VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"JnanaSangama", Belgaum -590014, Karnataka.

LAB REPORT on

OBJECT ORIENTED MODELLING AND DESIGN

Submitted by

PANKAJ GUPTA (1BM19CS110)

in partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

in

COMPUTER SCIENCE AND ENGINEERING

B.M.S. COLLEGE OF ENGINEERING BENGALURU-560019 May-2022 to July-2022

(Autonomous Institution under VTU)

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 MODELLING AND DESIGN** " Carried out by **PANKAJ GUPTA (1BM19CS110),** 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 modelling and design-(20CS6PCOMD)** work prescribed for the said degree.

Name of the Lab-In charge **Dr. Nandhini Vineeth**
Designation Assistant Professor
Department of CSE Department of CSE BMSCE, Bengaluru BMSCE, Bengaluru

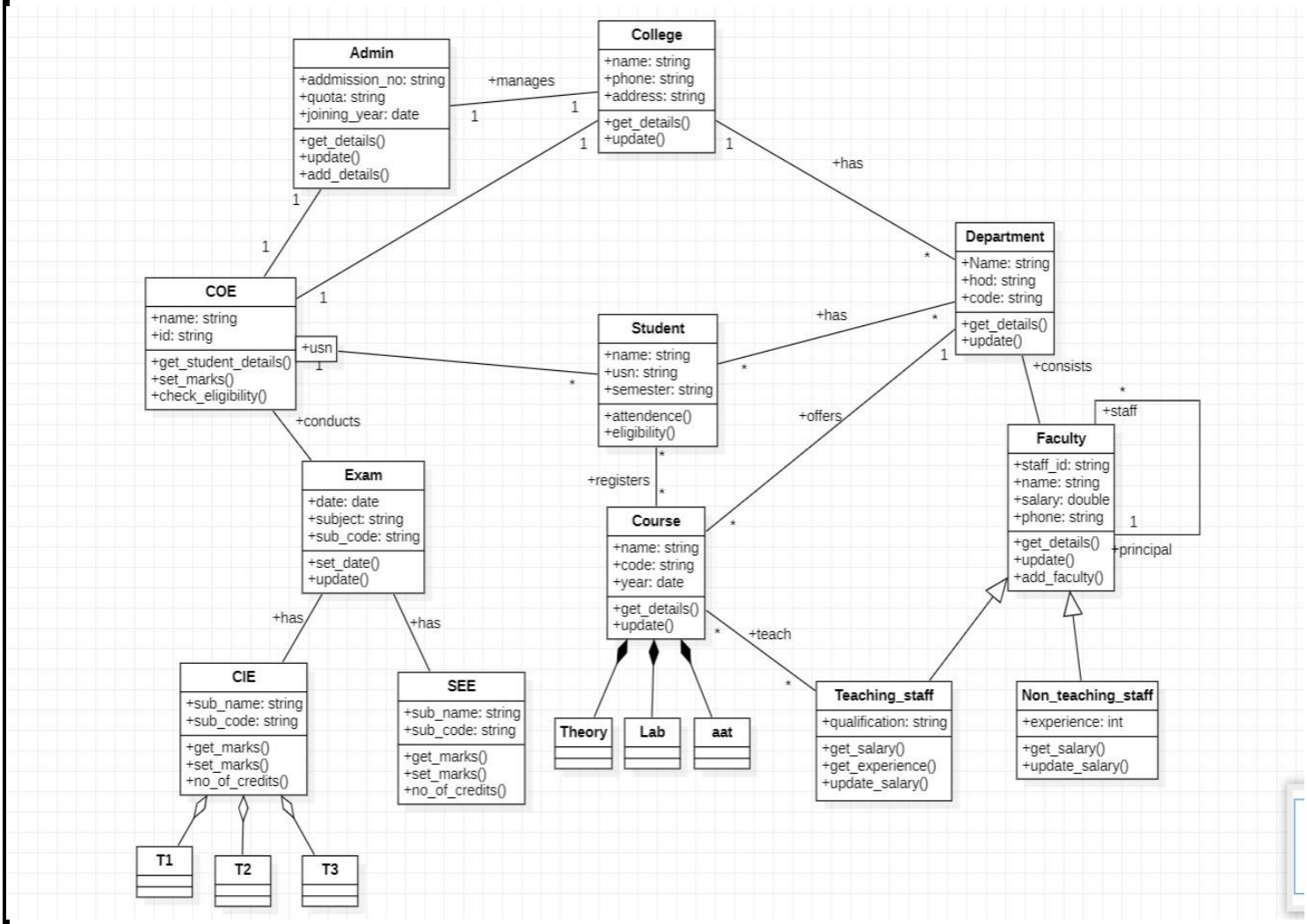
Index Sheet

Course Outcome

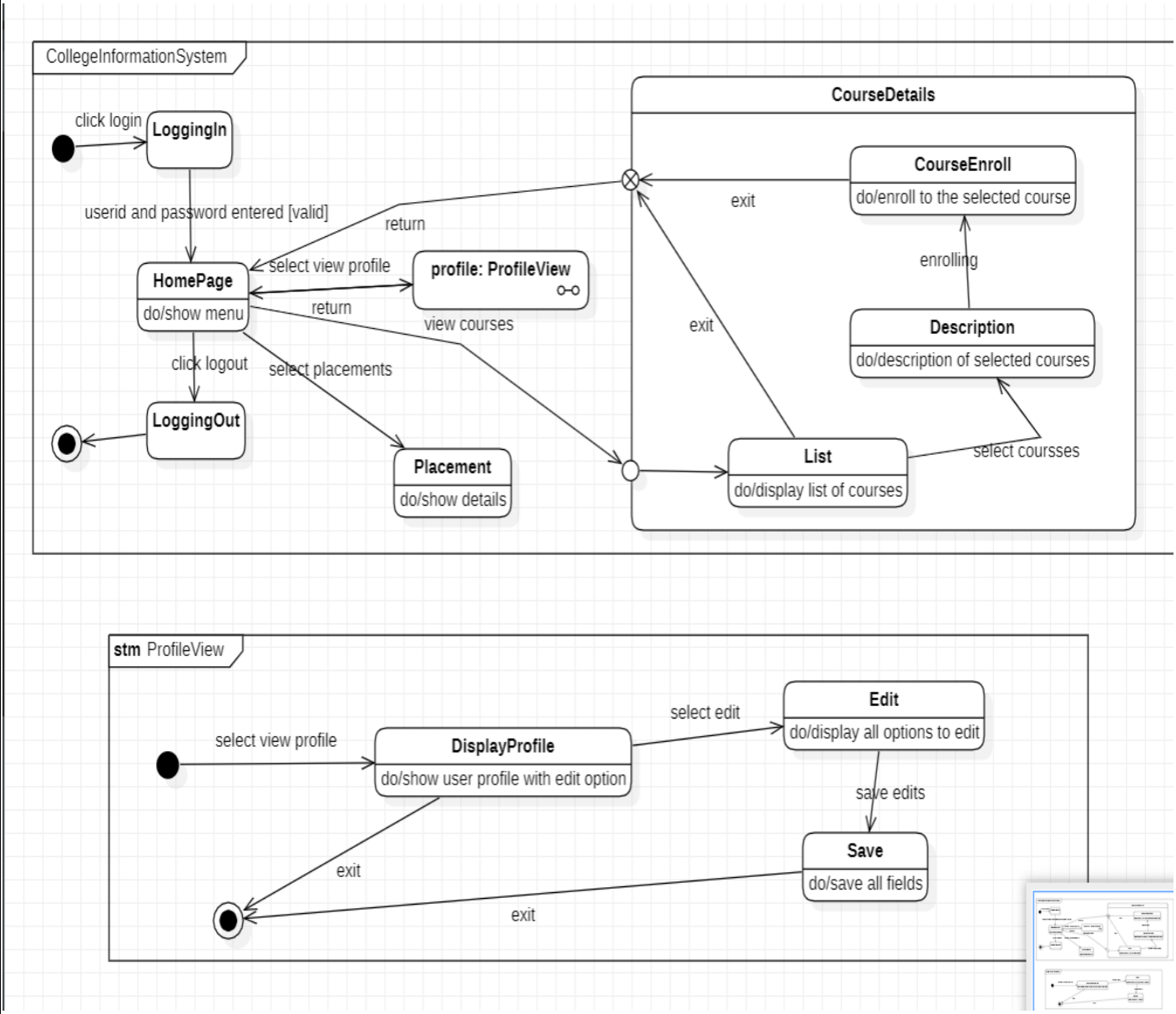
CO 1	Ability to apply the knowledge of class, State & Interaction Modelling using Unified Modeling Language to solve a given problem.
CO 2	Ability to analyze a System for a given requirement using Unified Modeling language
CO 3	Ability to design a given system using high level strategy.
CO 4	Ability to conduct practical experiment to solve a given problem using Unified Modeling language.

LAB 1

Class Diagram:

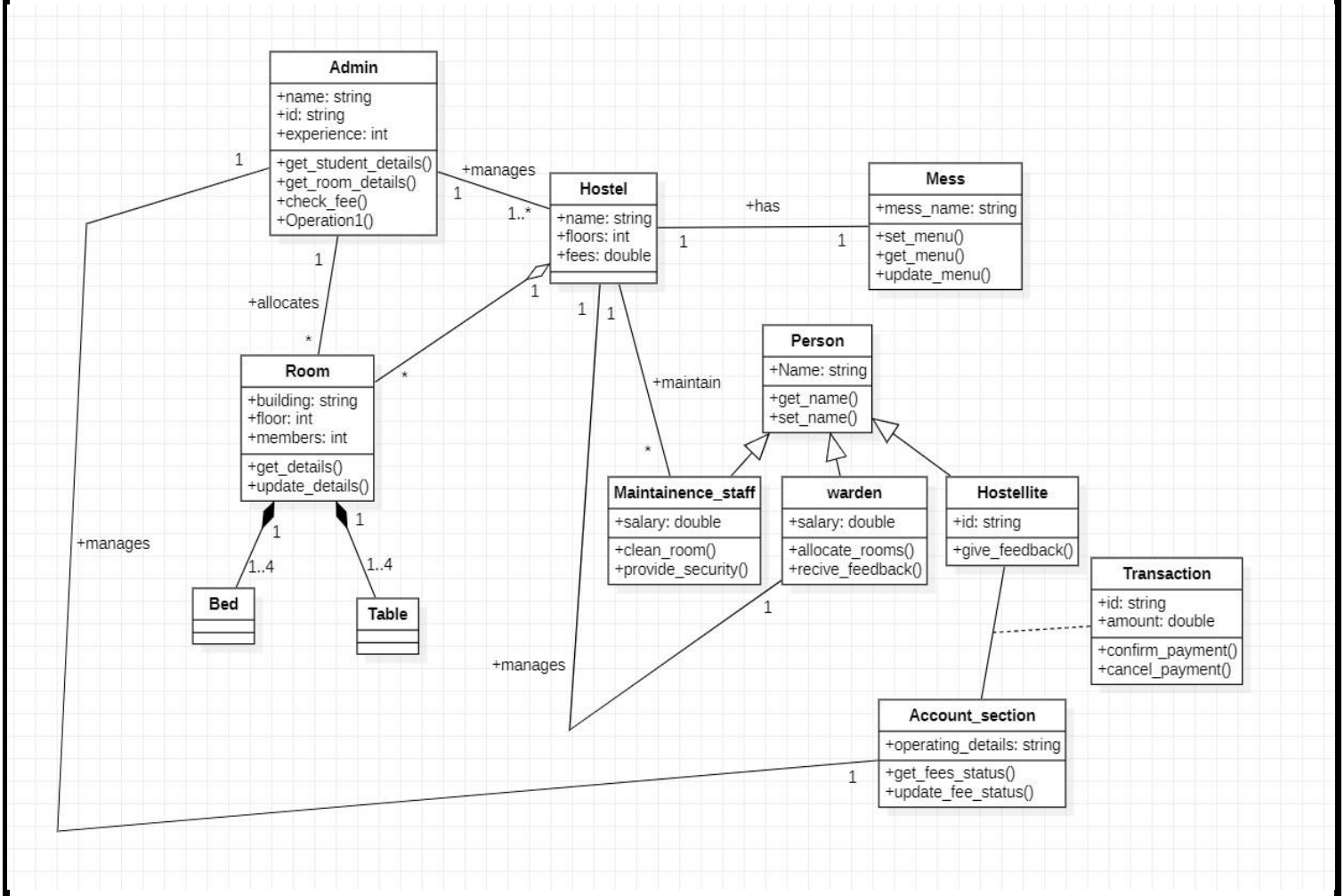


State diagram:

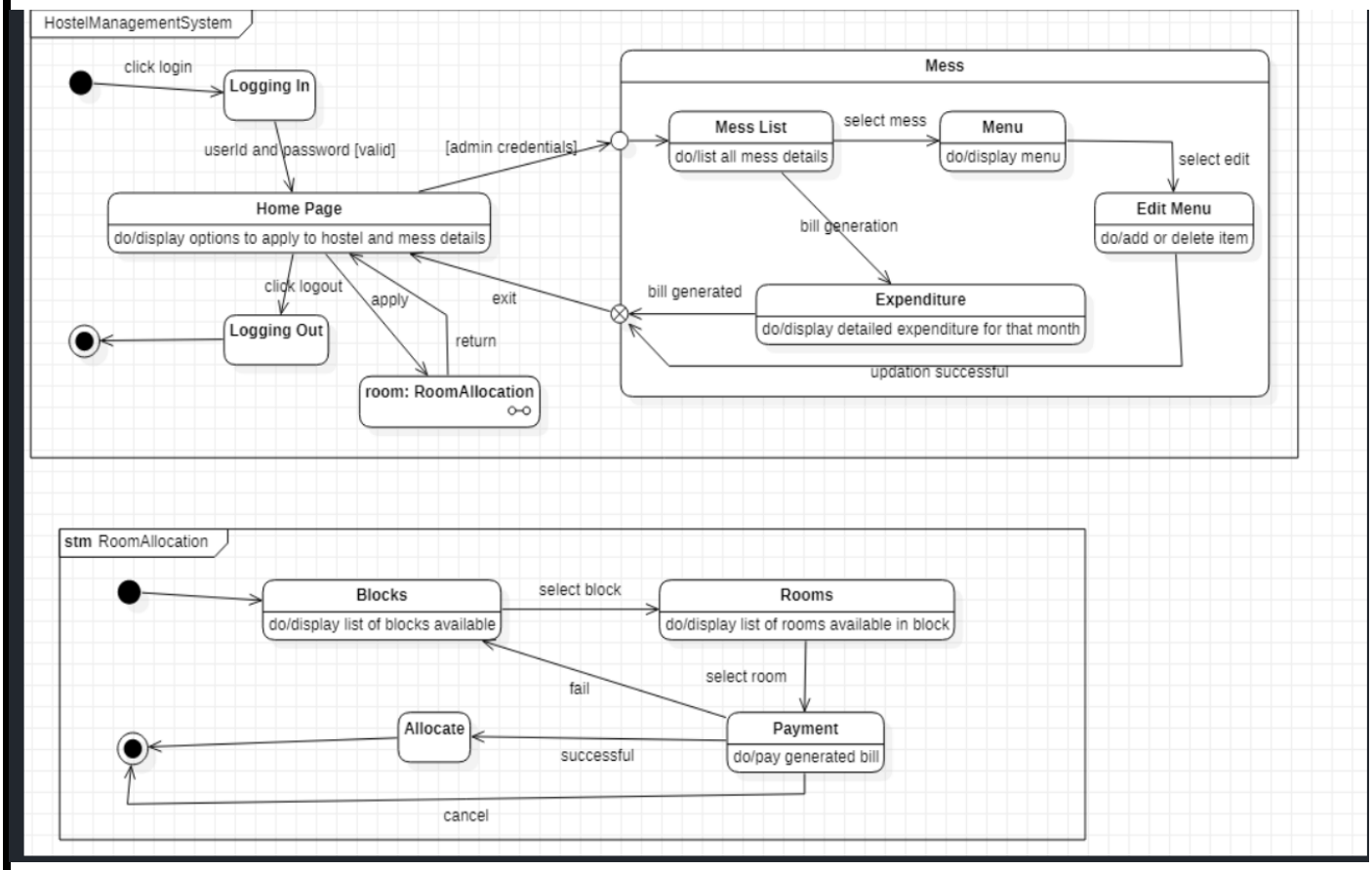


LAB 2

Class diagram:

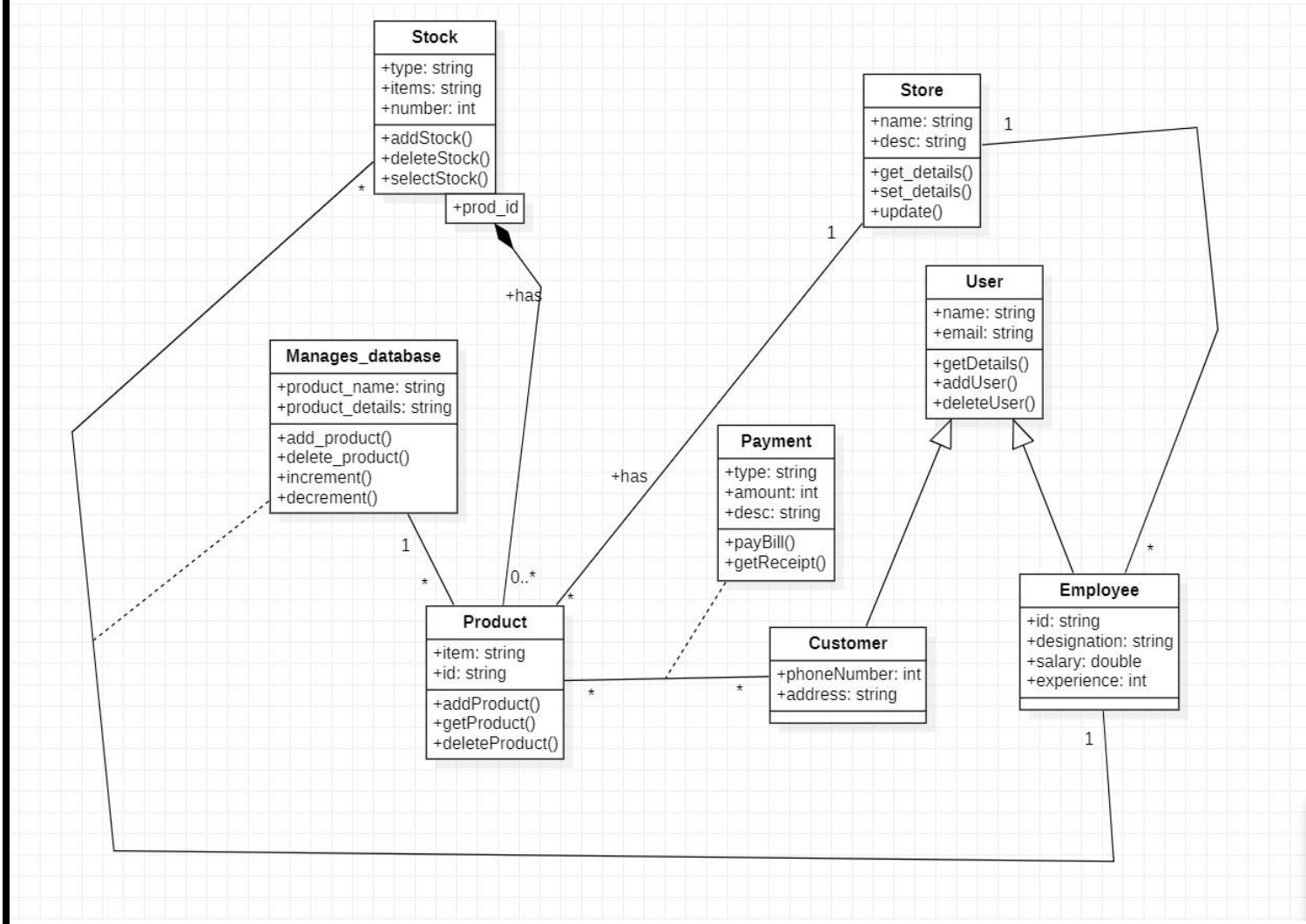


State diagram:

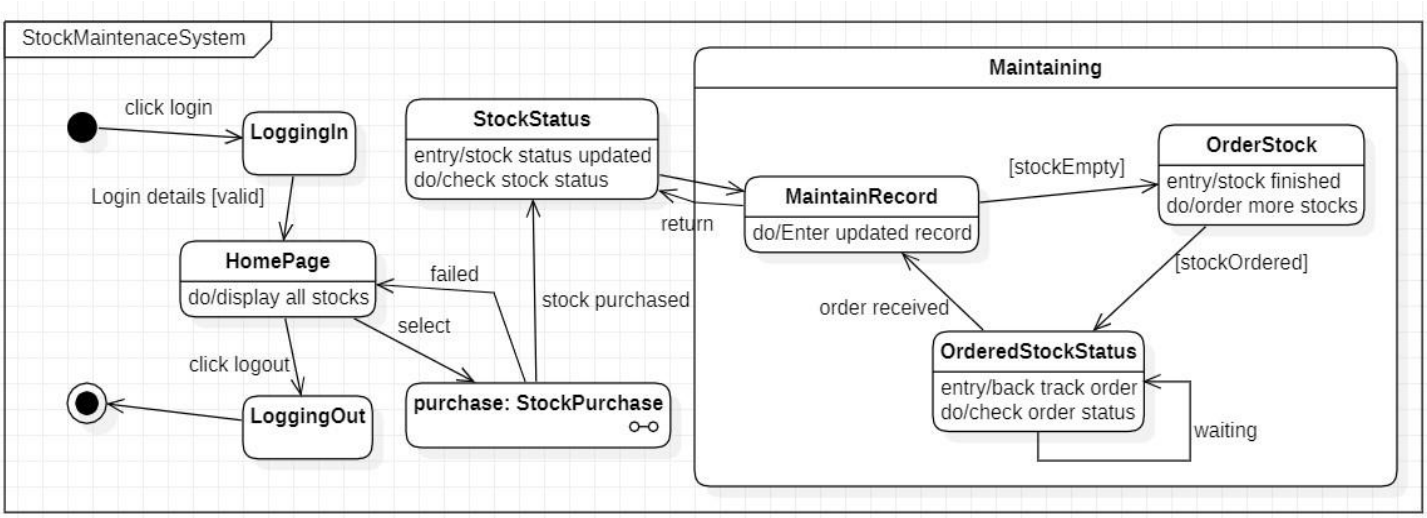

HostelManagementSystem
click login
Logging In
userId and password [valid]
[admin credentials]
Mess
Mess List
do/list all mess details
select mess
Menu
do/display menu
select edit
Edit Menu
do/add or delete item
Home Page
do/display options to apply to hostel and mess details
bill generation
click logout
apply
exit
bill generated
Expenditure
do/display detailed expenditure for that month
Logging Out
return
room: RoomAllocation
updation successful
stm RoomAllocation
Blocks
do/display list of blocks available
select block
Rooms
do/display list of rooms available in block
fail
select room
Allocate
Payment
do/pay generated bill
successful
cancel

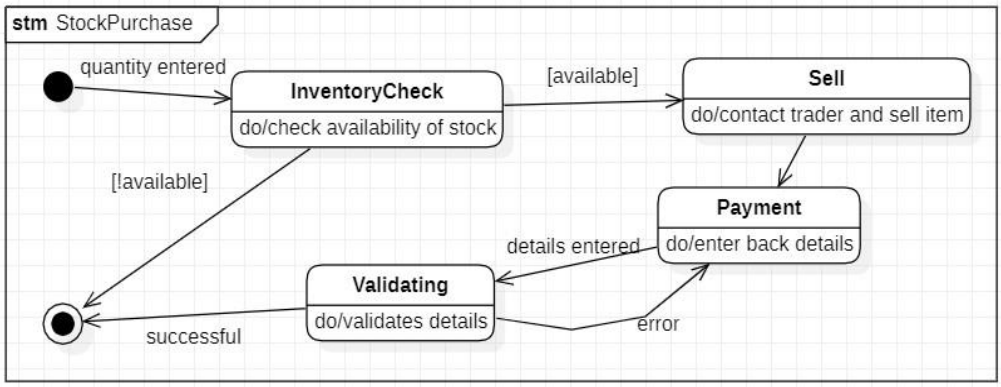
Class diagram:

LAB 3



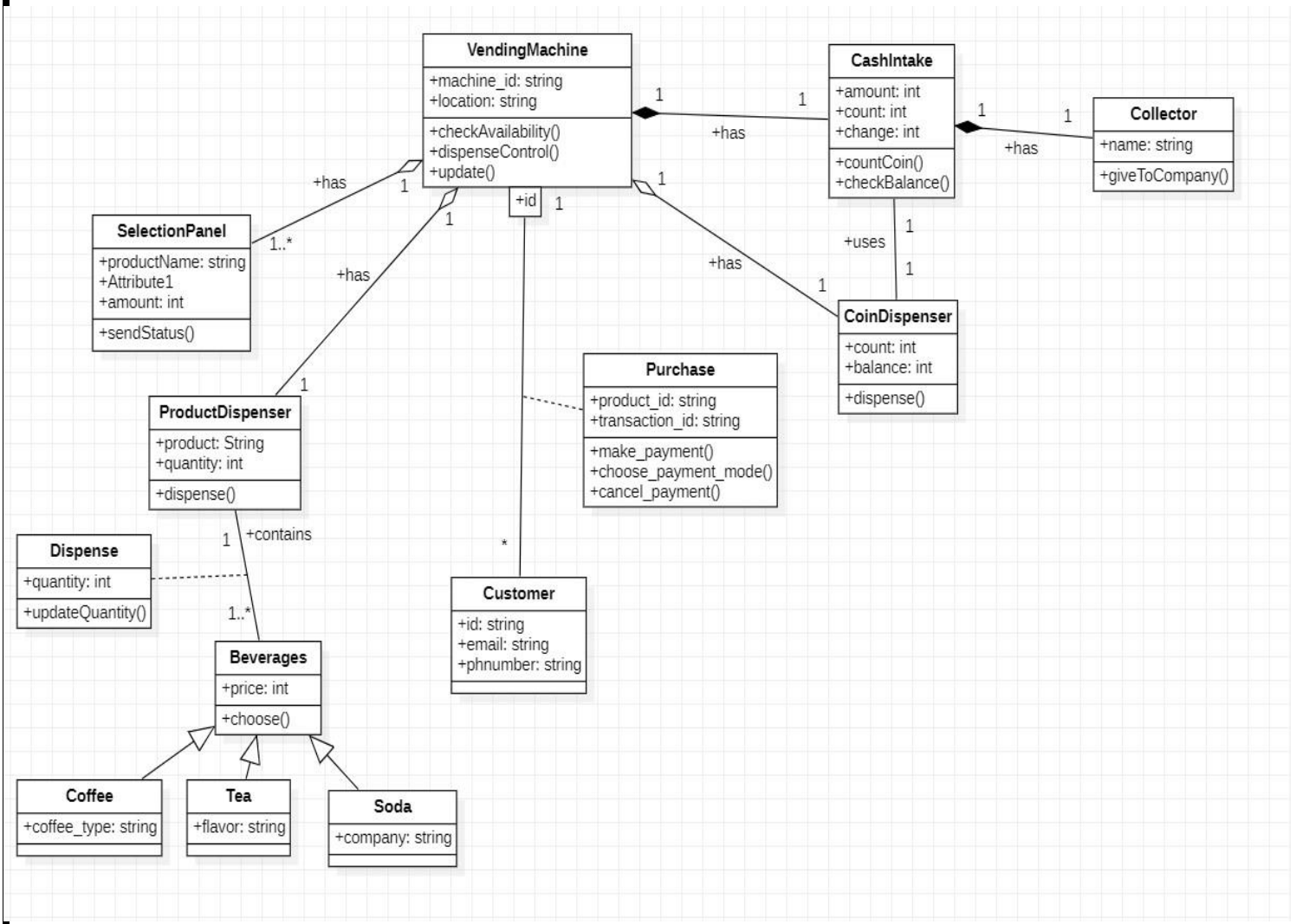
State diagram:


StockMaintenaceSystem
click login
LoggingIn
Login details [valid]
HomePage
do/display all stocks
failed
select
click logout
LoggingOut
purchase: StockPurchase
StockStatus
entry/stock status updated
do/check stock status
stock purchased
Maintaining
MaintainRecord
do/Enter updated record
return
[stockEmpty]
OrderStock
entry/stock finished
do/order more stocks
[stockOrdered]
order received
OrderedStockStatus
entry/back track order
do/check order status
waiting

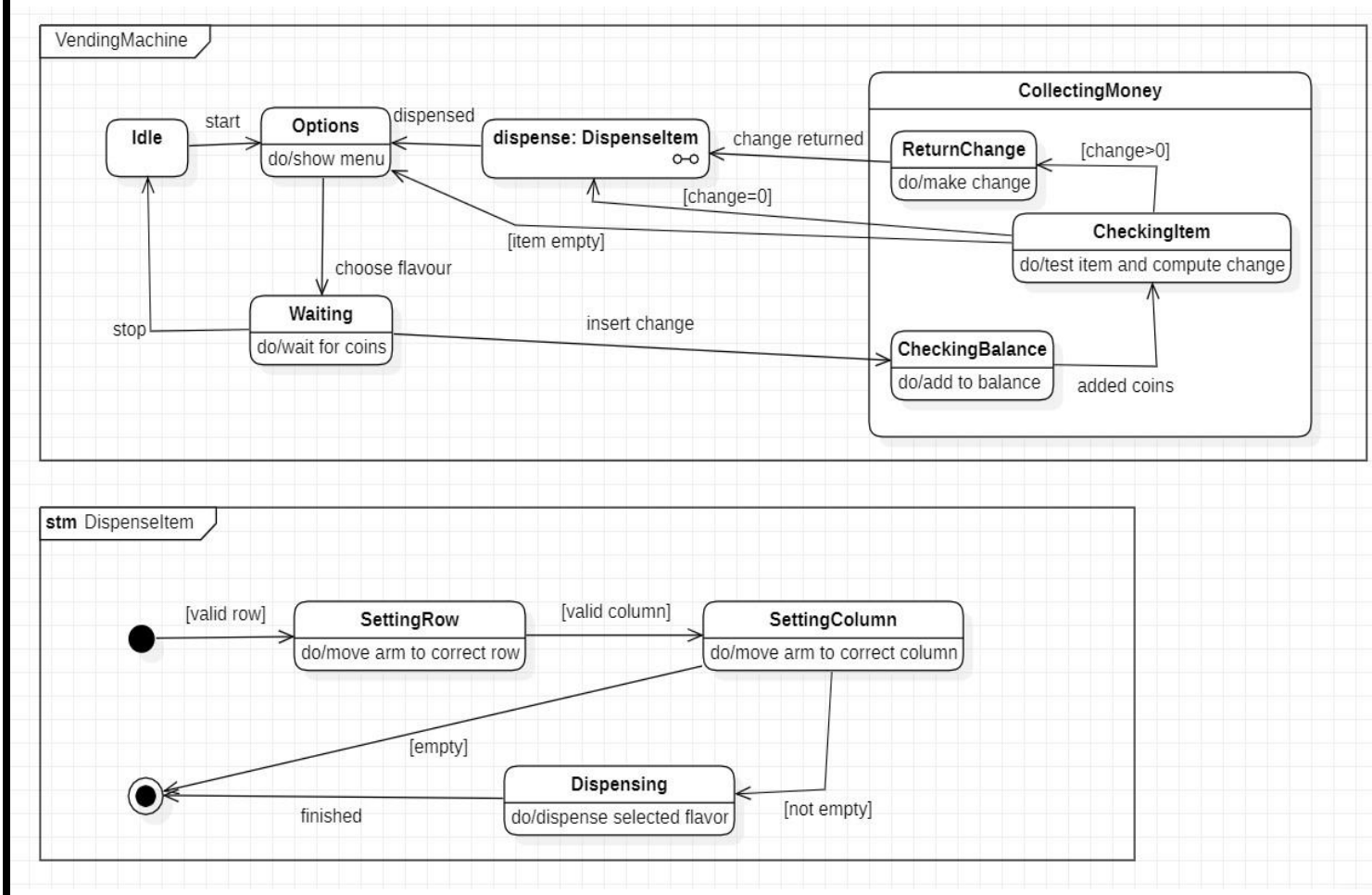

stm StockPurchase
quantity entered
InventoryCheck
do/check availability of stock
[available]
Sell
do/contact trader and sell item
[!available]
Payment
do/enter back details
details entered
Validating
do/validates details
error
successful

LAB 4

Class diagram:

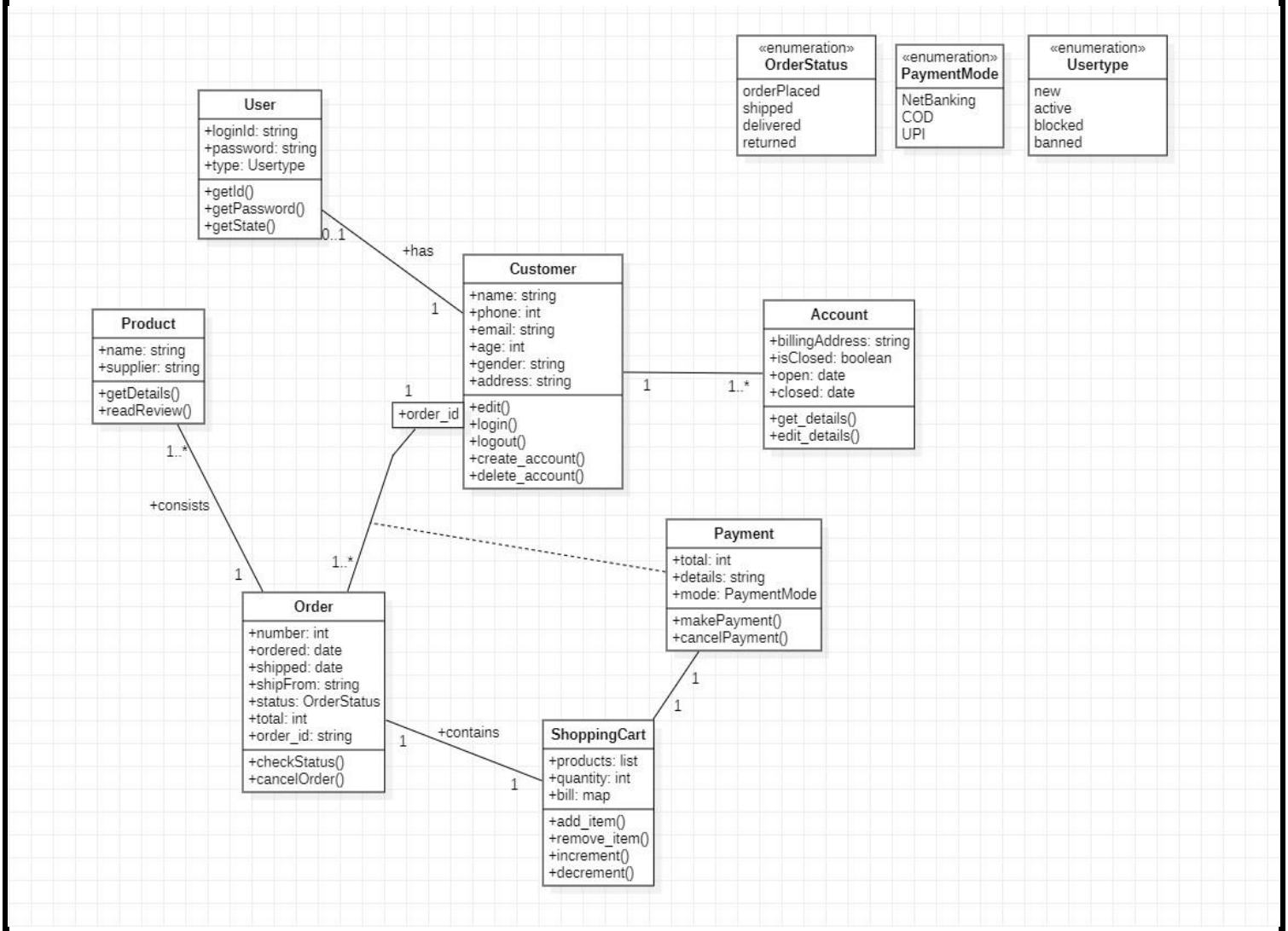


State diagram:

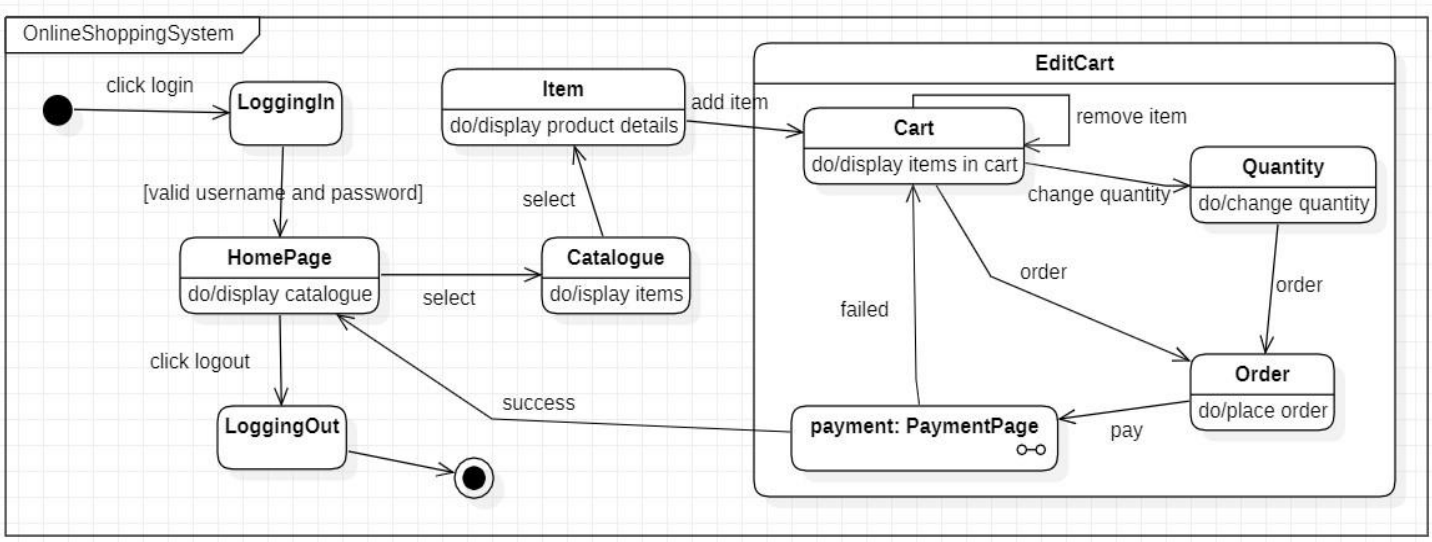


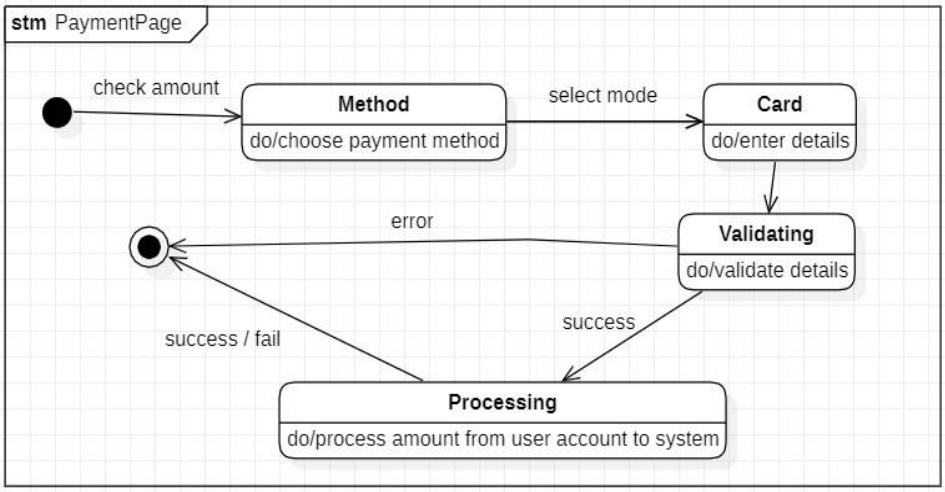
LAB 5

Class diagram:



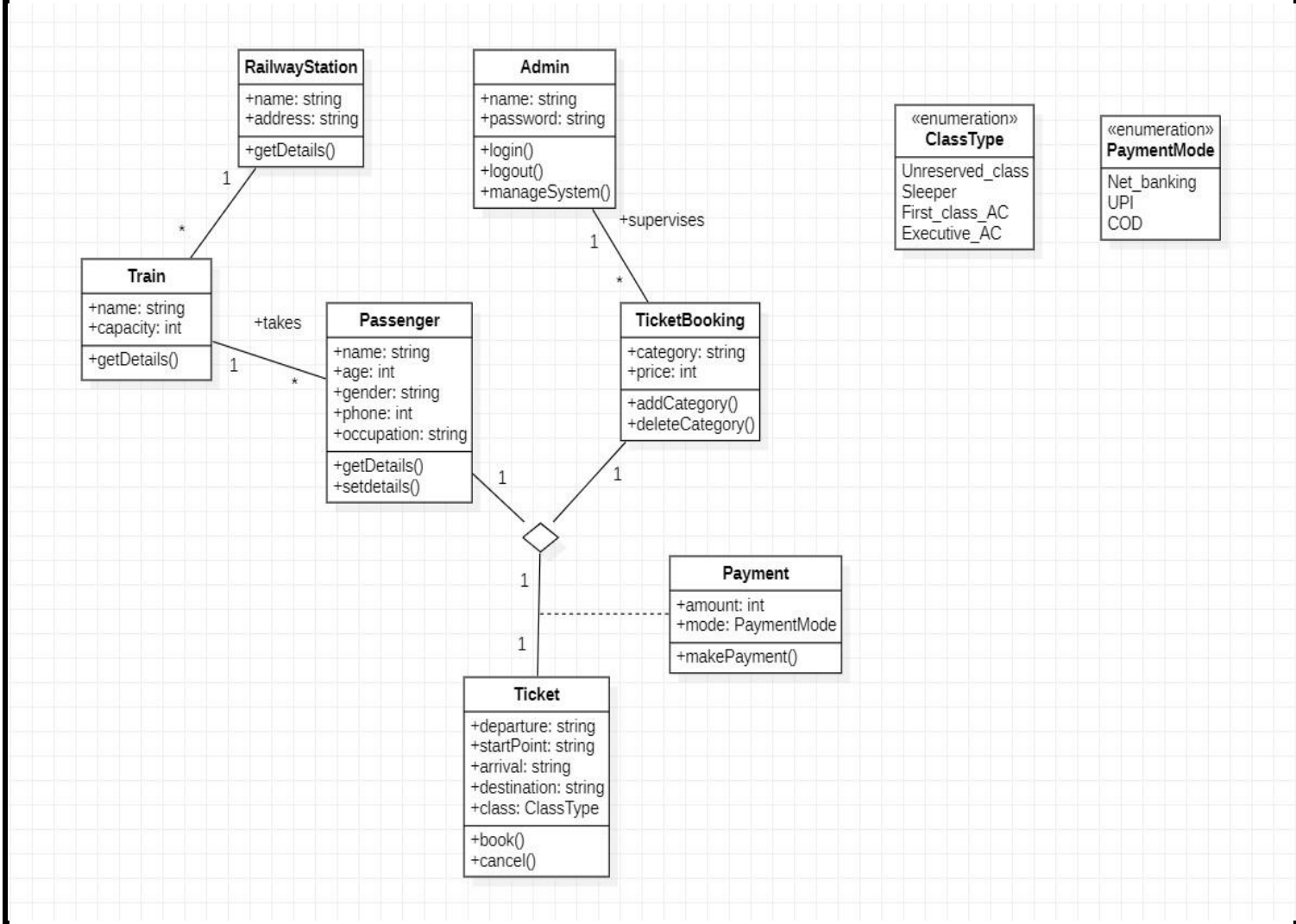
State diagram:



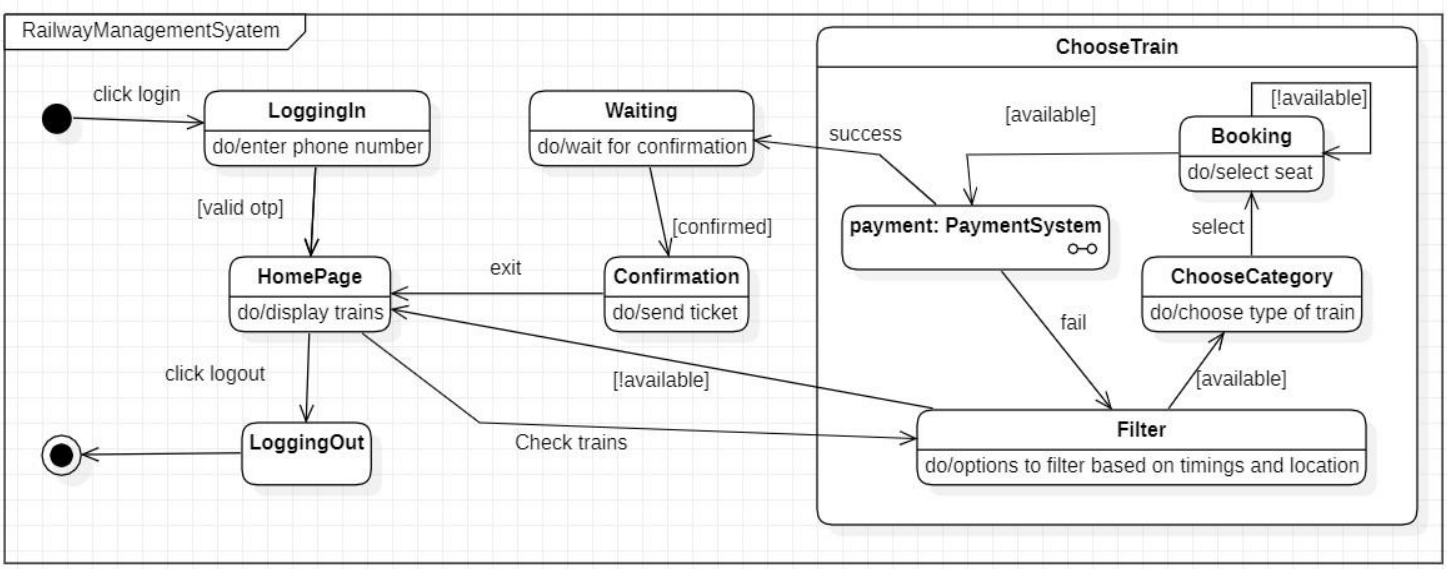


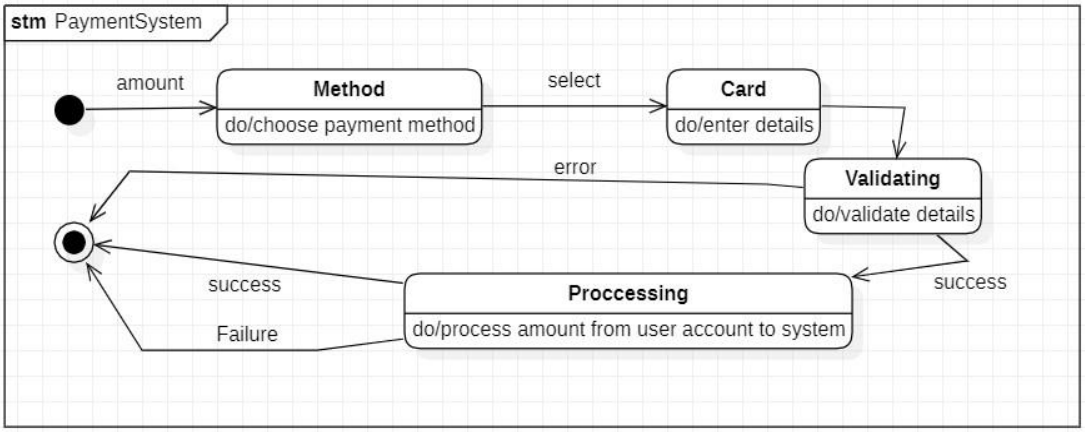
LAB 6

Class diagram:



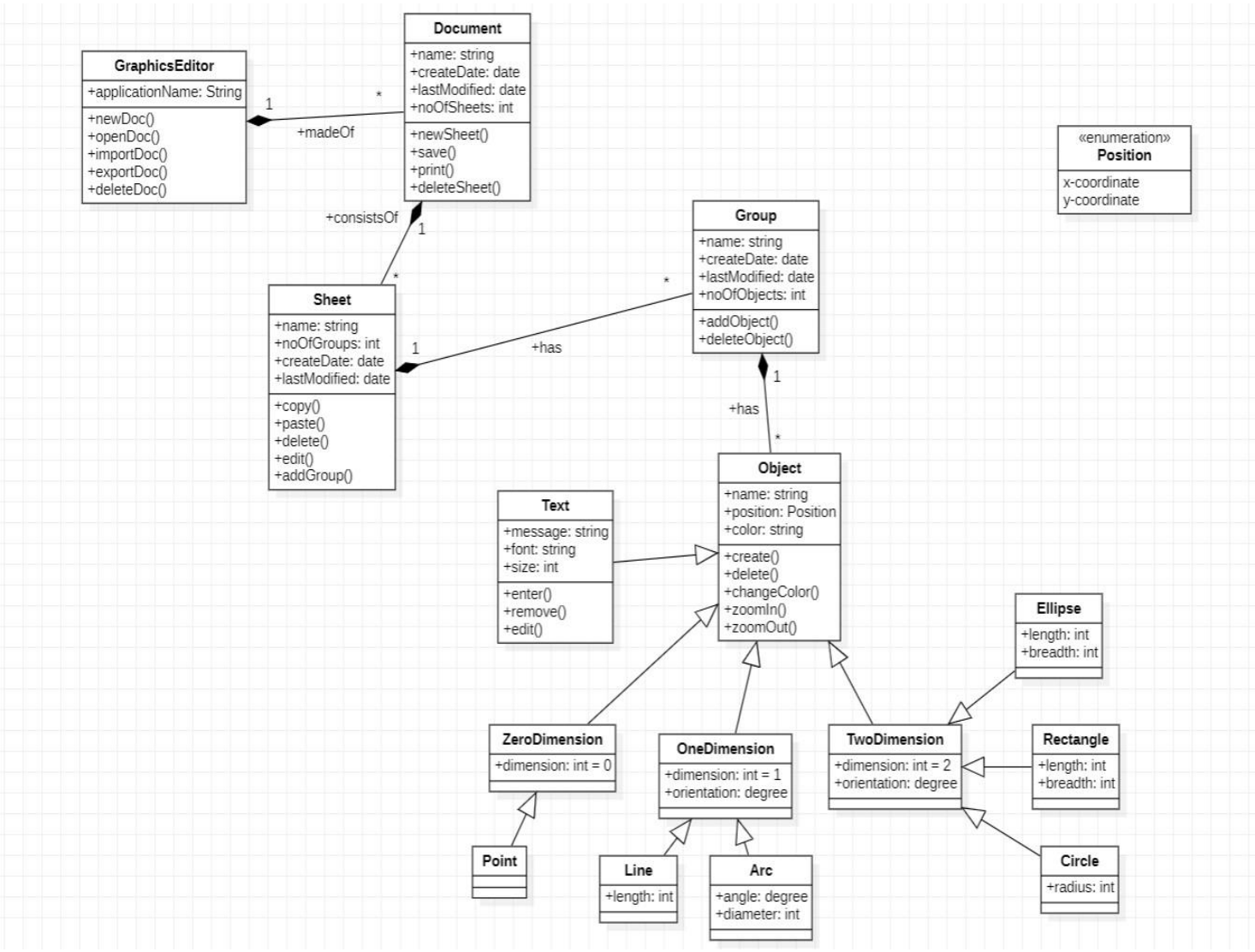
State diagram:





LAB 7

Class diagram:


GraphicsEditor
+applicationName: String
+newDoc()
+openDoc()
+importDoc()
+exportDoc()
+deleteDoc()
1
+madeOf
*
Document
+name: string
+createDate: date
+lastModified: date
+noOfSheets: int
+newSheet()
+save()
+print()
+deleteSheet()
«enumeration»
Position
x-coordinate
y-coordinate
+consistsOf
1
*
Sheet
+name: string
+noOfGroups: int
+createDate: date
+lastModified: date
+copy()
+paste()
+delete()
+edit()
+addGroup()
1
+has
*
Group
+name: string
+createDate: date
+lastModified: date
+noOfObjects: int
+addObject()
+deleteObject()
1
+has
*
Object
+name: string
+position: Position
+color: string
+create()
+delete()
+changeColor()
+zoomIn()
+zoomOut()
Text
+message: string
+font: string
+size: int
+enter()
+remove()
+edit()
Ellipse
+length: int
+breadth: int
ZeroDimension
+dimension: int = 0
OneDimension
+dimension: int = 1
+orientation: degree
TwoDimension
+dimension: int = 2
+orientation: degree
Rectangle
+length: int
+breadth: int
Point
Line
+length: int
Arc
+angle: degree
+diameter: int
Circle
+radius: int

State diagram: