VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"JnanaSangama", Belgaum -590014, Karnataka.

LAB REPORT
on

Object Oriented Modeling and Designing

Submitted by

Prathik Vittal (1BM19CS117)

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 "Big Data Analytics" carried out by **Prathik Vittal (1BM19CS117),** 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   **Object Oriented Modeling and Designing - (20CS6PCOMD)** work prescribed for the said degree.

Dr. Nandini Vineeth   **Dr. Jyothi S Nayak**
Assistant Professor   Professor and Head
Department of CSE   Department of CSE
BMSCE, Bengaluru   BMSCE, Bengaluru

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Index Sheet
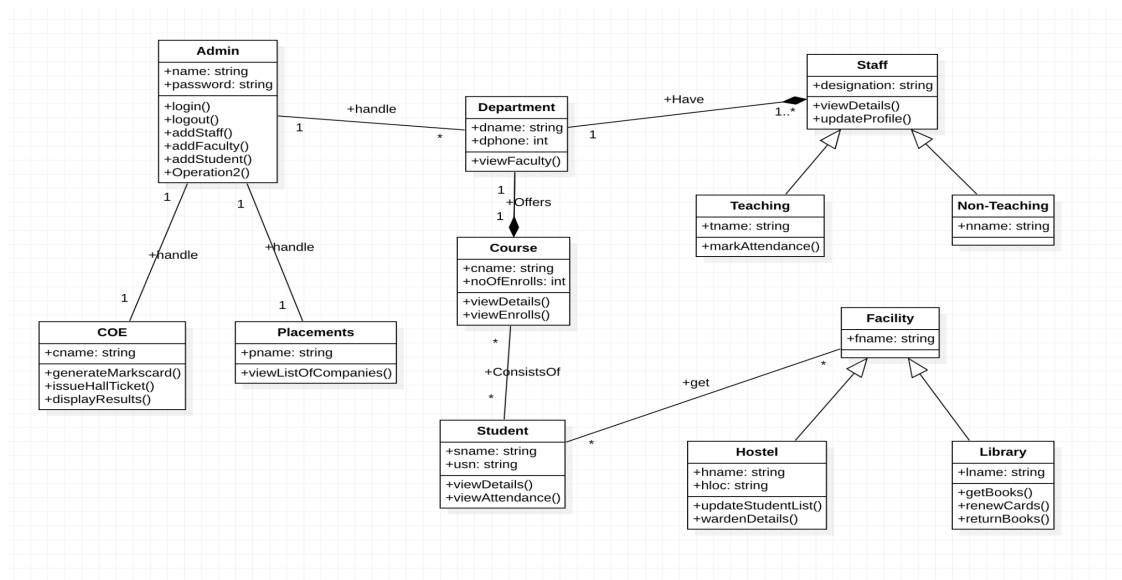
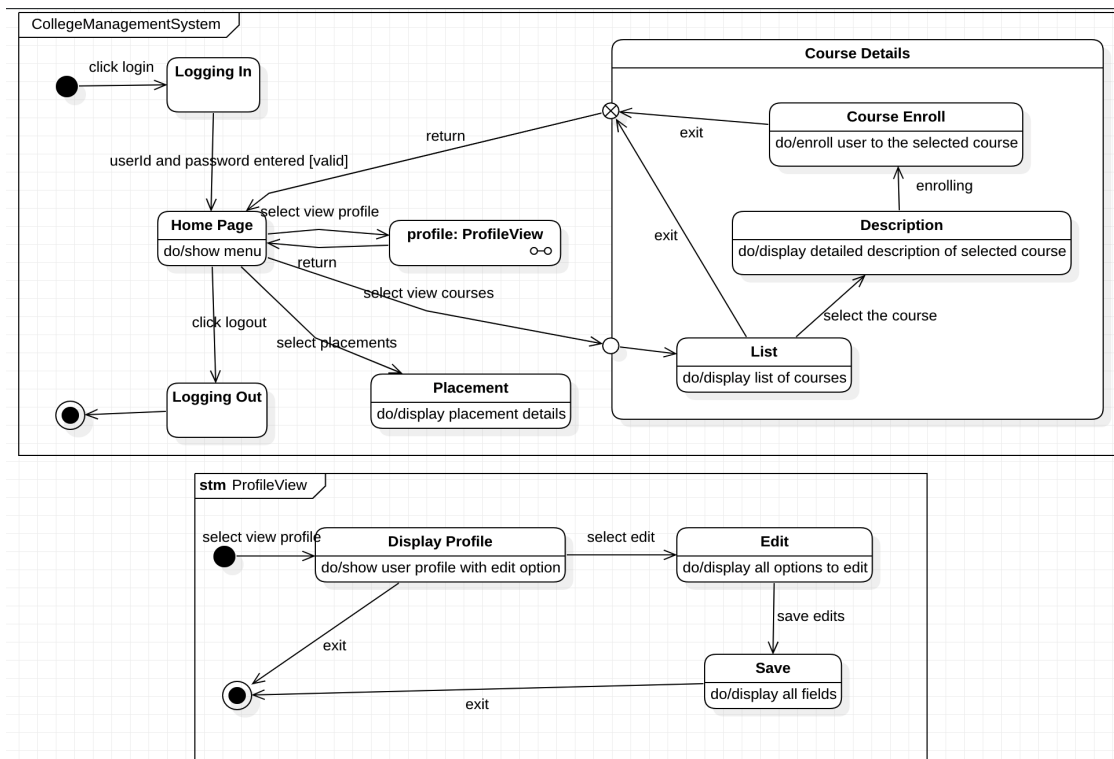| Sl. No.	Experiment Title	Page No.
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3	Stock Management System	
4	Coffee Vending System	
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6	Railway Reservation System	
7	Graphics Editor System	

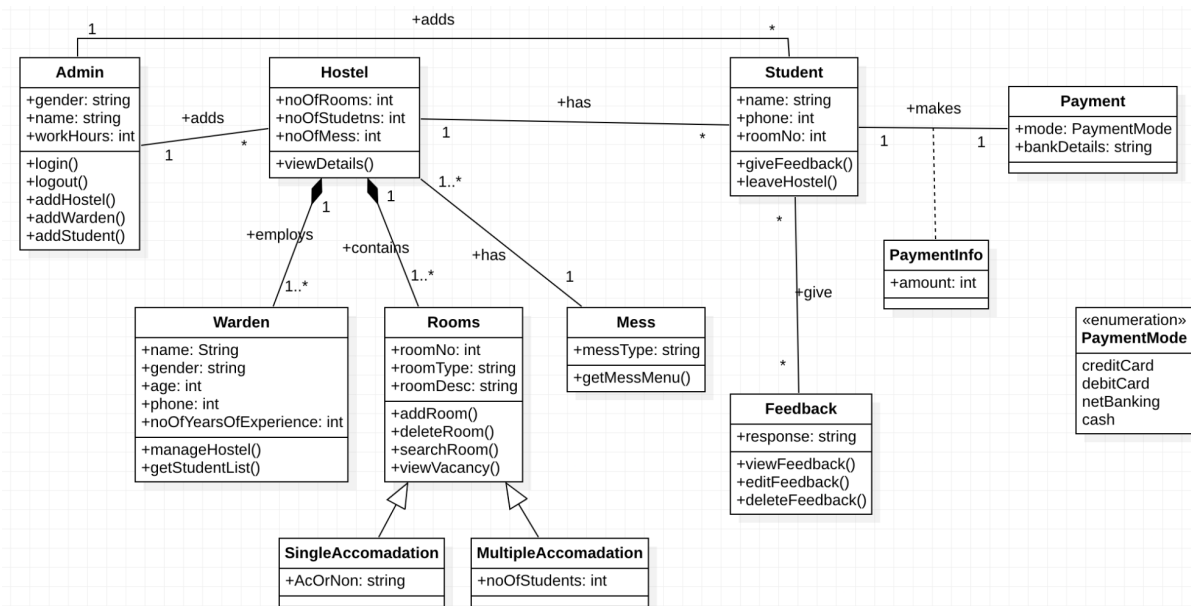## Course Outcome

Lab-1:

Class Diagram:

Admin
+name: string
+password: string
+login()
+logout()
+addStaff()
+addFaculty()
+addStudent()
+Operation2()

Department
+dname: string
+dphone: int
+viewFaculty()

Staff
+designation: string
+viewDetails()
+updateProfile()

+handle 1 ... * +Have 1..*

Teaching
+tname: string
+markAttendance()

Non-Teaching
+nname: string

+Offers 1 / 1

Course
+cname: string
+noOfEnrolls: int
+viewDetails()
+viewEnrolls()

+handle 1 / 1

COE
+cname: string
+generateMarkscard()
+issueHallTicket()
+displayResults()

Placements
+pname: string
+viewListOfCompanies()

+ConsistsOf *

Facility
+fname: string

+get *

Student
+sname: string
+usn: string
+viewDetails()
+viewAttendance()

Hostel
+hname: string
+hloc: string
+updateStudentList()
+wardenDetails()

Library
+lname: string
+getBooks()
+renewCards()
+returnBooks()

State Diagram:

CollegeManagementSystem

click login → **Logging In**

userId and password entered [valid]

Home Page
do/show menu

select view profile → **profile: ProfileView**

Course Details

Course Enroll
do/enroll user to the selected course

enrolling

Description
do/display detailed description of selected course

select the course

List
do/display list of courses

return / exit / exit

click logout → **Logging Out**

select placements → **Placement**
do/display placement details

select view courses

stm ProfileView

select view profile → **Display Profile**
do/show user profile with edit option

select edit → **Edit**
do/display all options to edit

save edits

exit

Save
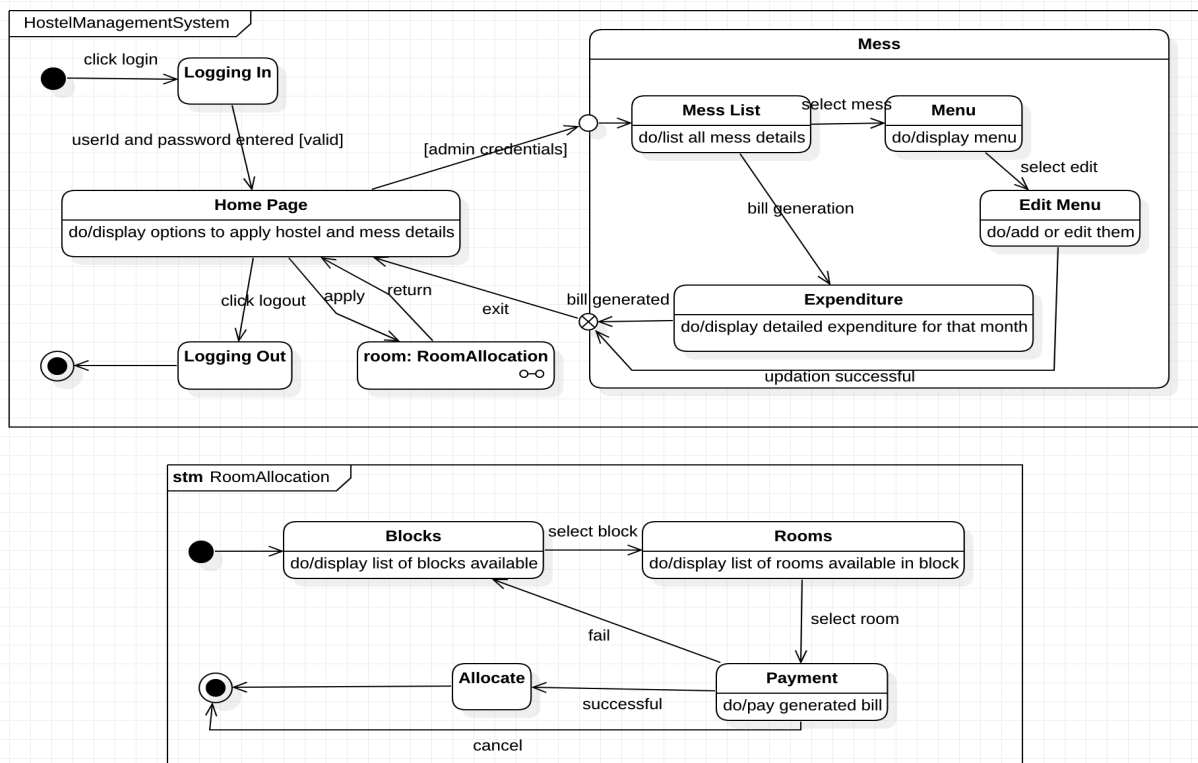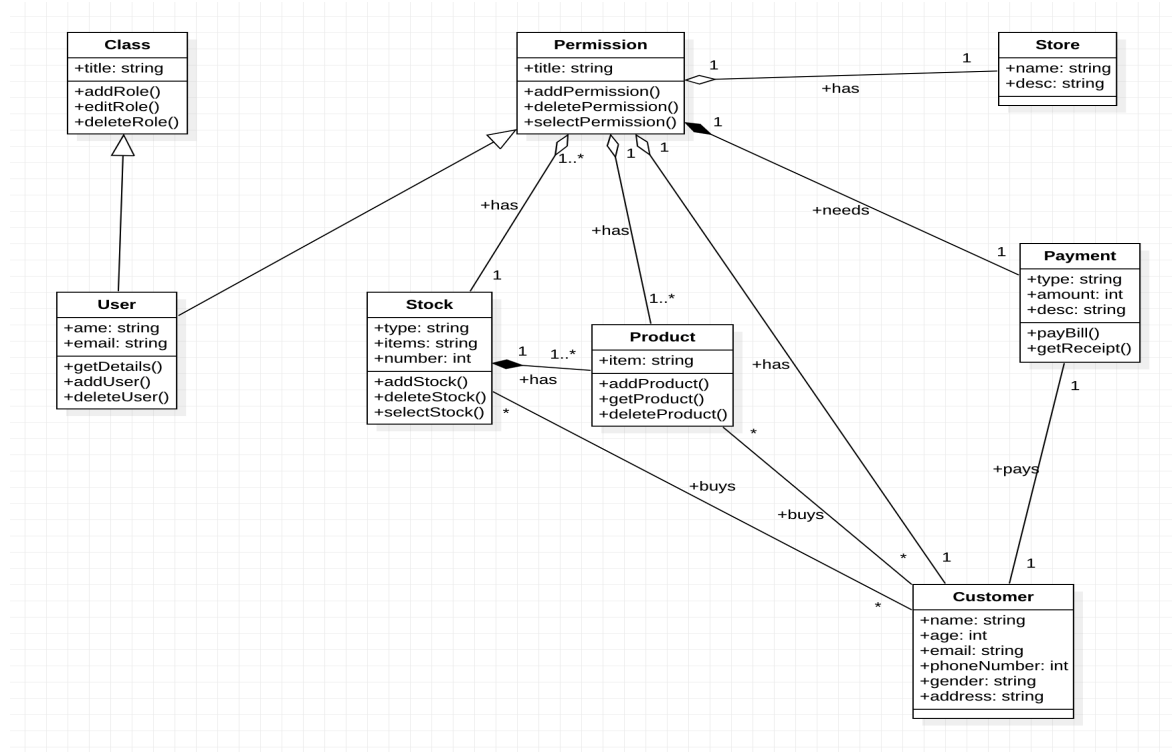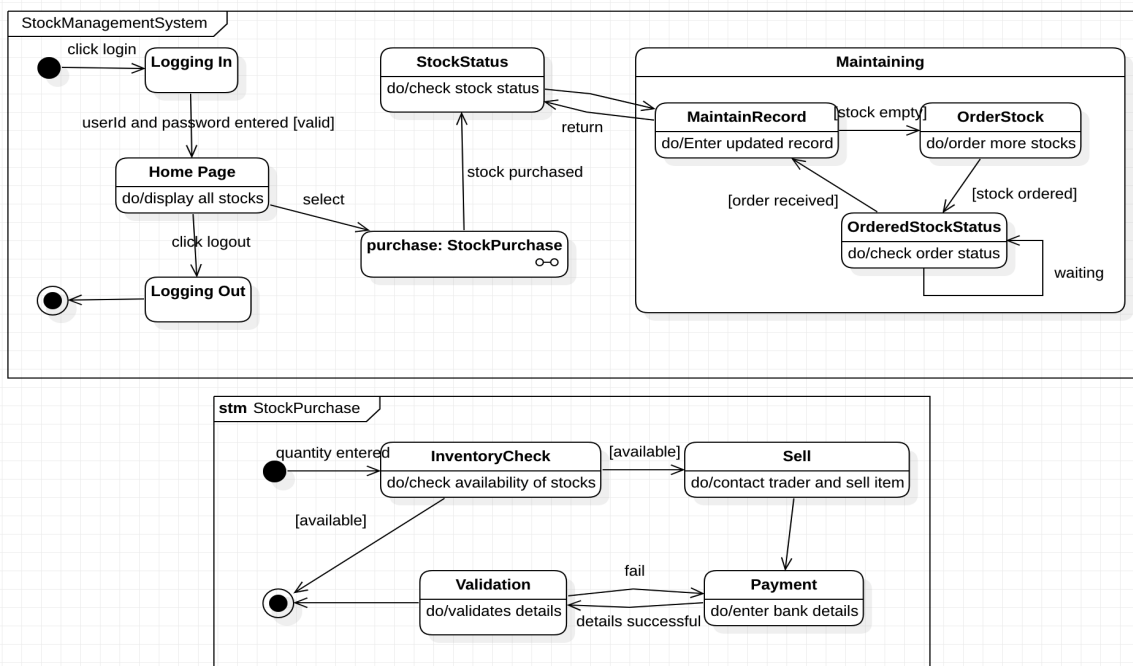do/display all fields
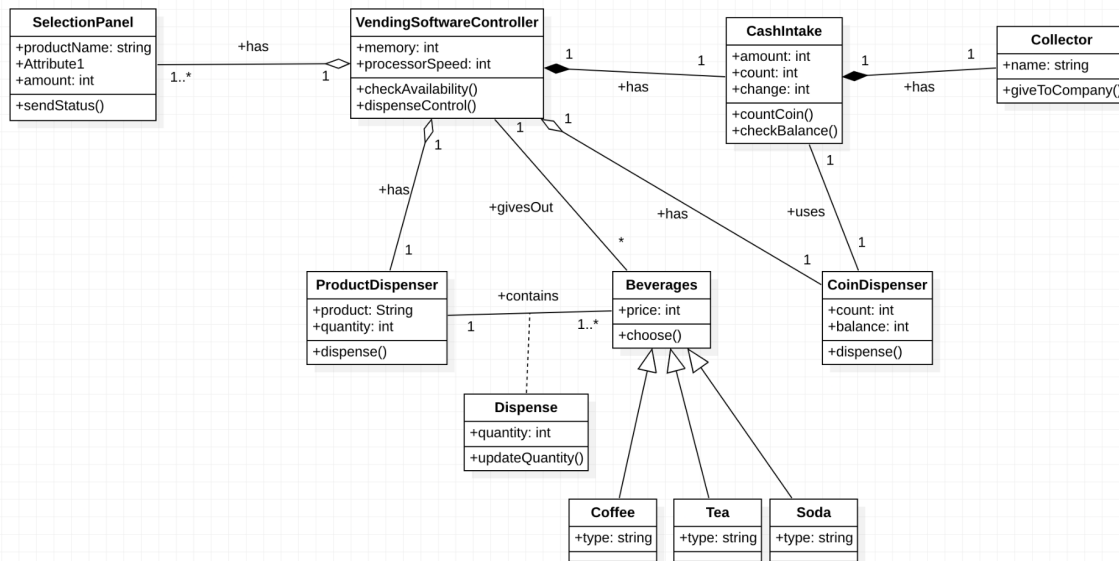
exit

Lab-2:

Class Diagram:

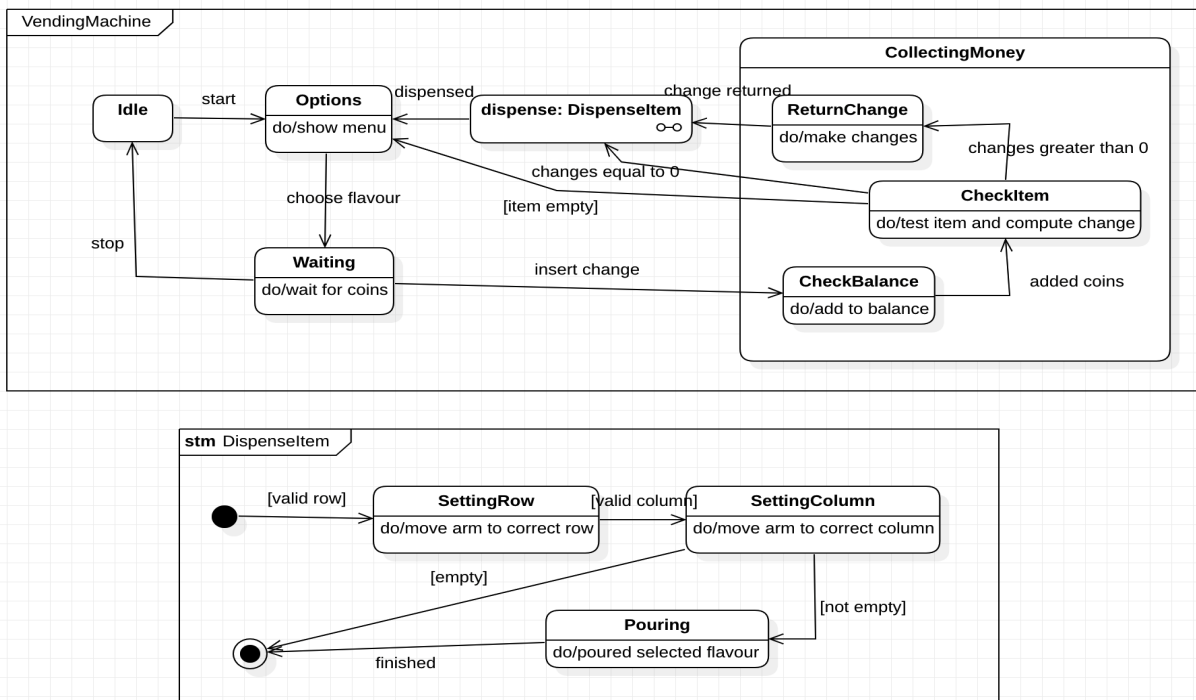State Diagram:

Lab-3:

Class Diagram:
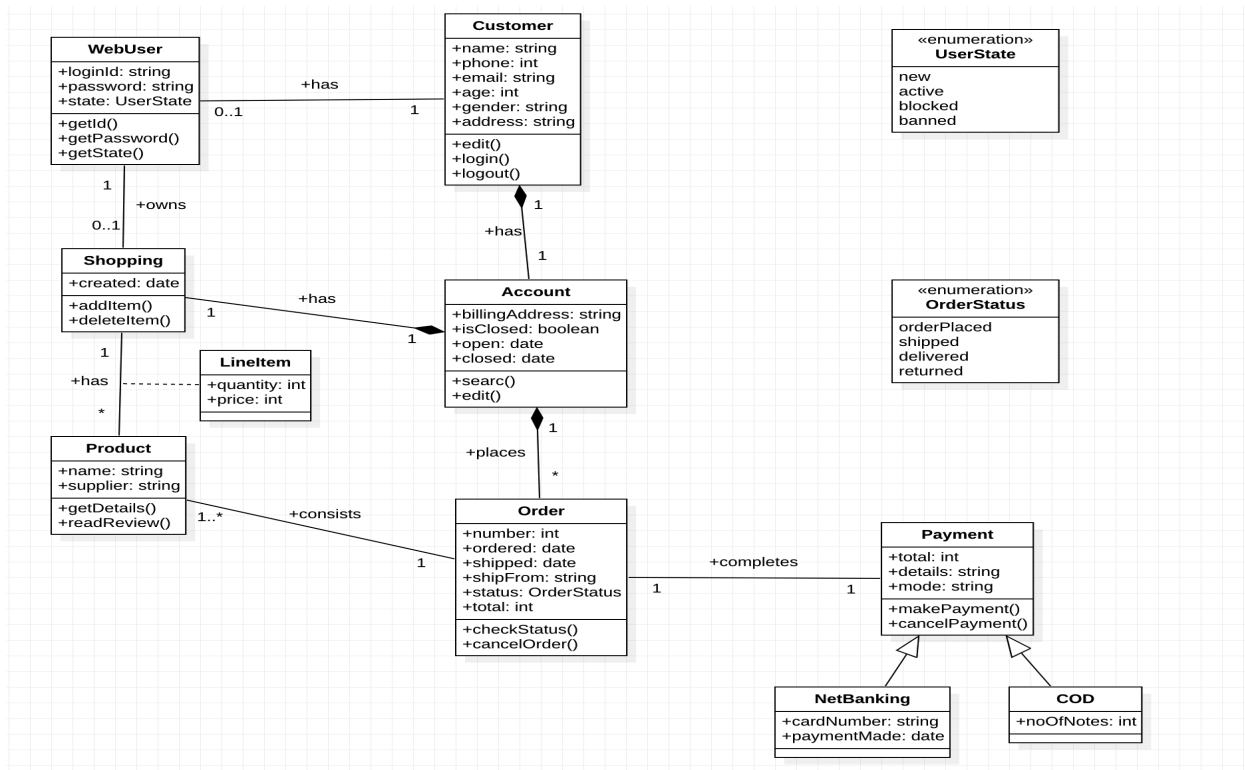

State Diagram:

Lab-4:

Class Diagram:

SelectionPanel
+productName: string
+Attribute1
+amount: int

+sendStatus()

+has · · · · · · 1..* · · · 1

VendingSoftwareController
+memory: int
+processorSpeed: int

+checkAvailability()
+dispenseControl()

+has

CashIntake
+amount: int
+count: int
+change: int

+countCoin()
+checkBalance()

1 · · · 1 · · · +has · · · 1

Collector
+name: string

+giveToCompany()

+has

+givesOut

+has

+uses

ProductDispenser
+product: String
+quantity: int

+dispense()

+contains · · · 1 · · · 1..*

Beverages
+price: int

+choose()

CoinDispenser
+count: int
+balance: int

+dispense()

Dispense
+quantity: int

+updateQuantity()

Coffee
+type: string

Tea
+type: string

Soda
+type: string

State Diagram:

Lab-5:

Class Diagram:

WebUser

+loginId: string
+password: string
+state: UserState

+getId()
+getPassword()
+getState()

Customer

+name: string
+phone: int
+email: string
+age: int
+gender: string
+address: string

+edit()
+login()
+logout()

«enumeration»
UserState

new
active
blocked
banned

+has 0..1 1

Shopping

+created: date

+addItem()
+deleteItem()

+has 1 1

Account

+billingAddress: string
+isClosed: boolean
+open: date
+closed: date

+searc()
+edit()

«enumeration»
OrderStatus

orderPlaced
shipped
delivered
returned

+owns 1 0..1

+has 1

LineItem

+quantity: int
+price: int

+has 1 *

Product

+name: string
+supplier: string

+getDetails()
+readReview()

+has 1

+places 1 *

Order

+number: int
+ordered: date
+shipped: date
+shipFrom: string
+status: OrderStatus
+total: int

+checkStatus()
+cancelOrder()

+consists 1..* 1

+completes 1 1

Payment

+total: int
+details: string
+mode: string

+makePayment()
+cancelPayment()

NetBanking

+cardNumber: string
+paymentMade: date

COD
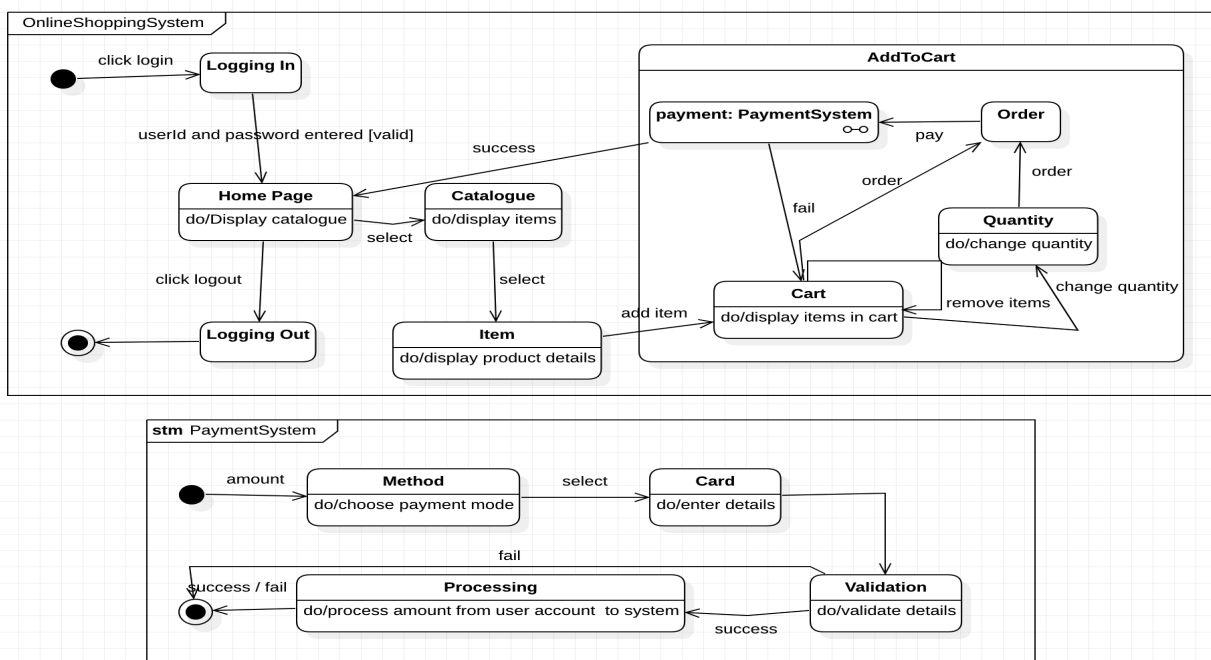
+noOfNotes: int

State Diagram:

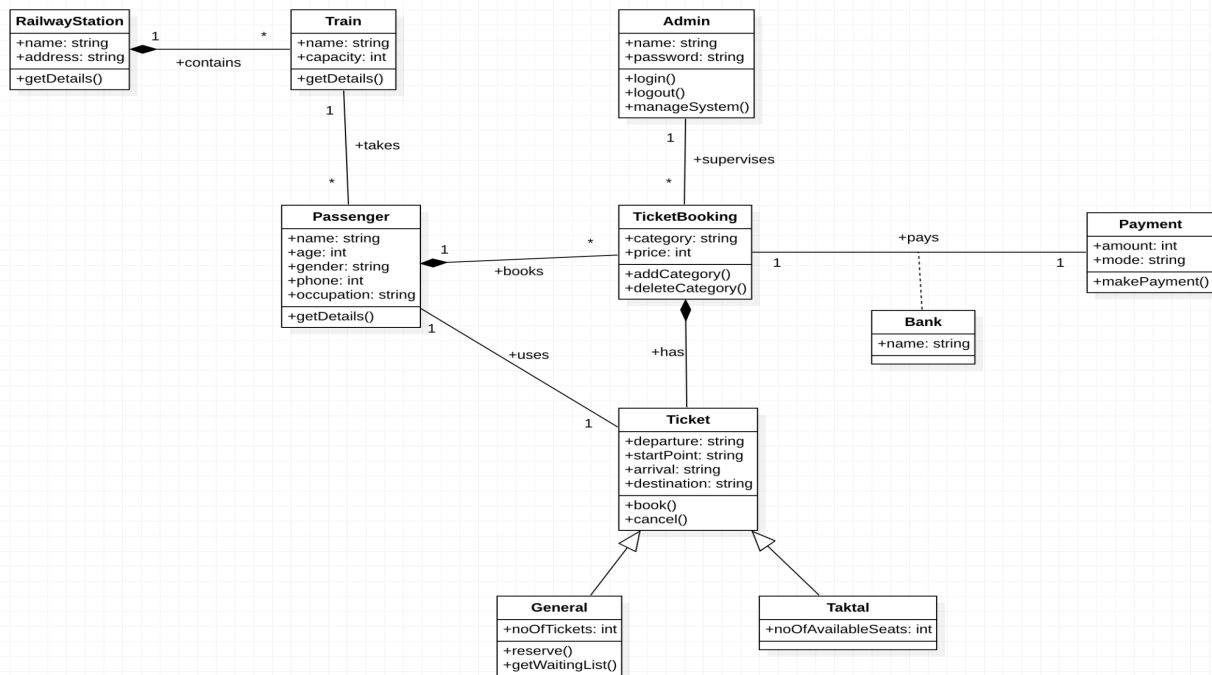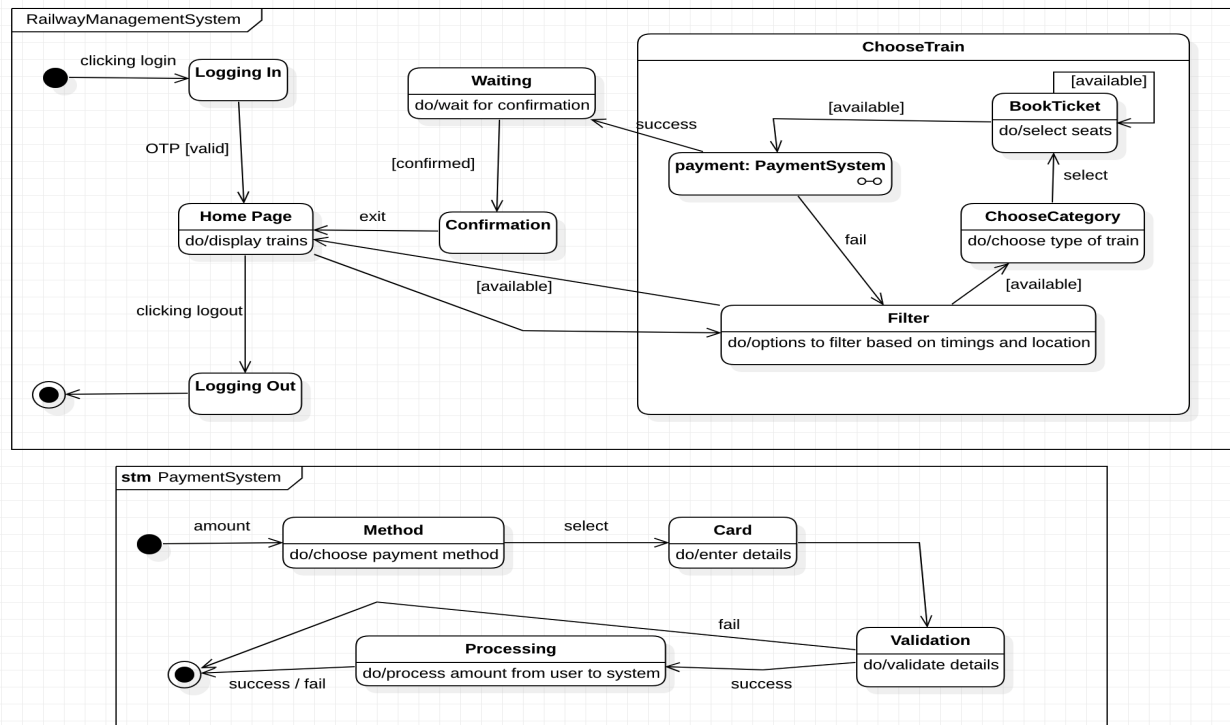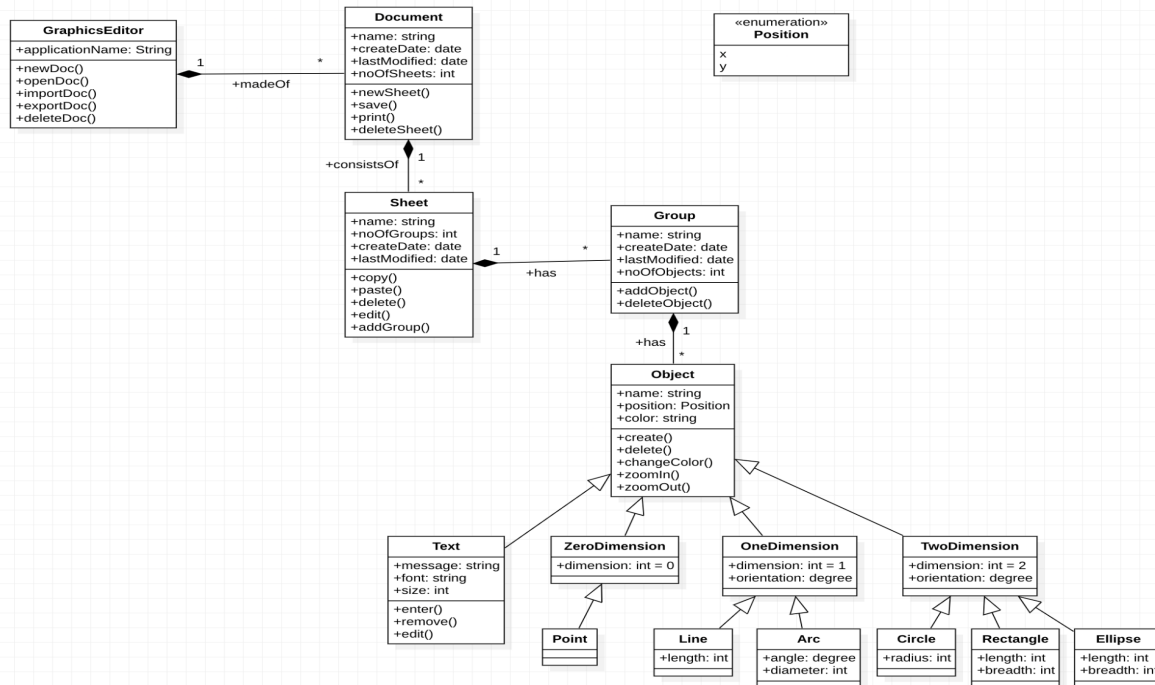# Lab-6:

Class Diagram:

State Diagram:

Lab-7:

Class Diagram:

State Diagram: