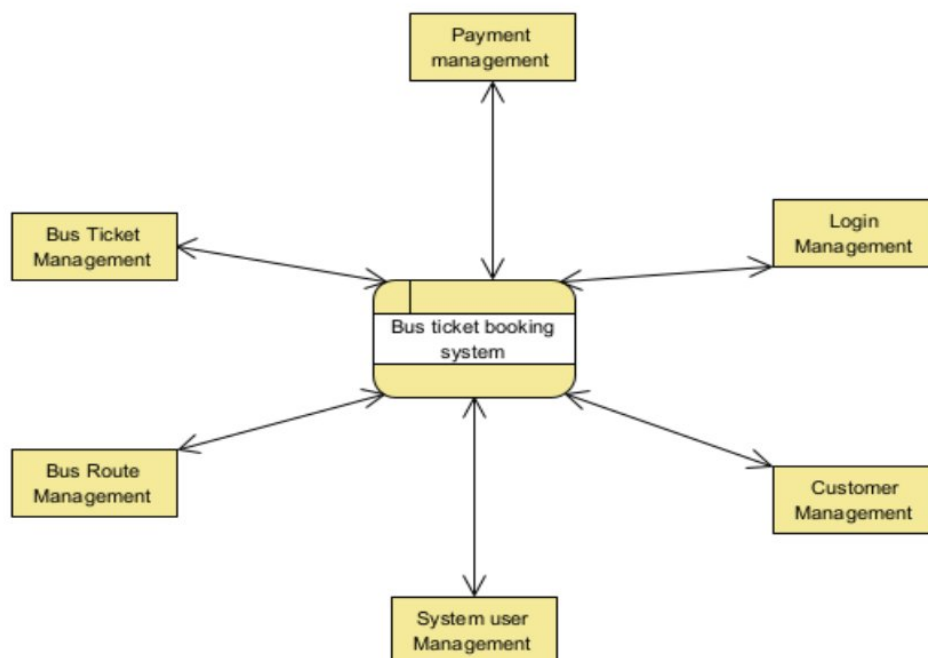
Part: DFD and Activity diagram for admin

The Data Flow Diagram (DFD) of the system:

Zero Level DFD:

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

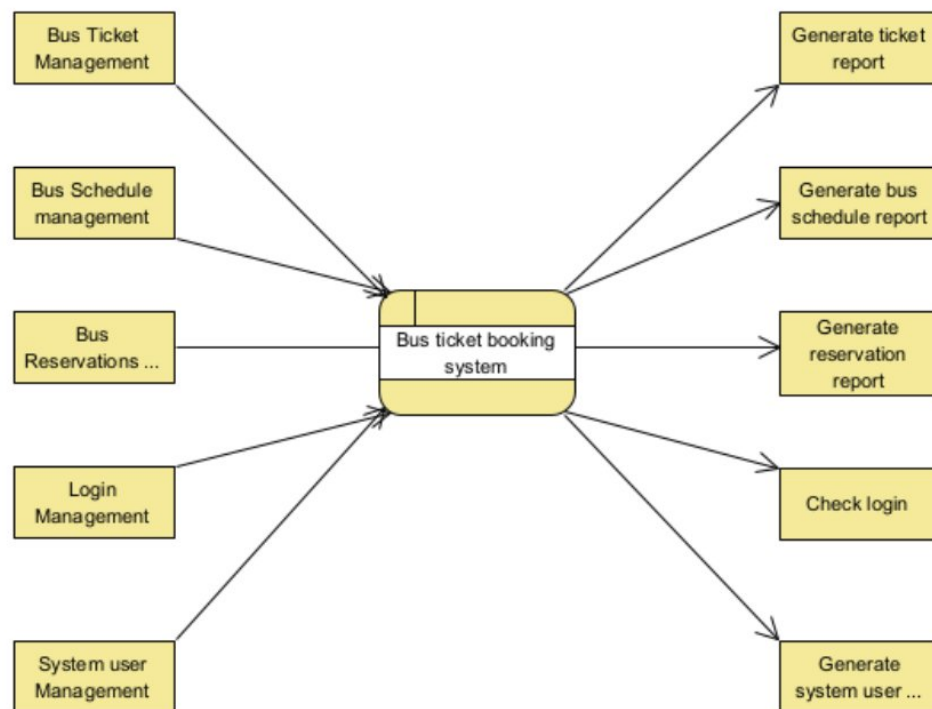
- Managing all bus schedules
- Managing all bus reservations
- Managing all bus tickets
- Managing all bus customers
- Managing all bus routes



First Level DFD:

Main entries and output of first level DFD:

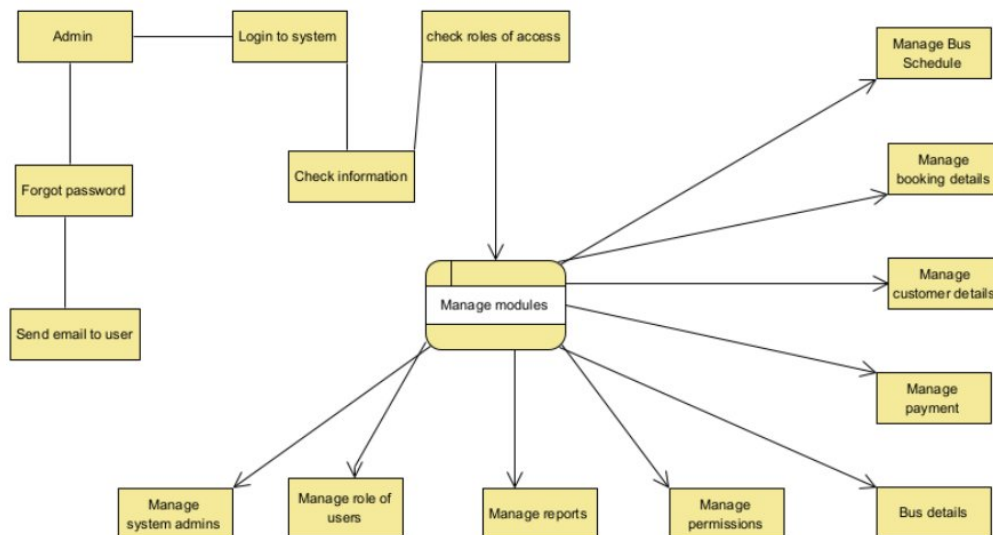
- Processing bus scheduling and generating reports
- Processing bus records and generating reservations reports
- Processing ticket records and generating reports
- Processing customers records and generating reports
- Processing bus routes records and generating reports
- Processing payment records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



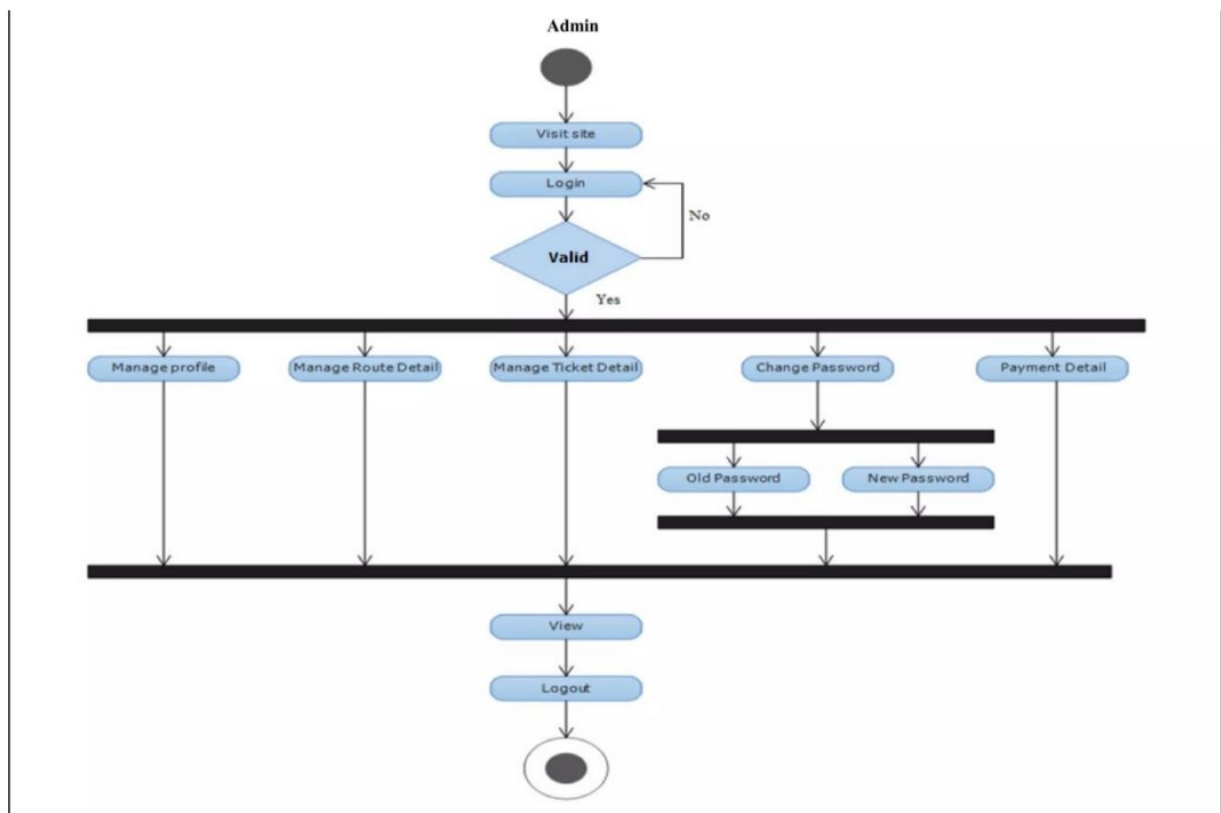
Second Level of DFD (Level 2 DFA):

Low level functionalities of bus ticket booking management system:

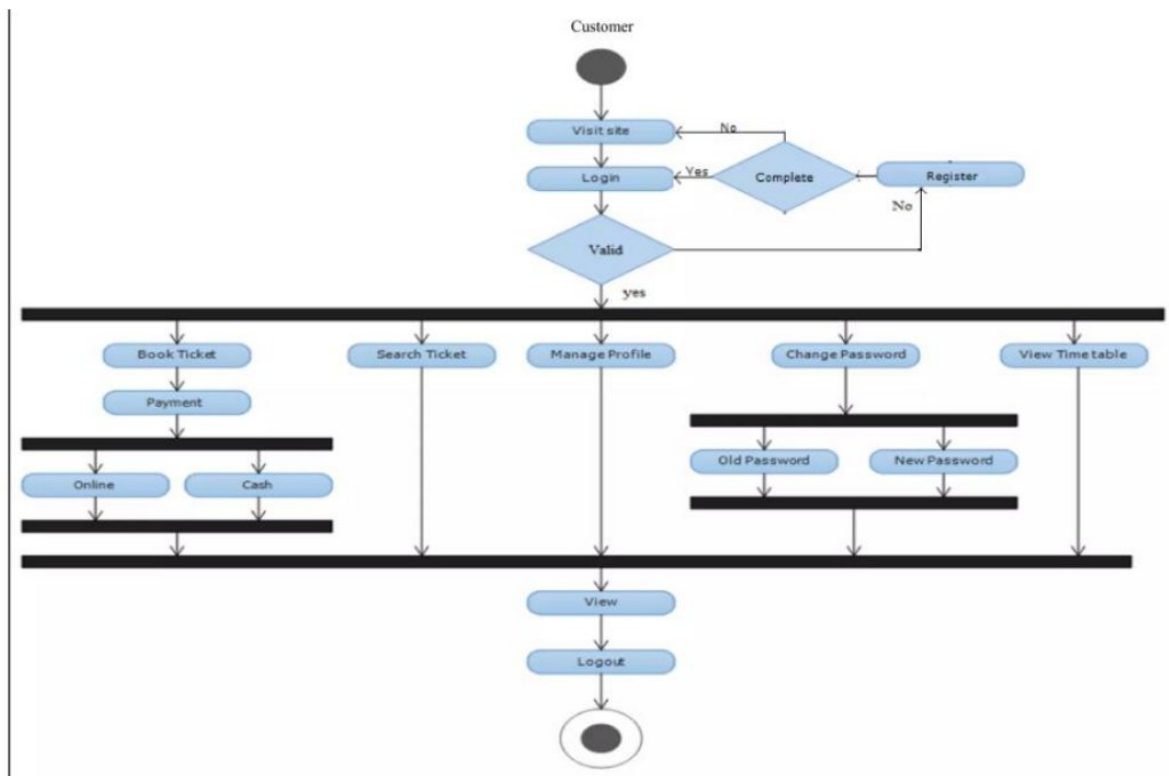
- Admin login to the system and manage all functionalities of bus system.
- Admin can add bus route, edit schedules, delete schedules and even view schedules.
- Admin can manage all details about ticket payments, reservation cancellations, booking details, customer details.
- Admin can search the details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



Activity Diagram for admin:



Activity Diagram for user:





Course Code : CSE 404

Course Title : Software Engineering and ISD Laboratory

Project name : Bus ticket booking management system

Experiment no: 04(b)

Experiment name: **UML Modeling of your Project: Use case diagrams, Class diagrams, Sequence diagrams, Activity diagrams, DFDs**

Submitted To

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04	375	Pritam Saha

Name: Mubasher Adnan Jihad

Roll : 374

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

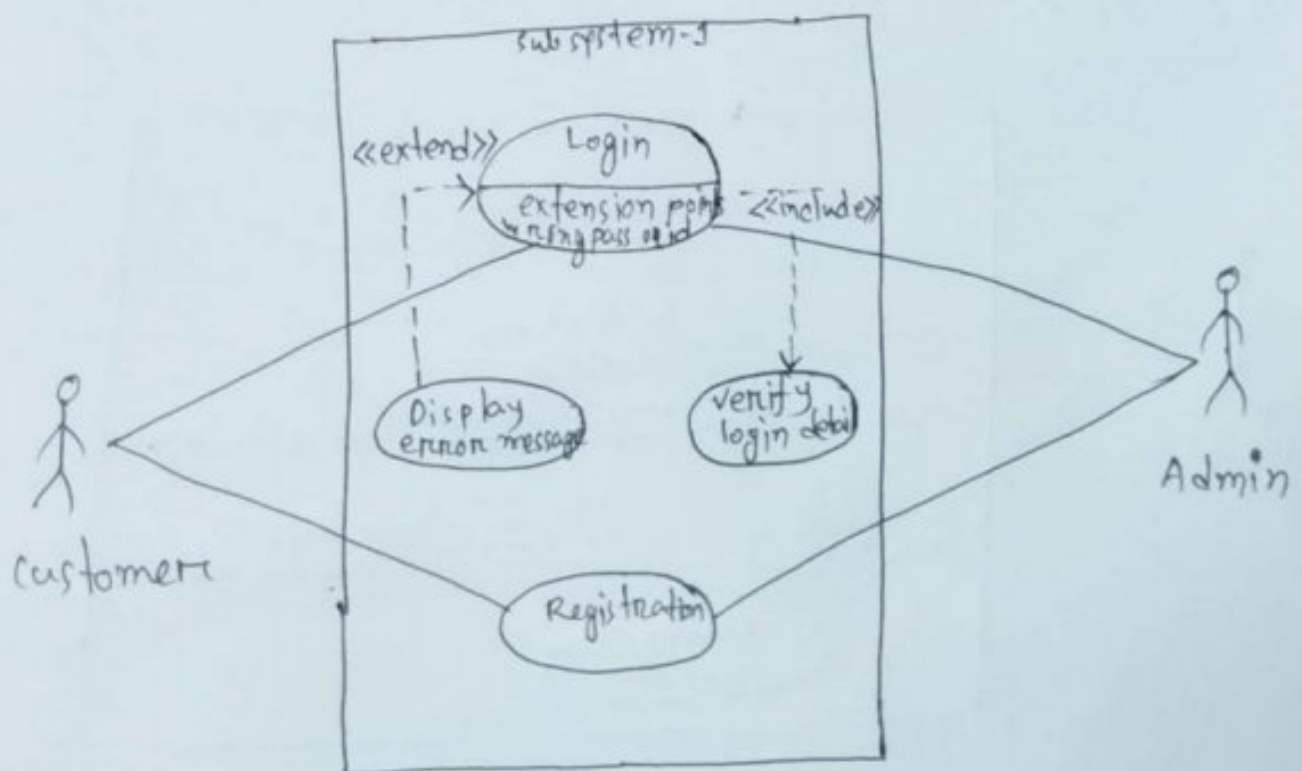
Post condition:

- 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.

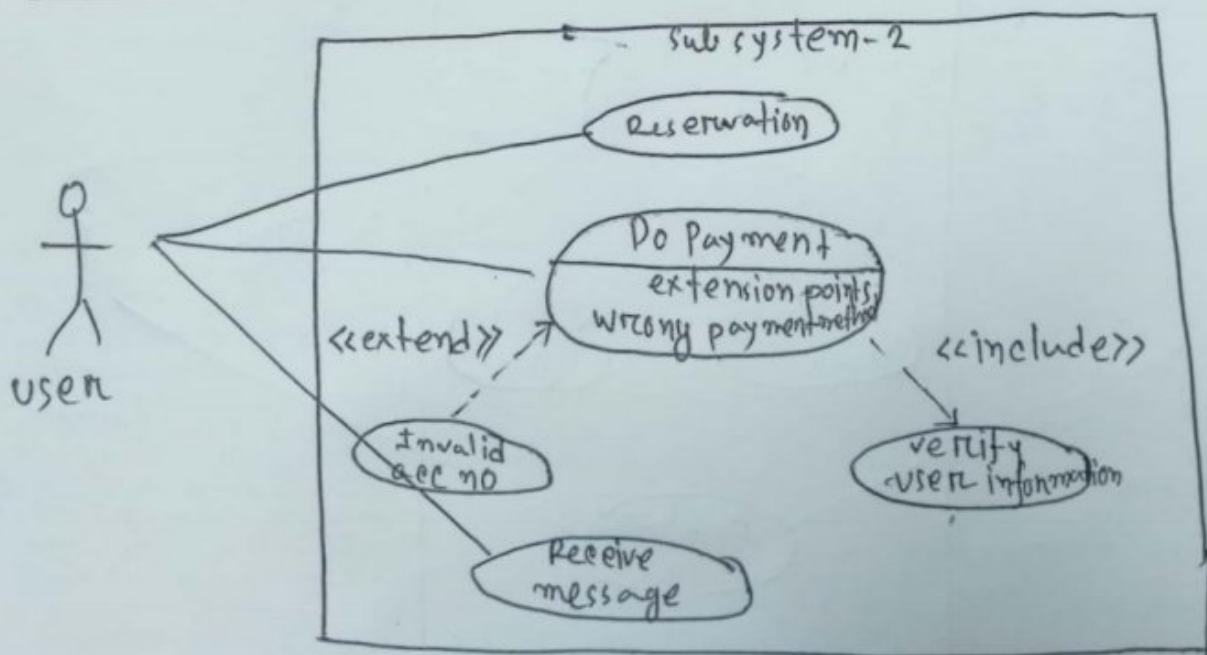
Post condition: Only registered customer can reserve ticket.

- Customer will get a confirmation notification.

Use case relation:

1. Include.
2. Extends.

Use case Diagram:



Name : Pritam Saha

ID : 375

Subsystem - 3

Actor : Admin

Scenario :

- Admin will add bus details.
- Admin will input pickup points of all buses so that customers 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 pickup point and time.

Postcondition :

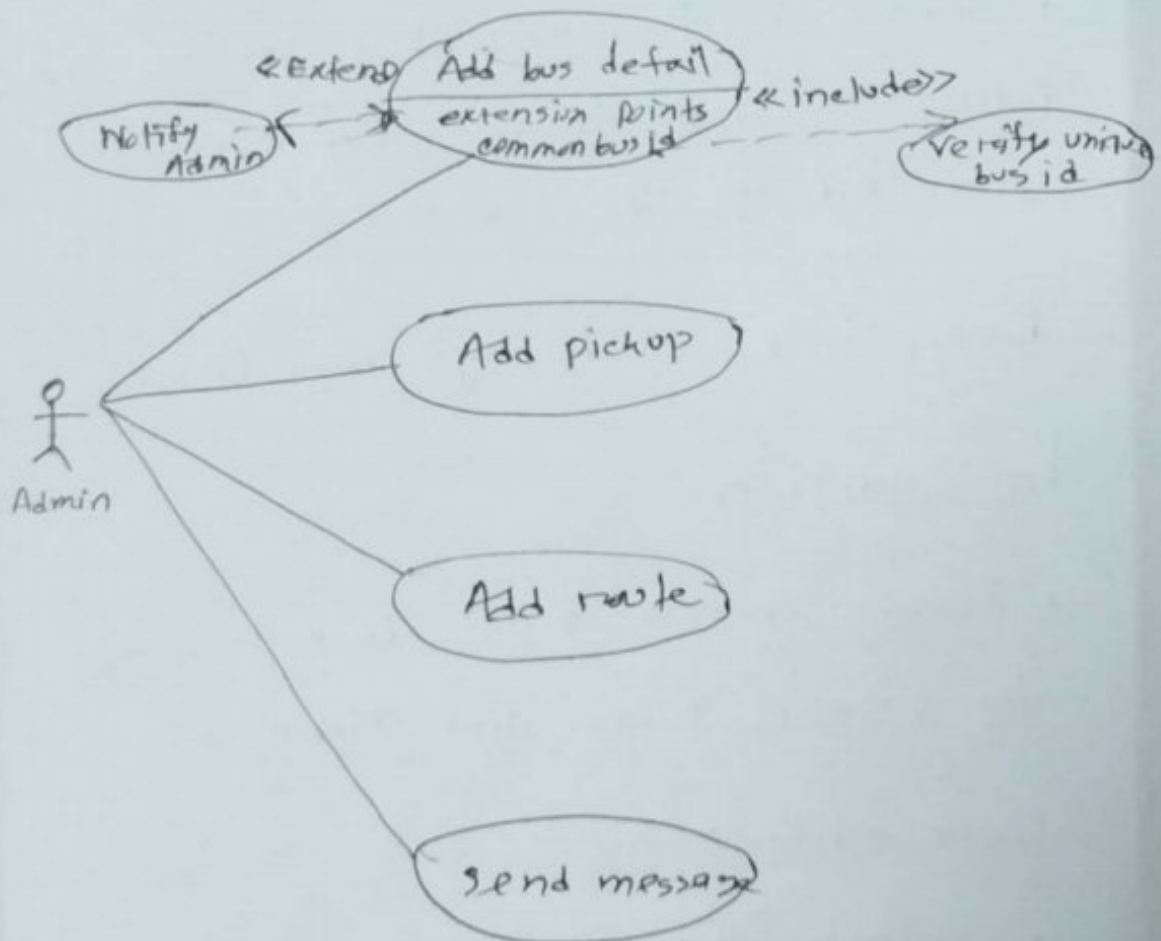
- Admin can provide one pickup time for one bus.
- Admin can provide one bus name and route at a same time.

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:

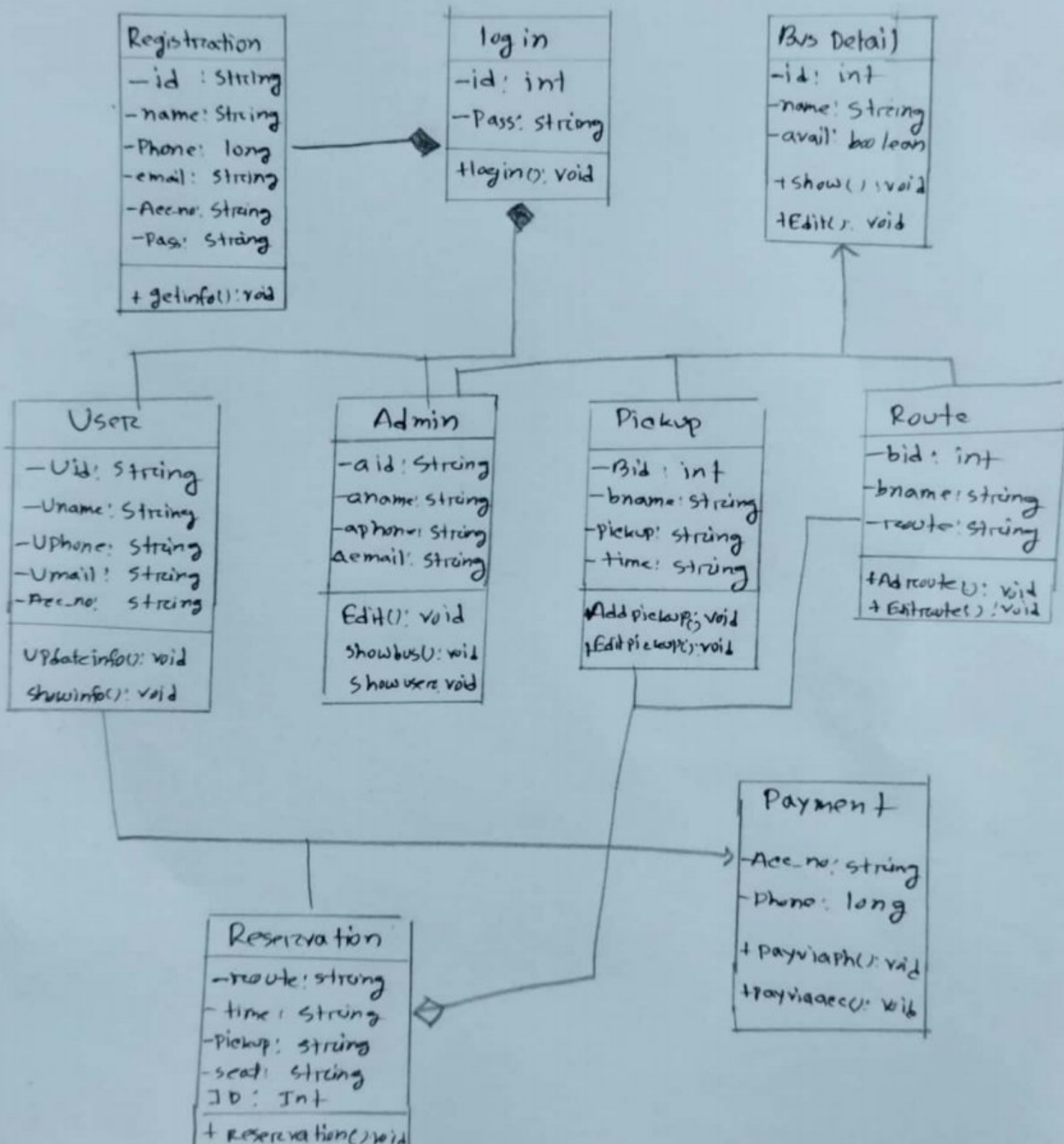
Sub system - 3



Pritam Saha

ID: 375

Part: class modeling



Name: Prakash Maitra

Roll : 370

Part : Entity Relationship Diagram

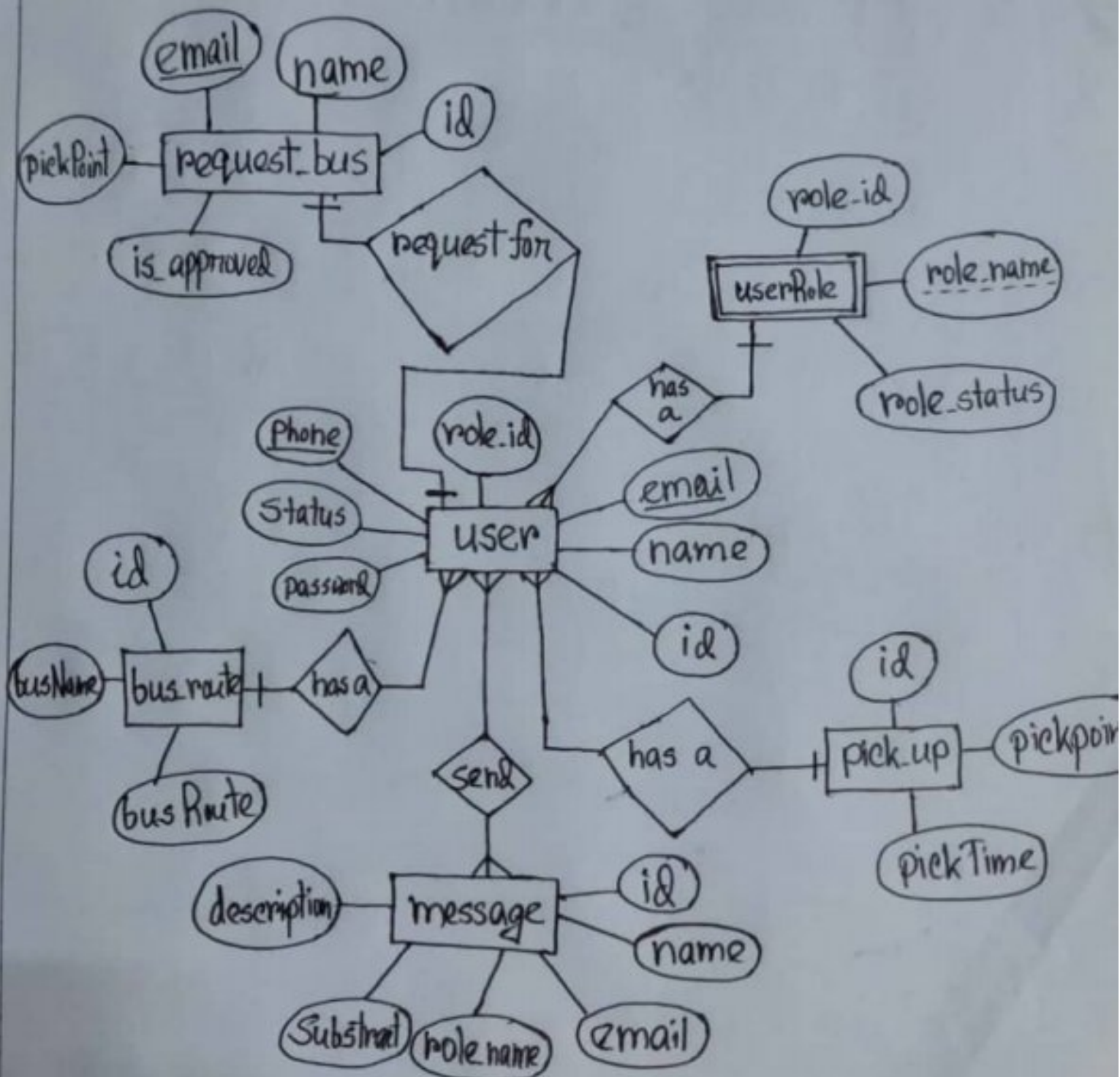


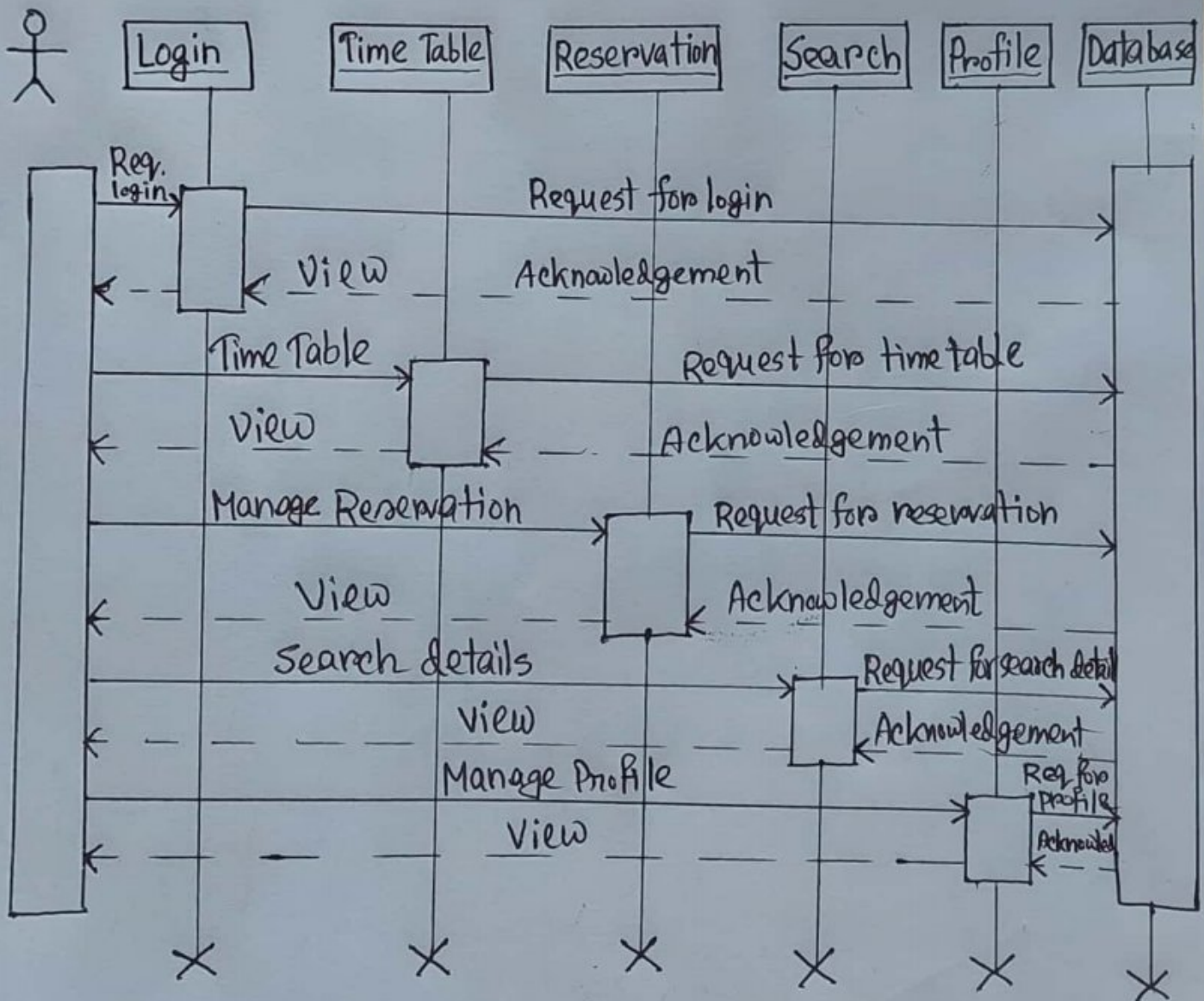
Figure : Entity Relationship Diagram

Name: Prokash Maitra

Roll : 370

Part : Sequence Diagram (Customer)

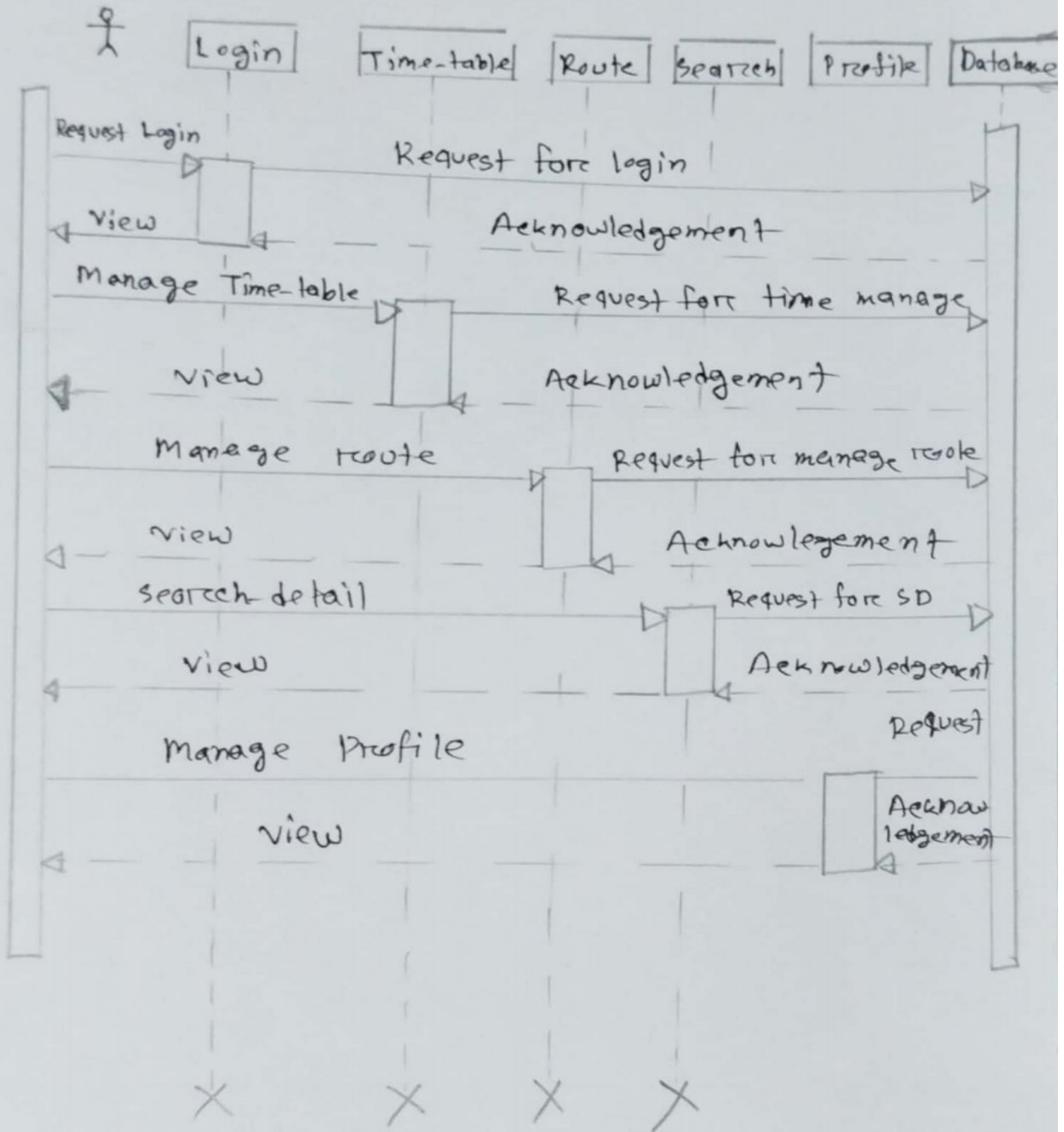
Sequence Diagram of Customer



Name: Pritam Saha

ID: 375

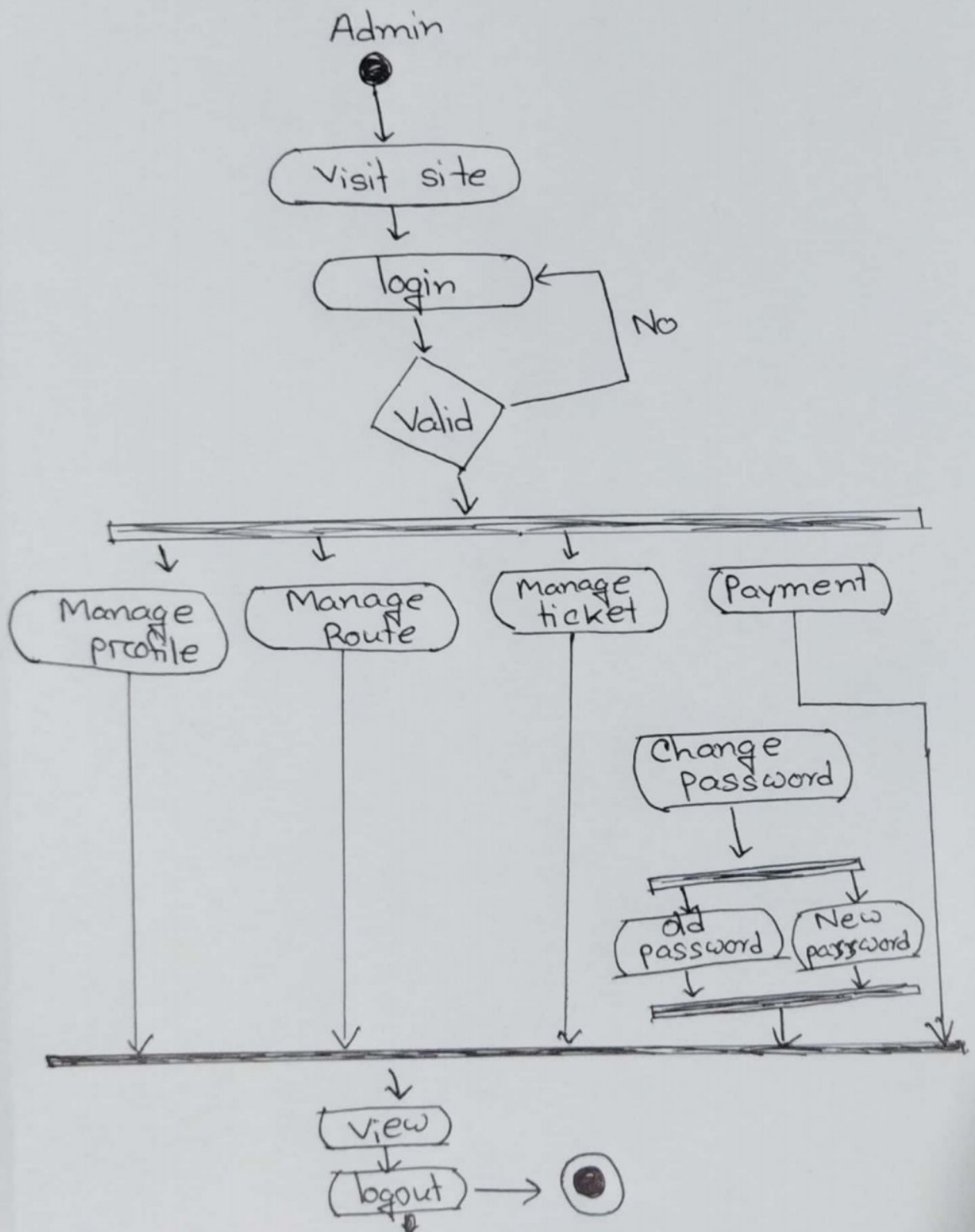
My part: Sequence Diagram (Admin)



Tama shil

ID - 342

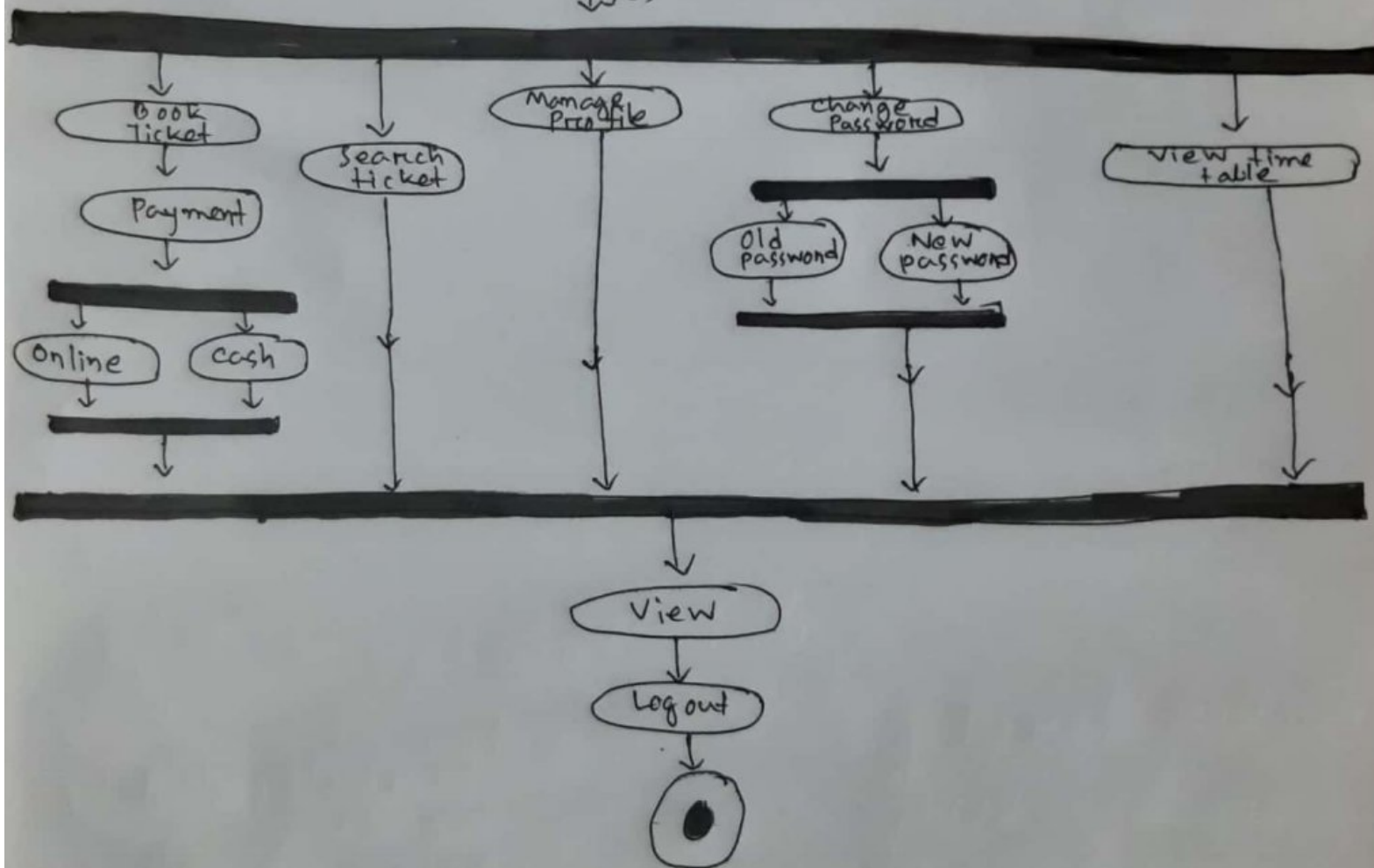
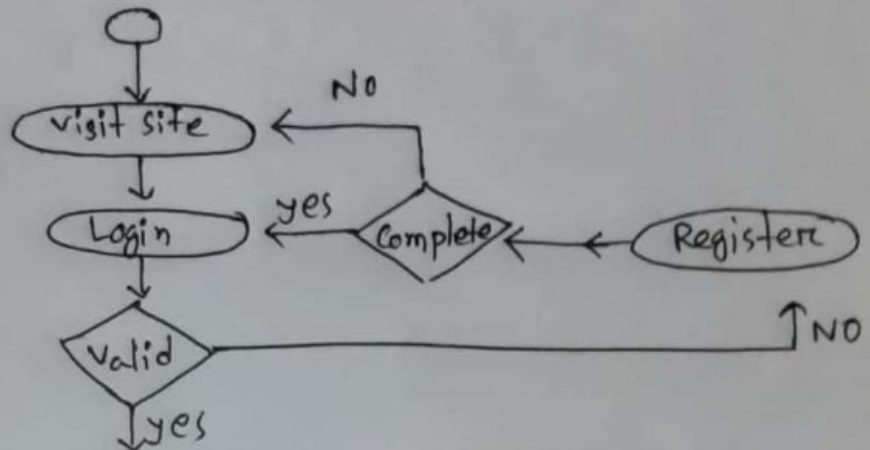
Part : Activity diagram
for Admin



Name: Mubashere Adnan Jihad
Roll: 374

Activity Diagram for Customer

Customer



Tama Shil

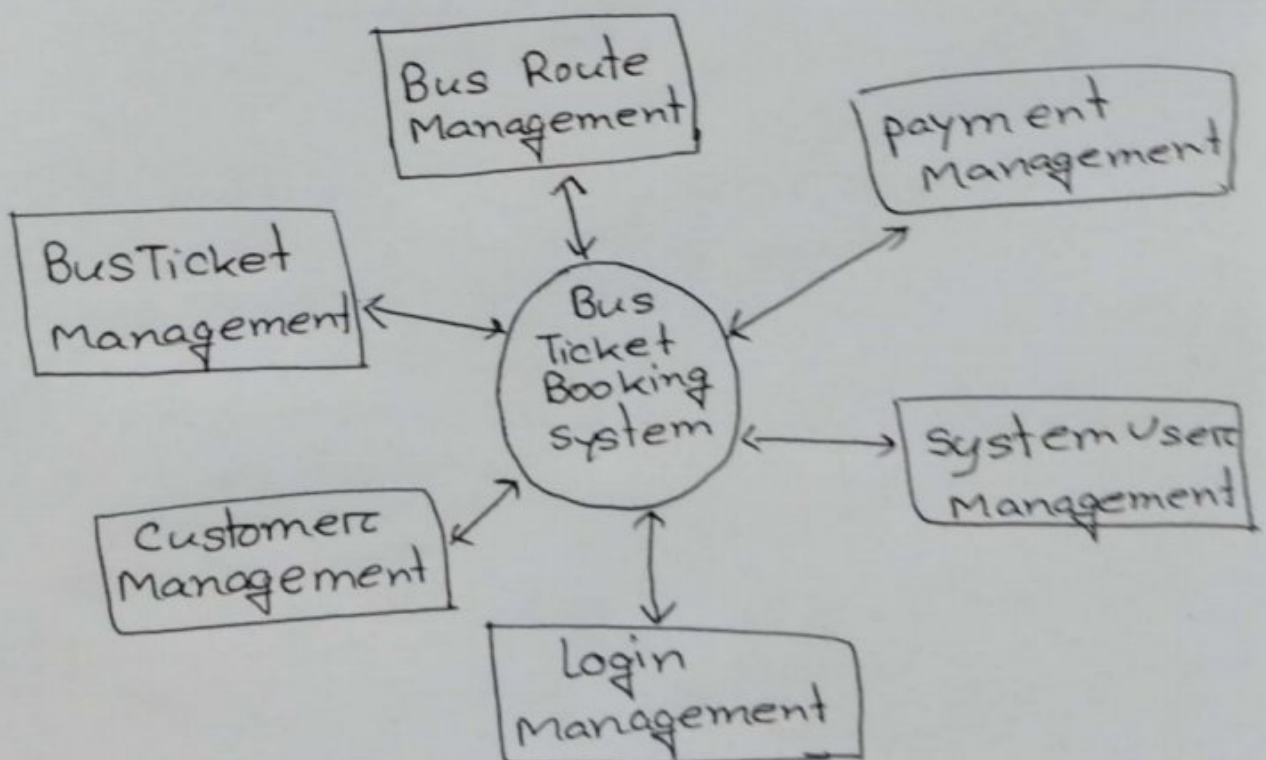
ID: 342

Part: Data flow Diagram

Zero level DataFlowDiagram (O LEVEL DFD):

High level entries and Process flow of
Bus ticket Booking system:

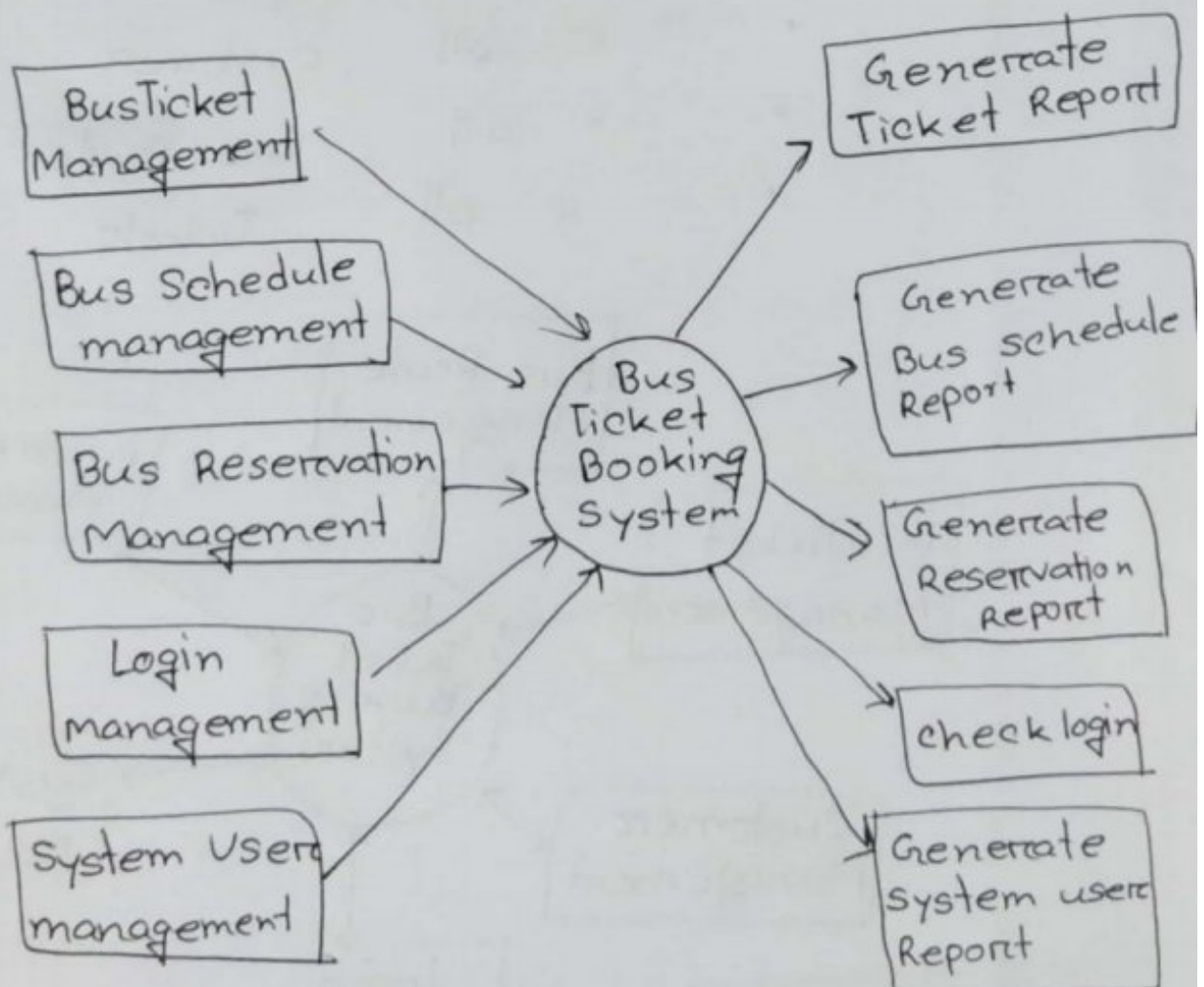
- Managing all Bus schedules
- " all Reservations
- " all Tickets
- " all customers
- " all Bus Route
- " all Tickets



First Level DFD:

Main entries and outputs of First Level DFD (1st level DFD):

- Processing bus schedules and generating report
- " bus records and generating report ^{Reservation}
- " Ticket records and generating report.
- " Customer records and generating report _{of all tickets.}
- " Processing bus routes and payment records and generating report.



Second level of DFA.

Low level functionalities of Bus ticket System;

- Admin login to the system and manage all functionalities of Bus system.
- Admin can add buses, schedules, edit, delete and view them.
- Admin can manage all details about ticket payments, reservation and confirmations.
- Admin can search the details of booking, customer details.
- Admin can track detailed information of Booking, Tickets, Customers.

