

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

“JnanaSangama”, Belgaum -590014, Karnataka.



LAB REPORT

on

OBJECT ORIENTED MODELING AND DESIGN

Submitted by

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in partial fulfillment for the award of the degree of
BACHELOR OF ENGINEERING

in

COMPUTER SCIENCE AND ENGINEERING



B.M.S. COLLEGE OF ENGINEERING

(Autonomous Institution under VTU)

BENGALURU-560019

May-2022 to July-2022

B. M. S. College of Engineering,
Bull Temple Road, Bangalore 560019
(Affiliated To Visvesvaraya Technological University, Belgaum)
Department of Computer Science and Engineering



CERTIFICATE

This is to certify that the Lab work entitled “OBJECT ORIENTED MODELING AND DESIGN” carried out by SHIVANSHU PANDE (1BM19CS151), who is bonafide student of B. M.S. College of Engineering. It is in partial fulfillment for the award of Bachelor of Engineering in Computer Science and Engineering of the Visvesvaraya Technological University, Belgaum during the year 2022. The Lab report has been approved as it satisfies the academic requirements in respect of a object oriented modeling and designing - (20CS6PCOMD) work prescribed for the said degree.

LATHA N R
PROFESSOR'
BMSCE BANGALURU'

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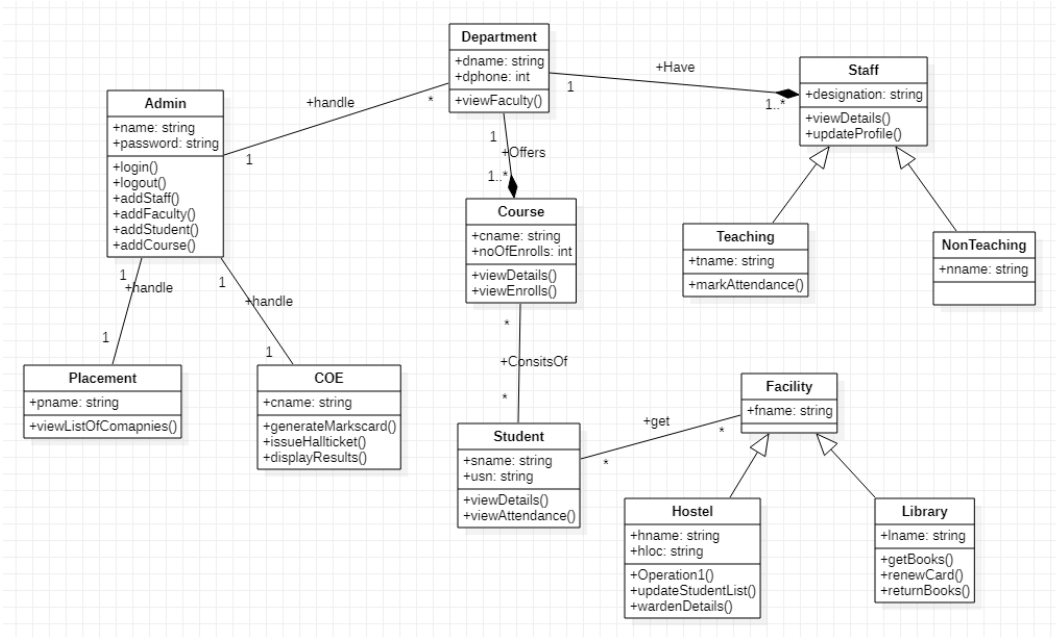
Course Outcome

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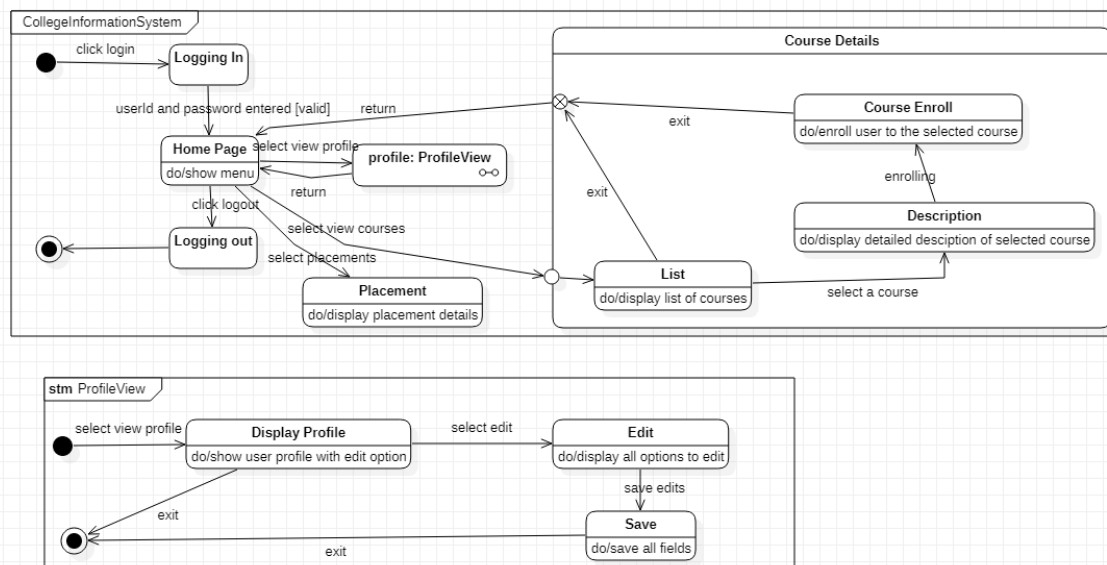
LAB-1

COLLEGE MANAGEMENT SYSTEM

● CLASS DIAGRAM



● STATE DIAGRAM



HOSTEL MANAGEMENT SYSTEM

```

classDiagram
    class Admin {
        +name: string
        +workHours: int
        +gender: string
        +login()
        +logout()
        +addHostel()
        +addWarden()
        +addStudent()
    }
    class Hostel {
        +noOfRooms: int
        +noOfStudents: int
        +noOfMess: int
        +viewDetails()
    }
    class Student {
        +name: string
        +phone: int
        +roomNo: int
        +giveFeedback()
        +leaveHostel()
    }
    class Warden {
        +name: string
        +gender: string
        +age: int
        +phone: int
        +noOfYearsOfExperience: int
        +manageHostel()
        +getStudentList()
    }
    class Rooms {
        +roomNo: int
        +roomType: string
        +roomDesc: string
        +addRoom()
        +deleteRoom()
        +searchRoom()
        +viewVacancy()
    }
    class Mess {
        +messType: string
        +getMessMenu()
    }
    class Feedback {
        +response: string
        +viewFeedback()
        +editFeedback()
        +deleteFeedback()
    }
    class Payment {
        +mode: PaymentMode
        +bankDetails: string
    }
    class PaymentInfo {
        +amount: int
    }
    class PaymentMode {
        <<enumeration>>
        creditCard
        debitCard
        netBanking
        cash
    }
    class SingleAccommodation {
        +AcOrNon: string
    }
    class MultipleAccommodation {
        +noOfStudents: int
    }

    Admin "1" -- "*" Hostel : +adds
    Hostel "1" -- "*" Student : +has
    Student "1" -- "1" Payment : +makes
    Warden "1..*" -- "1" Hostel : +employs
    Rooms "1..*" -- "1" Hostel : +contains
    Mess "1" -- "1" Rooms : +has
    Feedback "*" -- "*" Student : +give
    PaymentInfo -.- Payment
    PaymentMode <<enumeration>>
    SingleAccommodation <|-- Rooms
    MultipleAccommodation <|-- Rooms
  
```

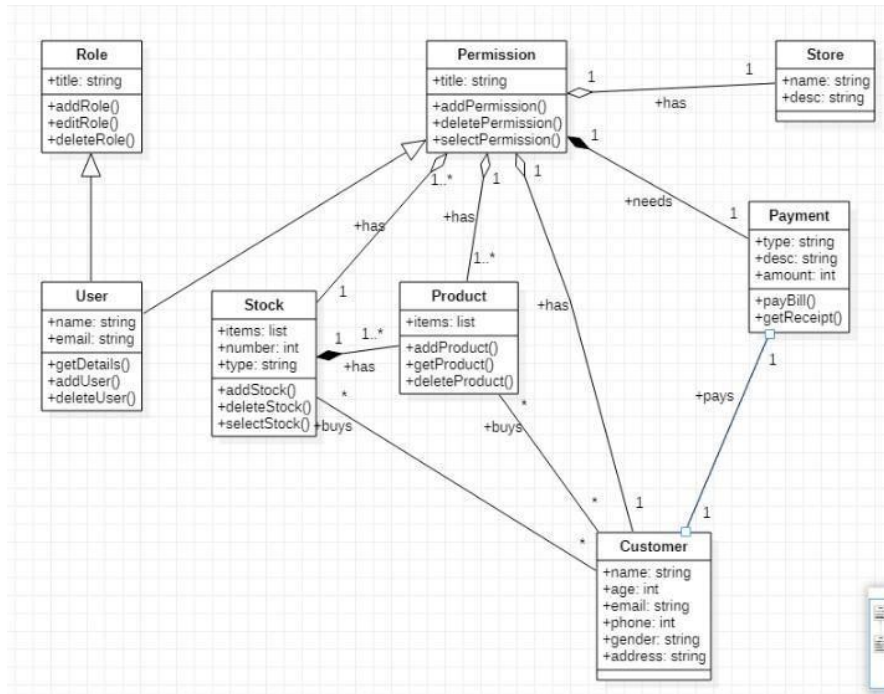
```
graph TD
    subgraph HostelManagementSystem
        Start(( )) -- click login --> Login[Logging In]
        Login -- "userid and password [valid]" --> Home[Home Page<br/>do/display options to apply to hostel and mess details]
        Home -- "click logout" --> Logout[Logging Out]
        Logout --> End(( ))
        Home -- "apply" --> RoomAllocation[room: RoomAllocation<br/>o-o]
        RoomAllocation -- "return" --> Home
        Home -- "[admin credentials]" --> Mess
        subgraph Mess
            StartMess(( )) --> MessList[Mess List<br/>do/list all mess details]
            MessList -- "select mess" --> Menu[Menu<br/>do/display menu]
            Menu -- "select edit" --> EditMenu[Edit Menu<br/>do/add or delete item]
            EditMenu -- "update successful" --> Expenditure
            MessList -- "bill generation" --> Expenditure
            Expenditure -- "bill generated" --> Join(( ))
            Join --> Home
        end
    end

    subgraph stmRoomAllocation [stm RoomAllocation]
        StartRoom(( )) --> Blocks[Blocks<br/>do/display list of blocks available]
        Blocks -- "select block" --> Rooms[Rooms<br/>do/display list of rooms available in block]
        Rooms -- "select room" --> Payment[Payment<br/>do/pay generated bill]
        Payment -- "successful" --> Allocate[Allocate]
        Allocate --> EndRoom(( ))
        Payment -- "fail" --> Blocks
        Payment -- "cancel" --> EndRoom
    end
```

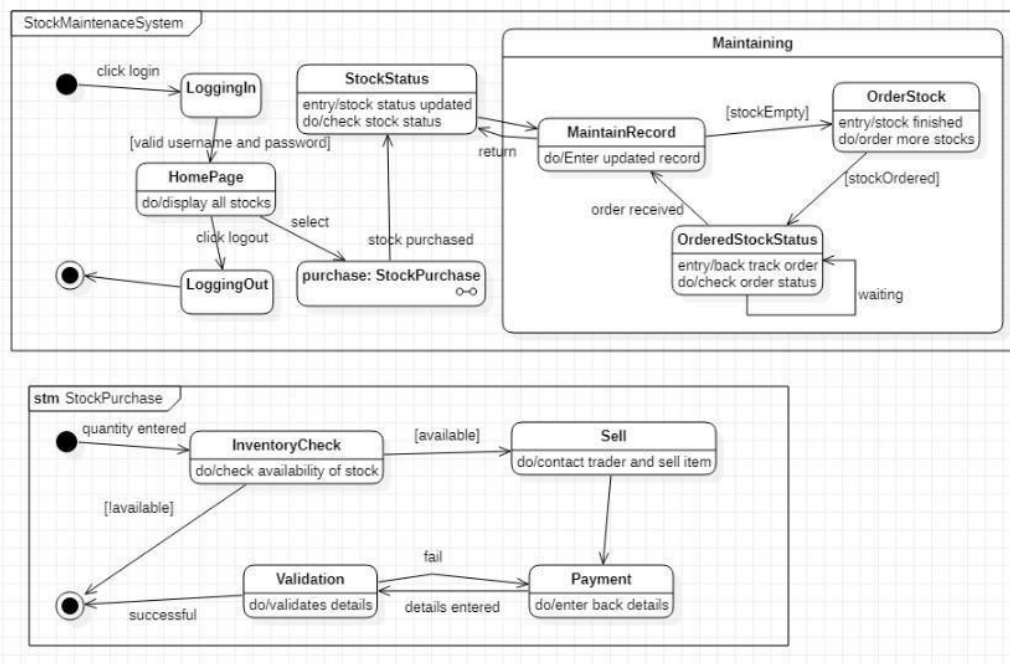
LAB-3

STOCK MAINTENANCE SYSTEM

● CLASS DIAGRAM



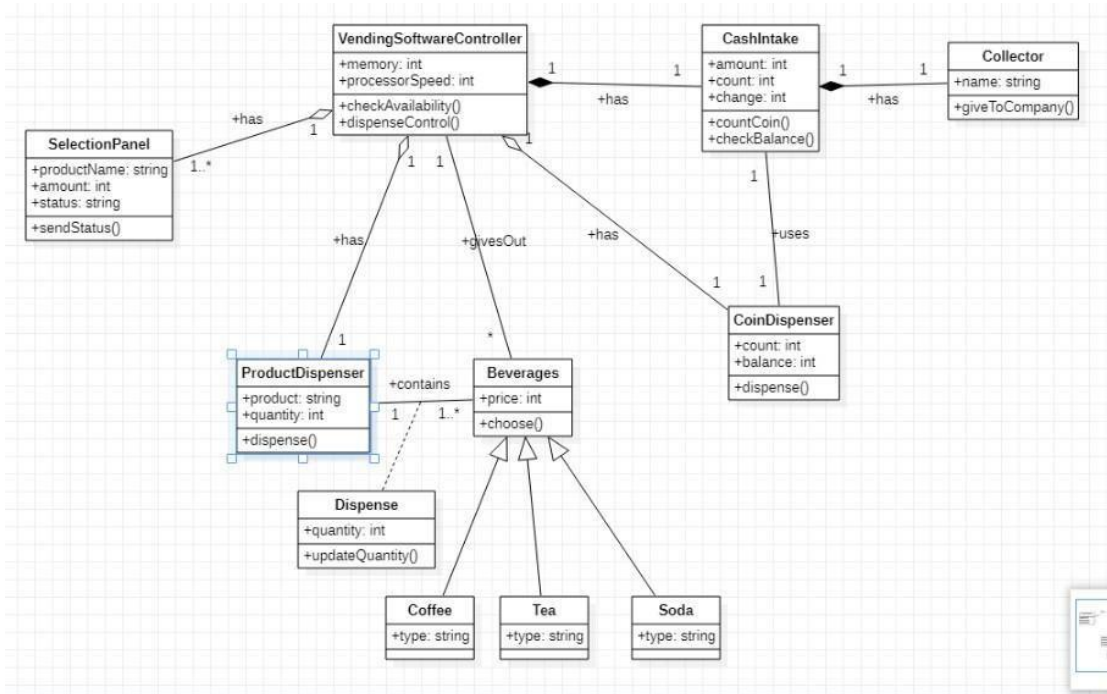
● STATE DIAGRAM



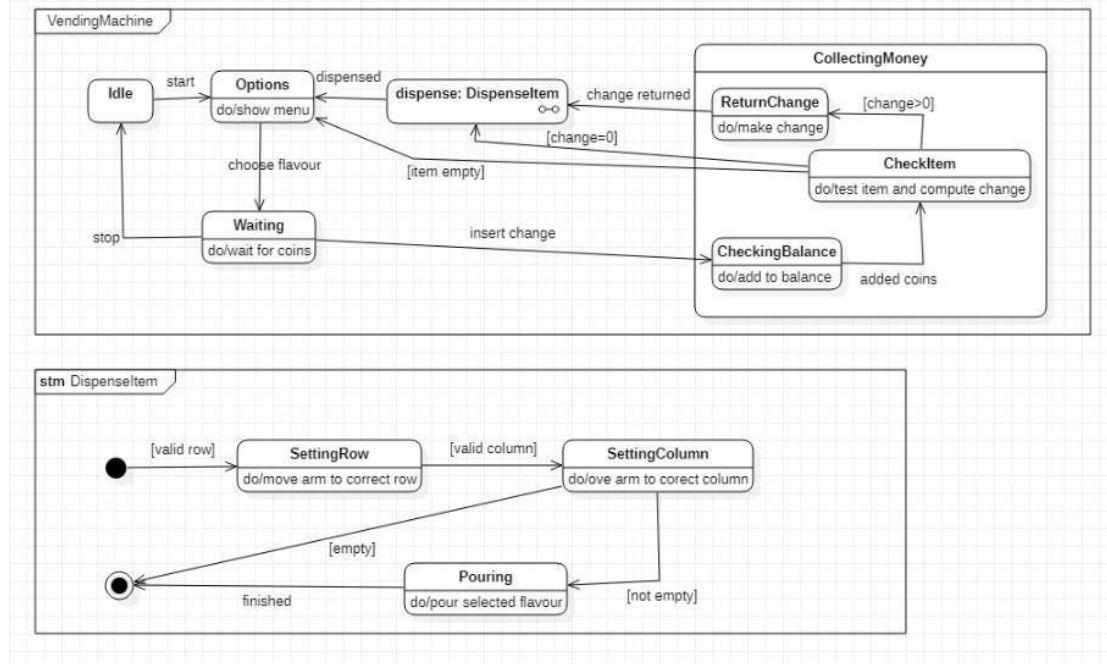
LAB-4

COFFEE VENDING MACHINE

• CLASS DIAGRAM



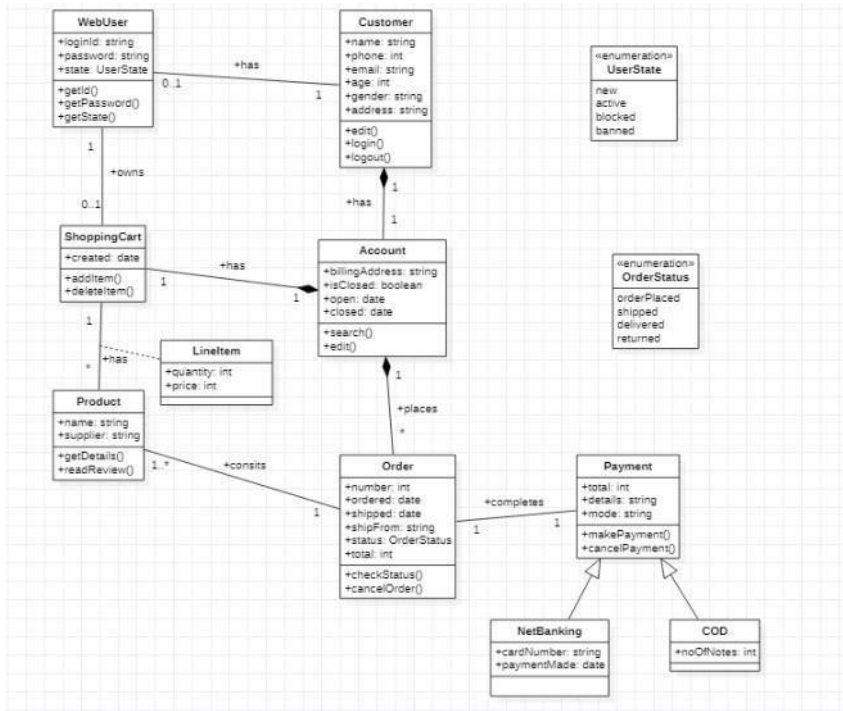
• STATE DIAGRAM



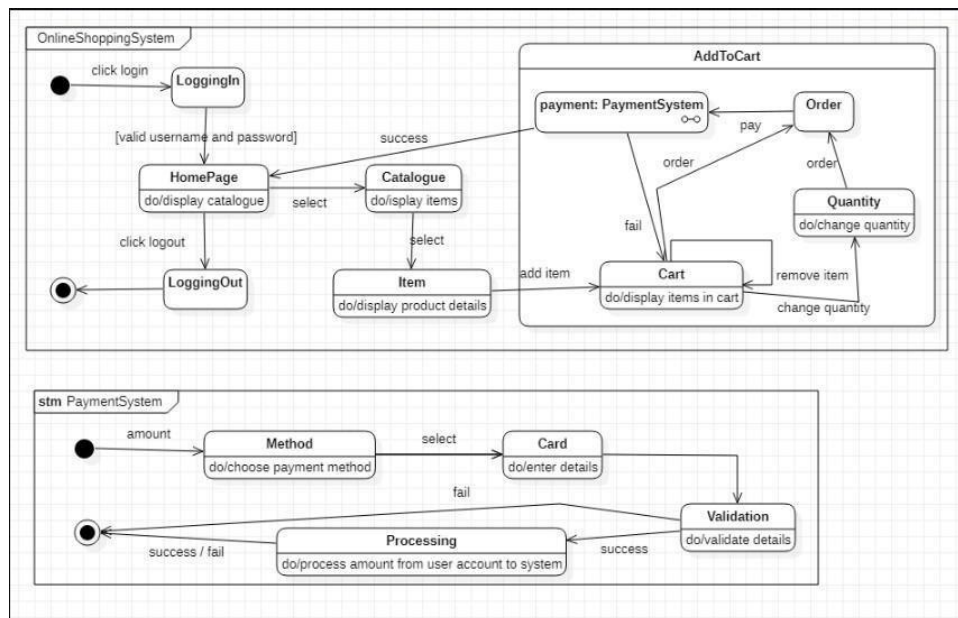
LAB-5

ONLINE SHOPPING SYSTEM

● CLASS DIAGRAM



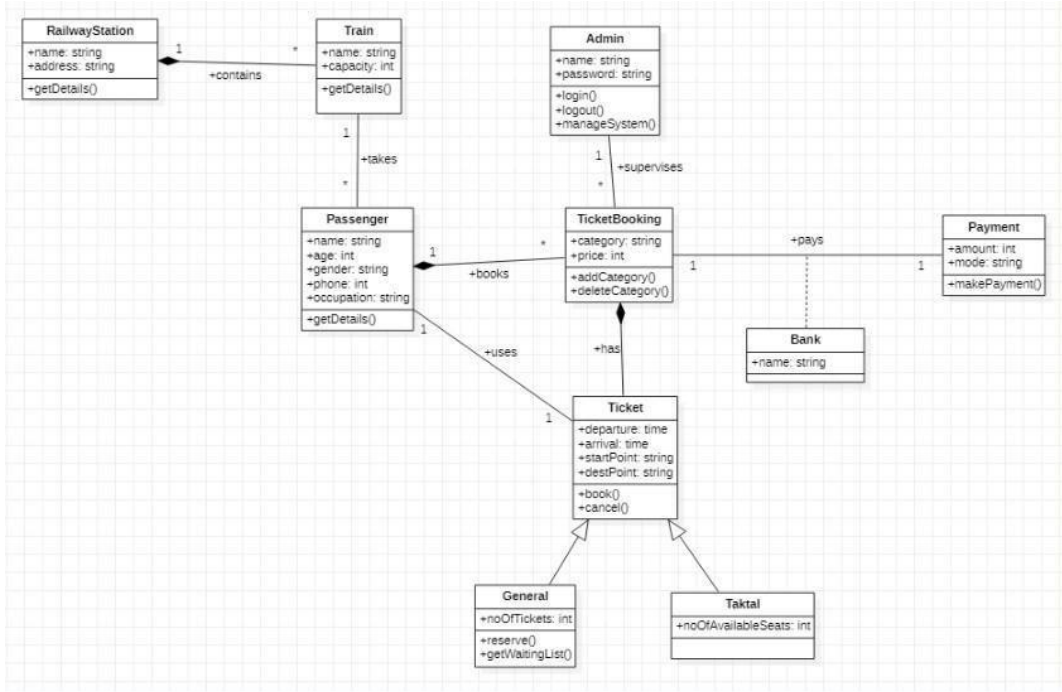
● STATE DIAGRAM



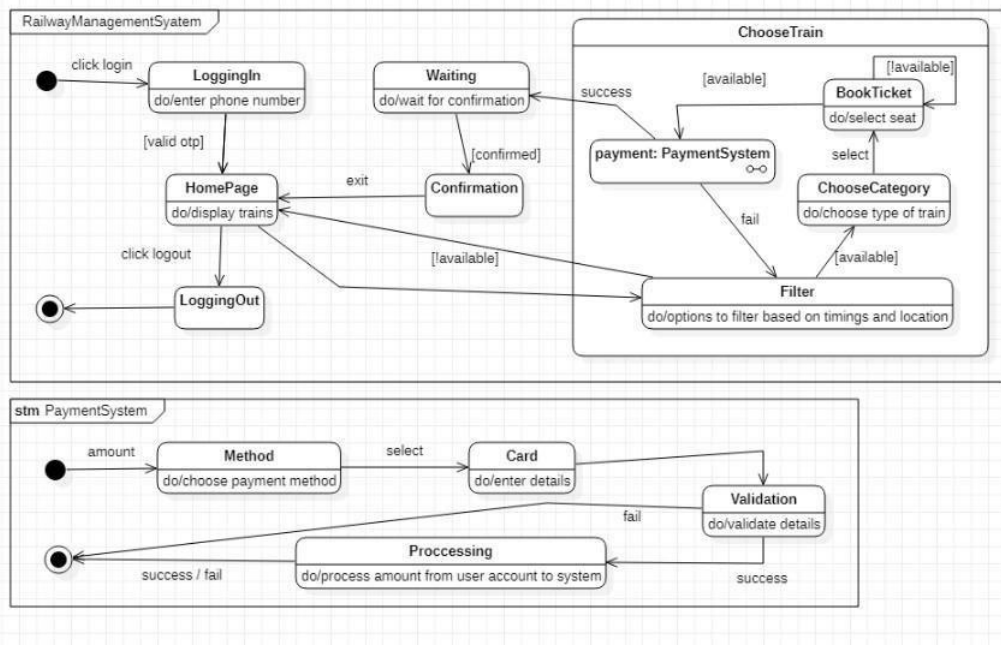
LAB-6

RAILWAY RESERVATION SYSTEM

CLASS DIAGRAM



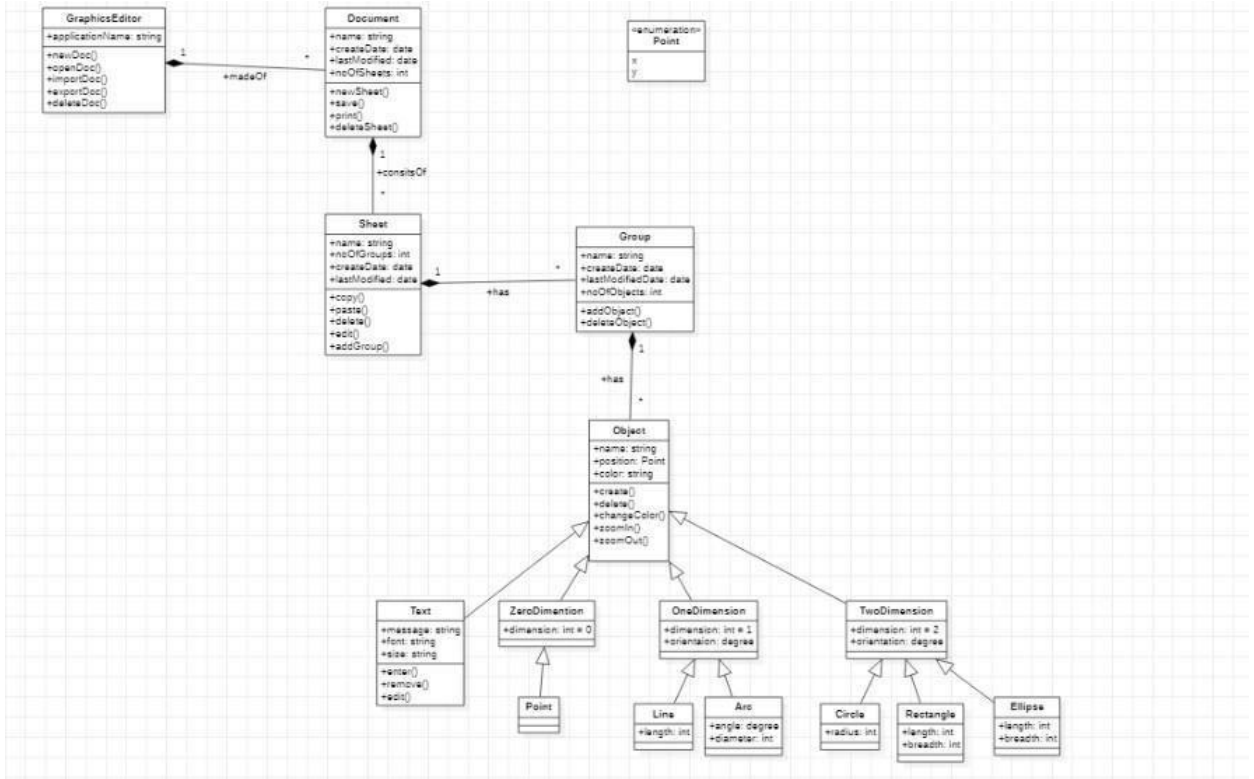
STATE DIAGRAM



LAB-7

GRAPHICS EDITOR SYSTEM

● CLASS DIAGRAM



● STATE DIAGRAM

