

B.M.S. COLLEGE OF ENGINEERING BENGALURU
Autonomous Institute, Affiliated to VTU



Lab Record

Object Oriented Analysis and Design

Submitted in partial fulfillment for the 6th Semester Laboratory

Bachelor of Technology
in
Computer Science and Engineering

Submitted by:

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Table of Contents

1.College Information System
2.Hostel Management System
3.Stock Maintenance System
4.Coffee Vending Machine
5.Online Shopping System
6.Railway reservation system
7.Graphics Editor

1. College Information System

Use Case Diagram

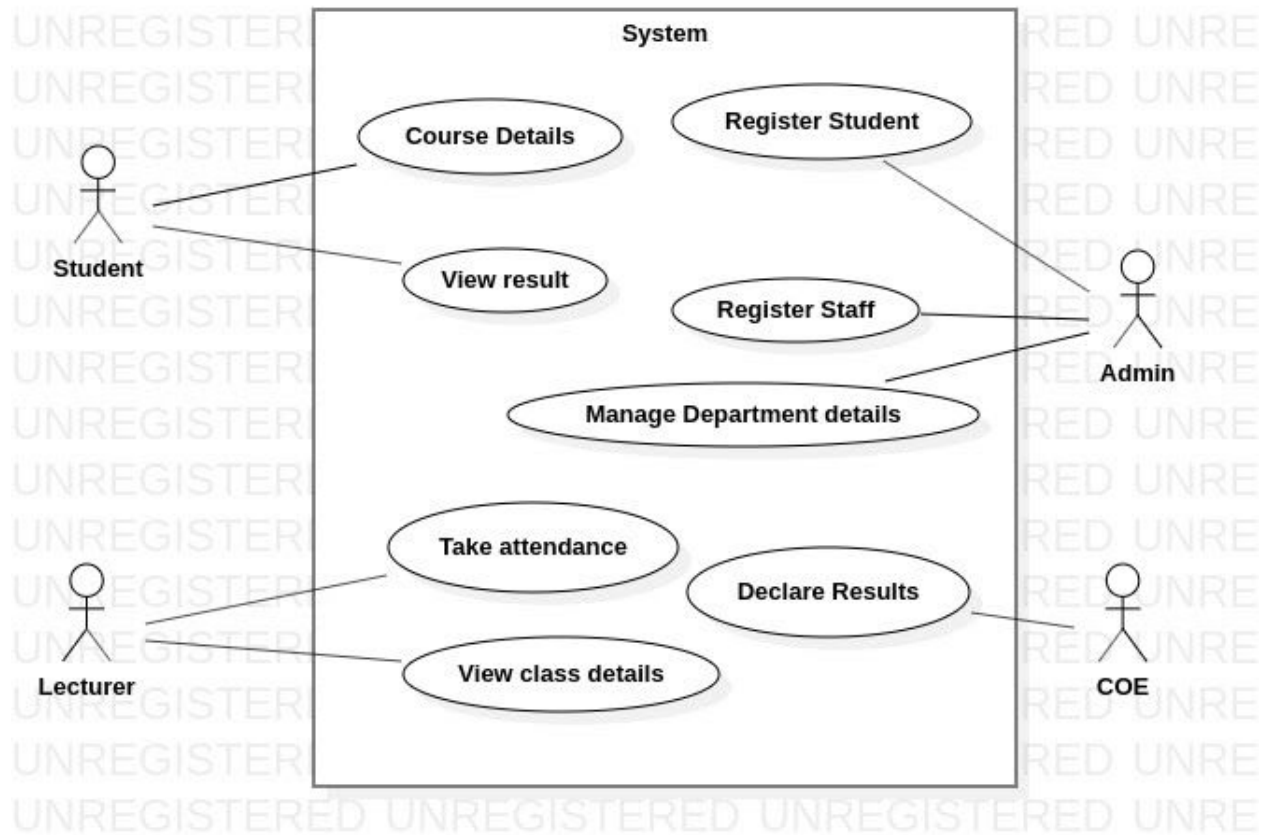


Figure 1.1 : Use Case Model

Actors :

1. *Admin* : The administrator of the system.
2. *Student* : A student of the college.
3. *Lecturer* : A lecturer in the college.
4. *COE* : The COE department is responsible for conducting examinations.

Use Cases :

1. *Course Details* : A student can view course details.
2. *View result* : A student can view his result.
3. *Register Student* : The administrator can register a new student.
4. *Register Staff* : The administrator can register new staff.
5. *Manage Department details* : The administrator can insert, update or delete department details.
6. *Take attendance* : A lecturer can take attendance.
7. *View class details* : A lecturer can view class details.
8. *Declare Results* : COE can declare examination results.

Advanced Use Case Diagram

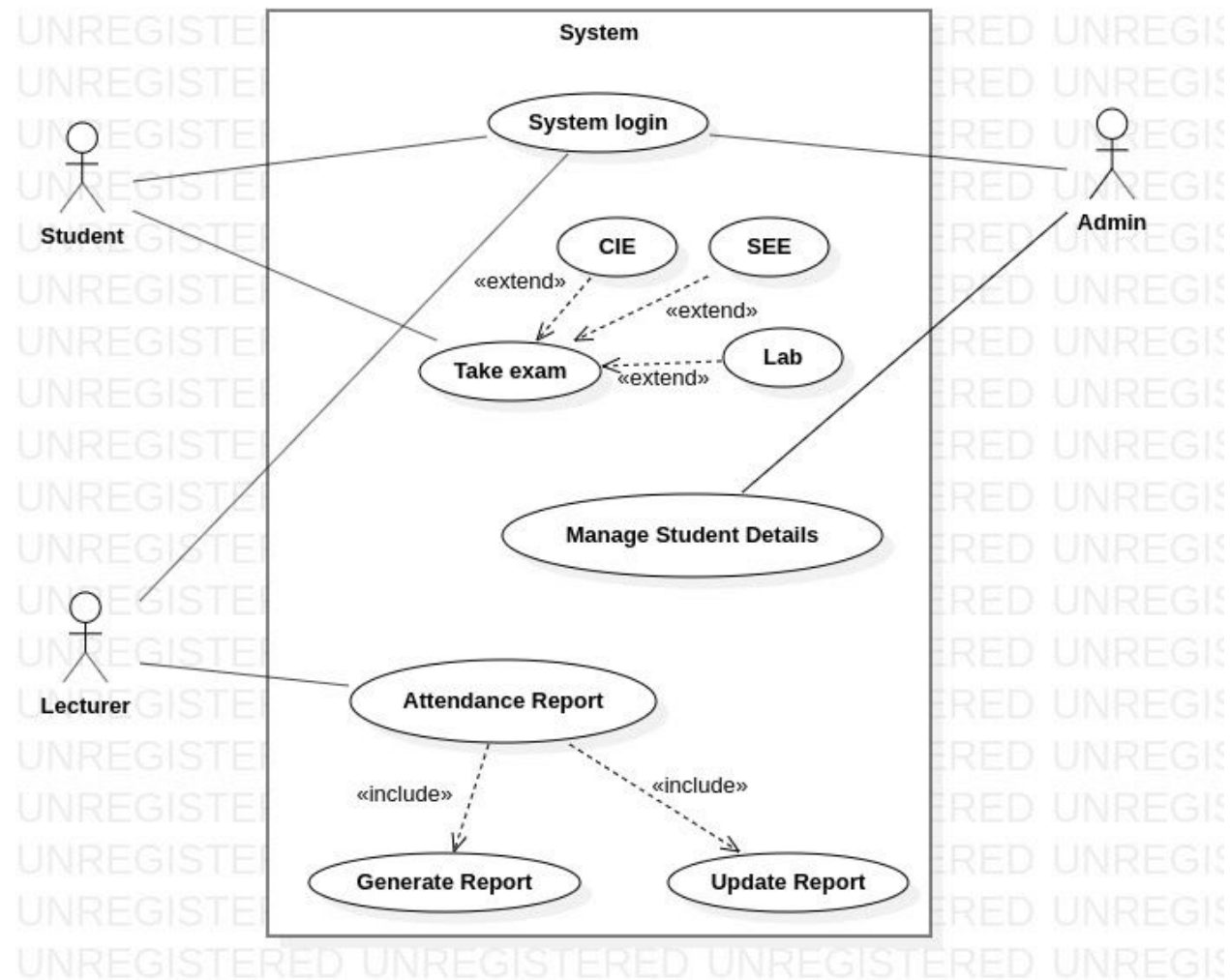


Figure 1.2 : Advanced Use Case Model

Use Cases :

1. *System login* : The actors login to the system.
2. *Take exam*: A student can take an exam.
3. *CIE, SEE and Lab*: Extensions of Take exam use case, they represent different types of exams a student can take.
4. *Manage Student Details* : The administrator can insert, update or delete student details.
5. *Attendance Report* : A lecturer prepares an attendance report. This includes Generate Report and Update Report use cases.

2. Hostel Management System

Use Case Diagram

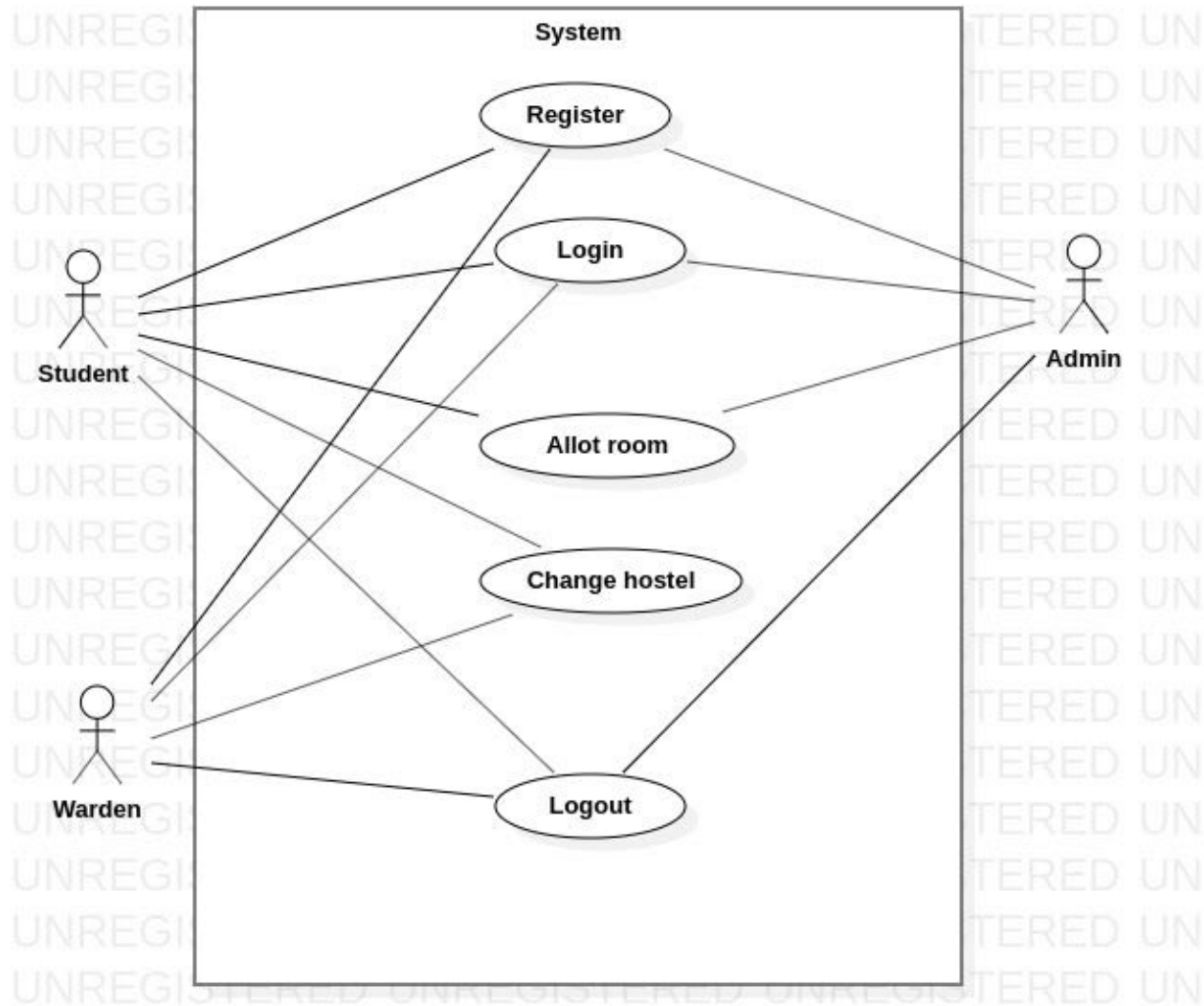


Figure 2.1 : Use Case Model

Actors :

1. *Admin* : The administrator of the system.
2. *Student* : A student of the college.
3. *Warden* : A warden of a hostel.

Use Case :

1. *Register* : All actors register into the system.
2. *Login* : All actors login into the system.
3. *Logout* : All actors logout into the system.

4. *Allot room* : A student selects a room and is allocated the room. The admin can allocate a room to a student.
5. *Change hostel* : A student or a warden can change his/her hostel.

Advanced Use Case Diagram

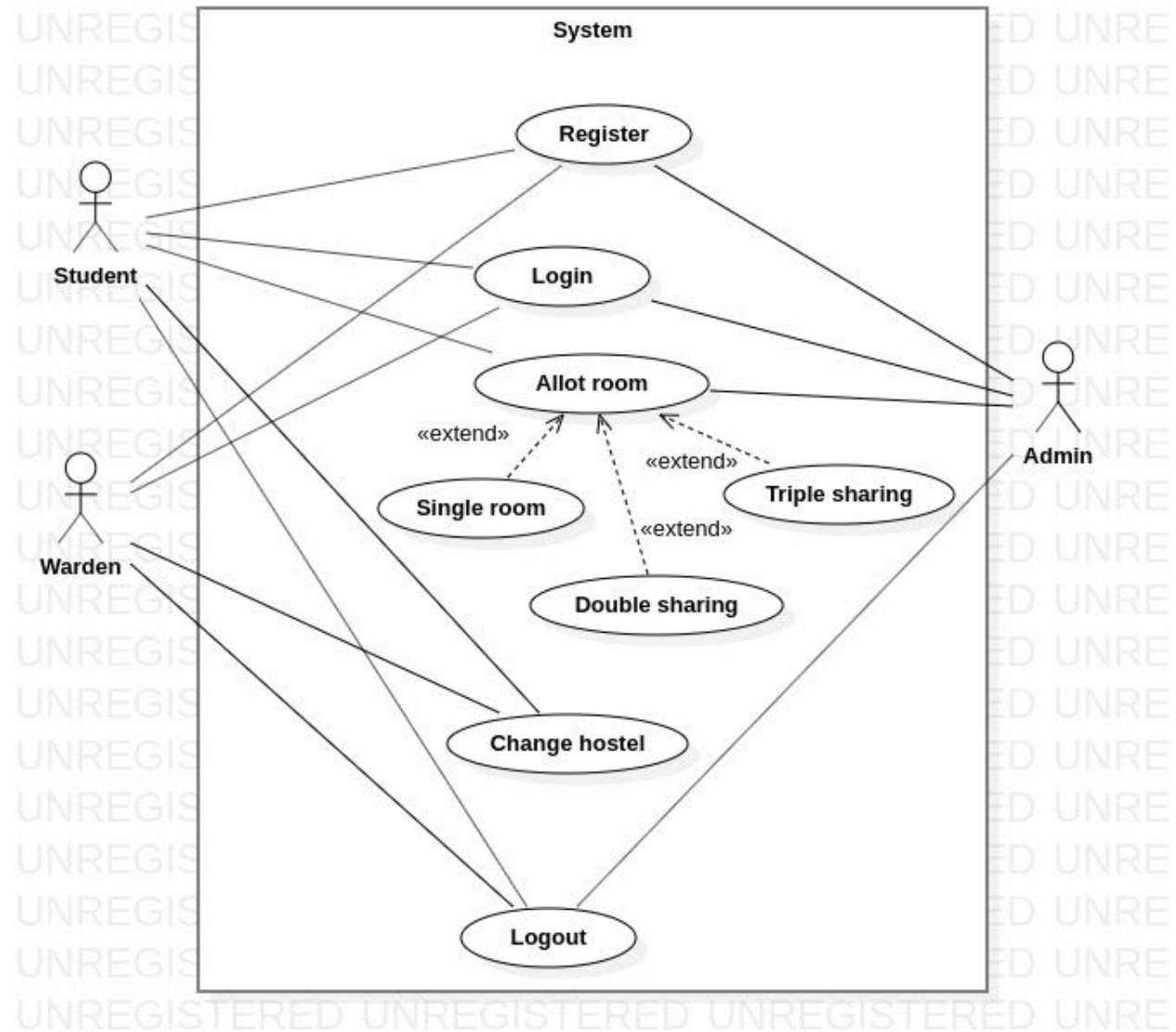


Figure 2.2 :Advanced Use Case Model

Use Case :

1. *Single room* : An extension of Allot room, a student is allotted a single room.
2. *Double sharing* : An extension of Allot room, a student is allotted a double sharing room.
3. *Triple sharing* : An extension of Allot room, a student is allotted a triple sharing room.

3. Stock Maintenances System

Use Case Diagram

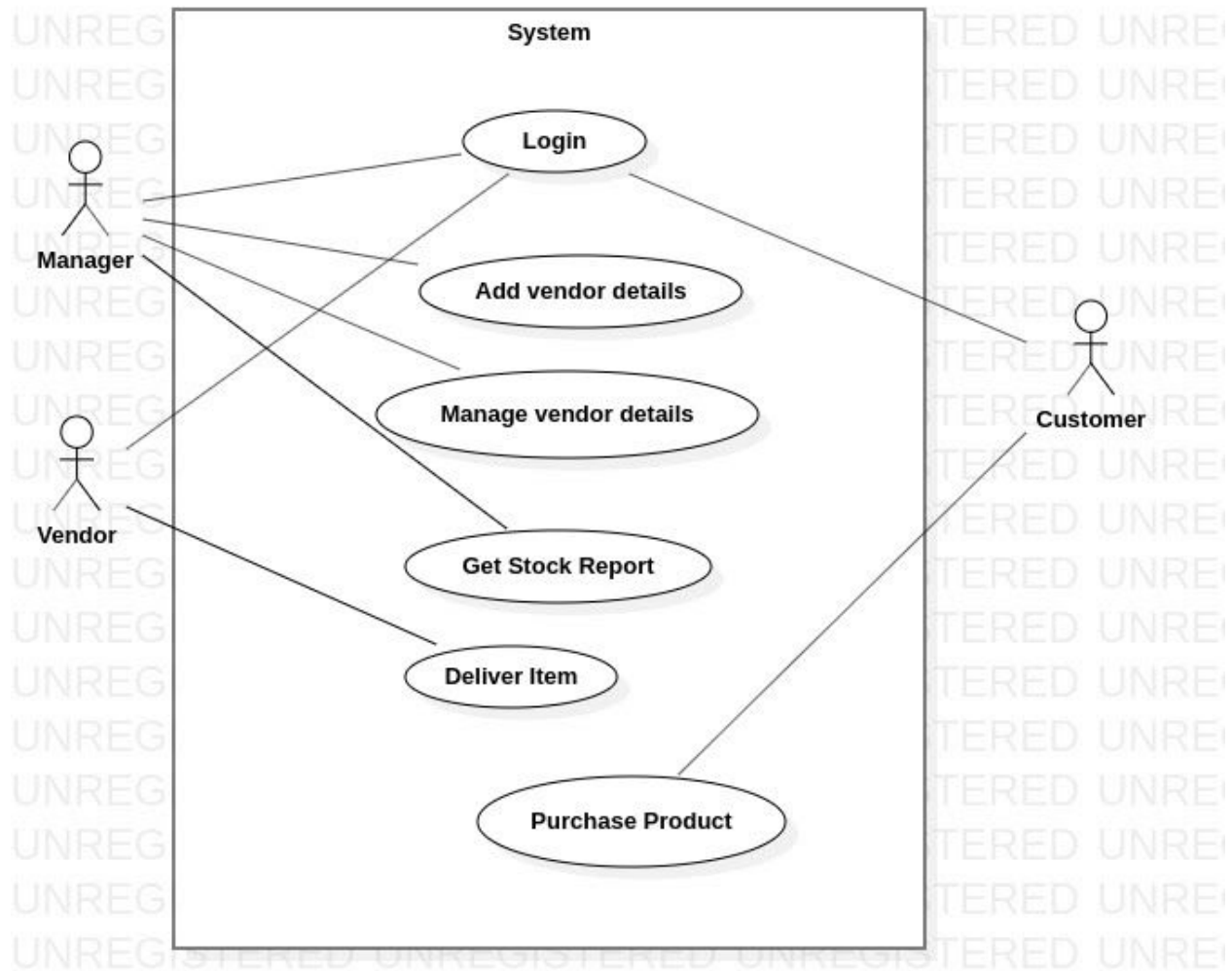


Figure 3.1 : Use Case Model

Actors :

1. *Manager* : A manager of the stock.
2. *Vendor* : A supplier of items.
3. *Customer* : A person who purchases products.

Use Case :

1. *Login* : All actors login to the system.
2. *Add vendor details* : A manager adds a vendor's details.
3. *Manage vendor details* : A manager updates or deletes a vendor's details.
4. *Get Stock Report* : A manager gets the stock's report.
5. *Deliver item* : A vendor delivers an item.

6. *Purchase Product* : A customer purchases a product.

Advanced Use Case Diagram

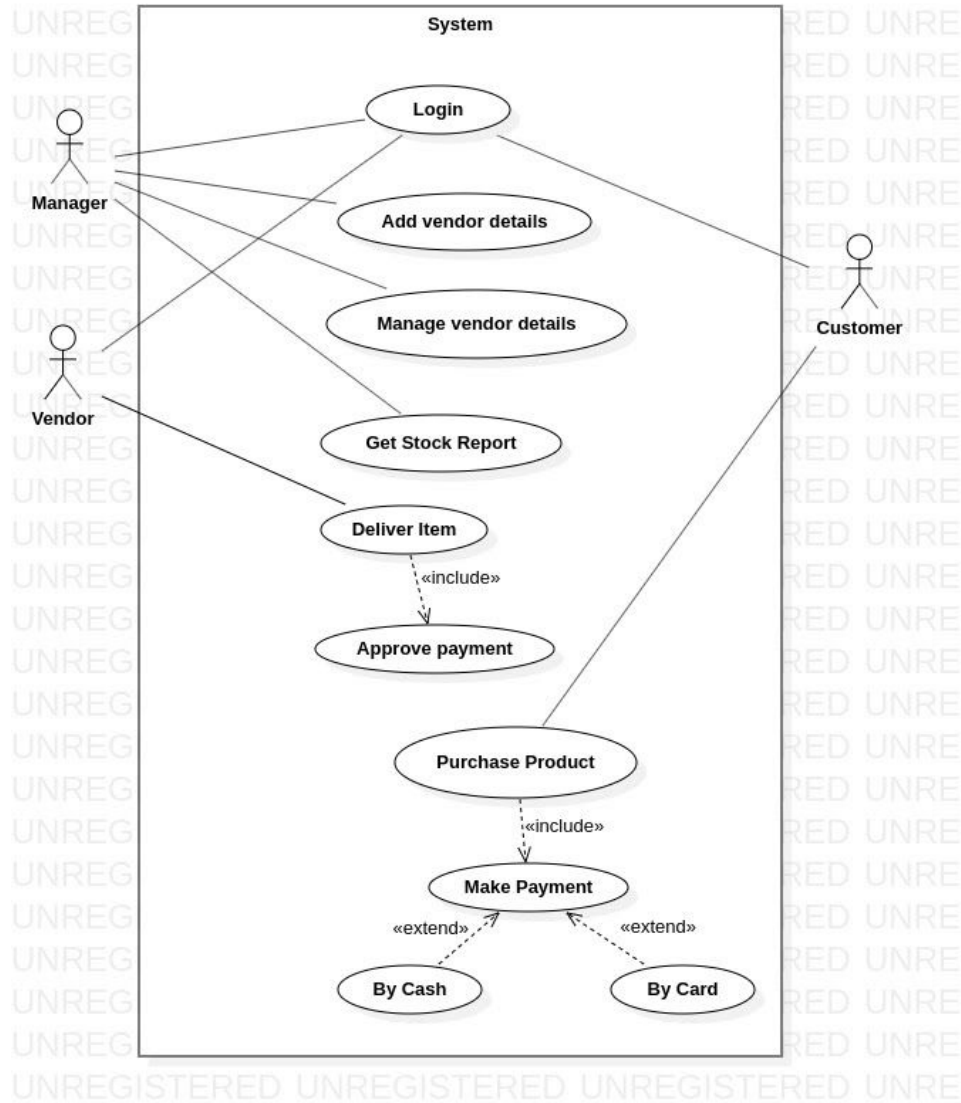


Figure 3.2 :Advanced Use Case Model

Use Case :

1. *Approve payment* : This is included in Deliver item, a vendor approves payment on delivering an item.
2. *Make payment* : This is included in Purchase product, a customer makes a payment on purchasing.
3. *By Cash, By Card* : Extensions of Make payment, indicates mode of payment.

4. Coffee Vending Machine

Use Case Diagram

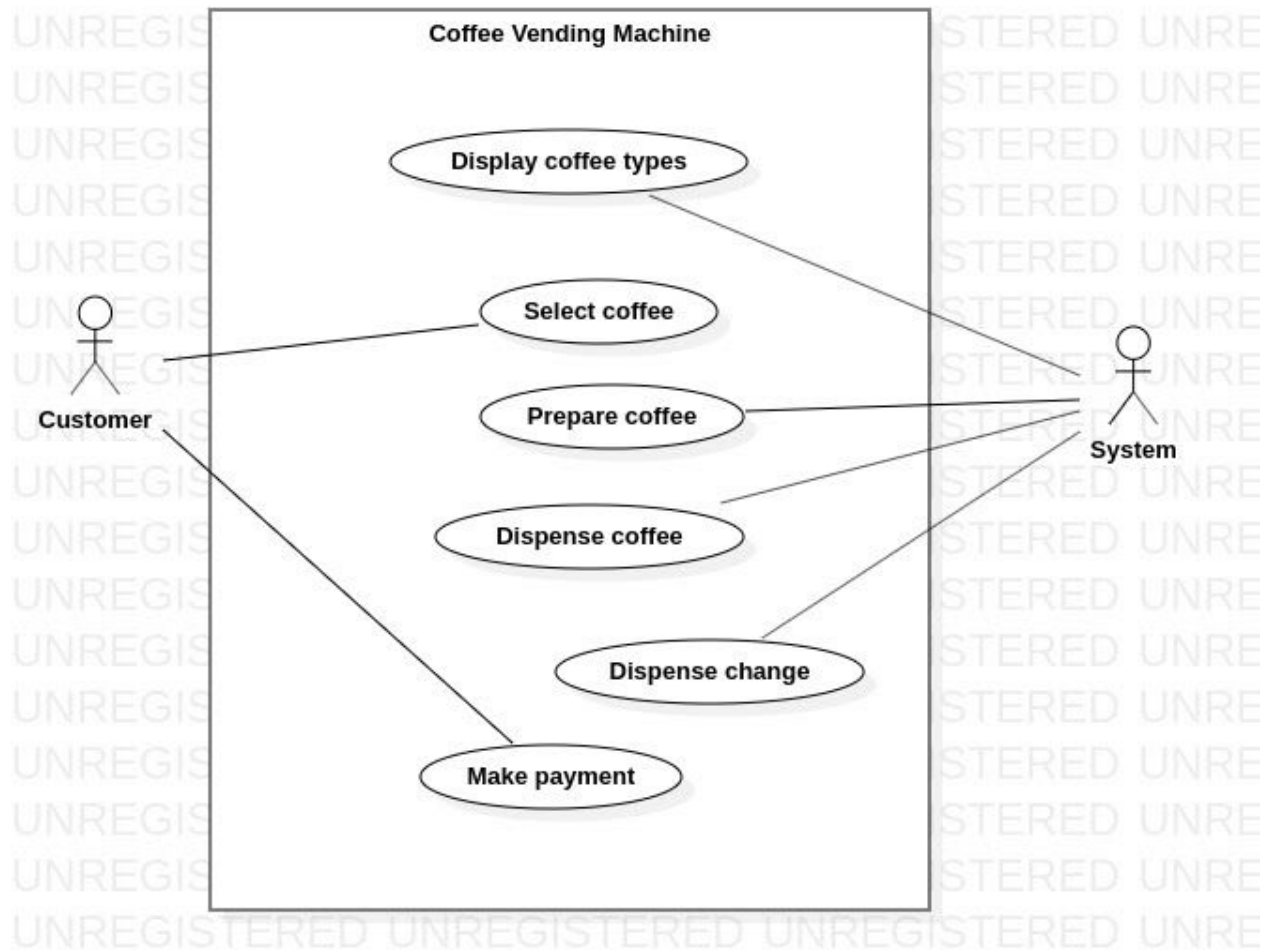


Figure 4.1 : Use Case Model

Actors :

1. *Customer* : A person who uses the system.
2. *System* : The Coffee Vending Machine system.

Use Case :

1. *Display coffee types* : The system displays available coffee types.
2. *Prepare coffee* : The system prepares the selected coffee.
3. *Dispense coffee* : The system dispenses the prepared coffee.
4. *Dispense change* : The system returns change to the customer.
5. *Select coffee* : The customer selects a coffee type.
6. *Make payment* : The customer pays for the coffee.

Advanced Use Case Diagram

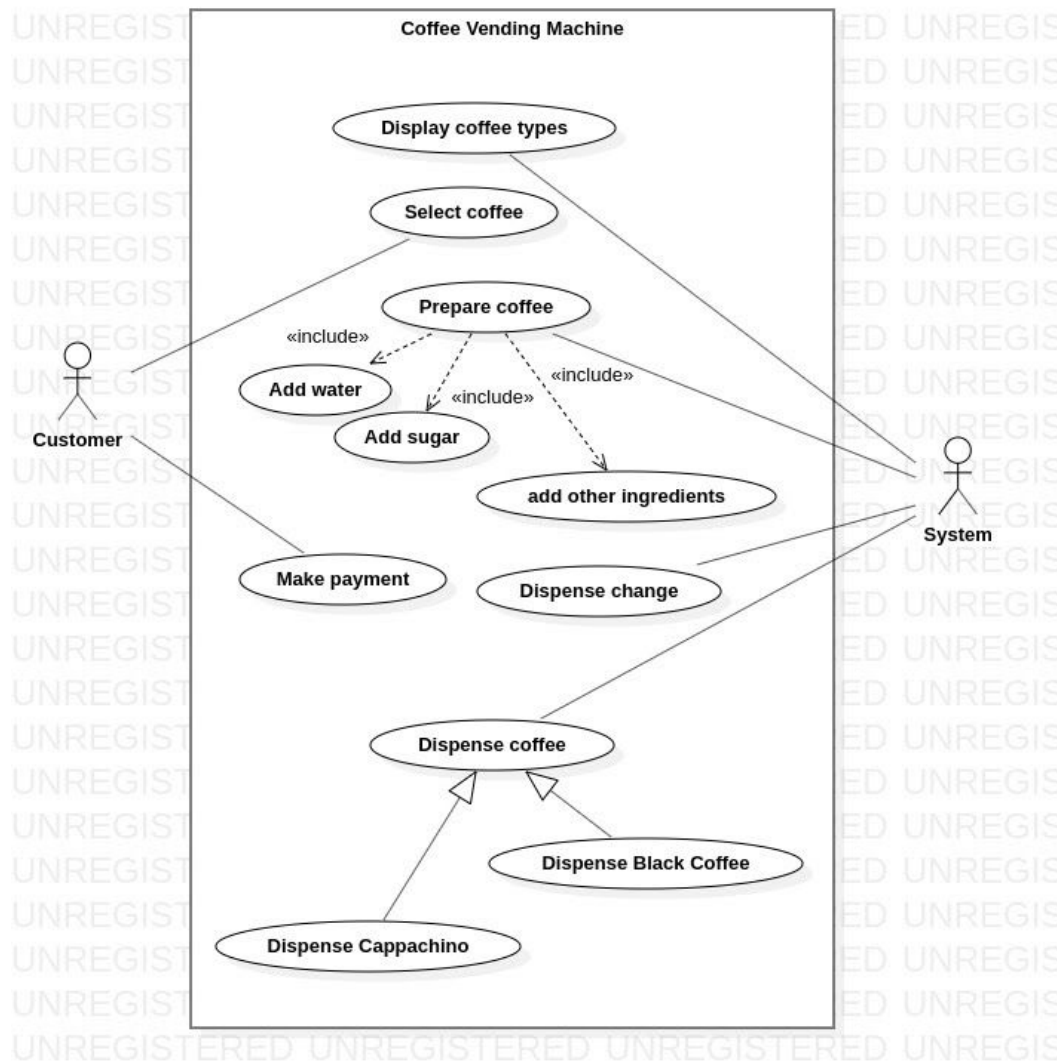


Figure 4.2 :Advanced Use Case Model

Use Case :

1. *Add water* : This is included in Prepare coffee.
2. *Add sugar* : This is included in Prepare coffee.
3. *Add other ingredients* : This is included in Prepare coffee.
4. *Dispense Cappuccino* : This is a child use case of Dispense coffee.
5. *Dispense Black Coffee*: This is a child use case of Dispense coffee.

5. Online Shopping System

Use Case Diagram

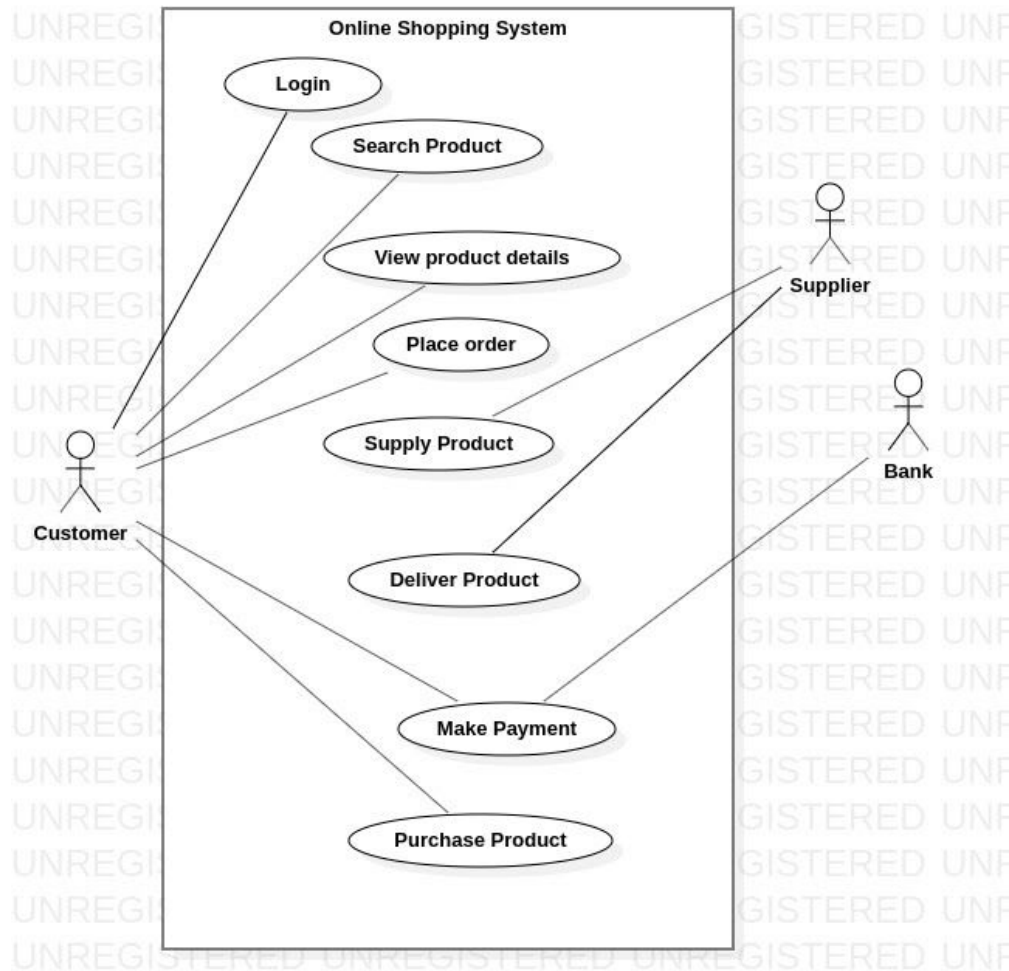


Figure 5.1 : Use Case Model

Actors :

1. *Customer* : A person who purchases products using the system.
2. *Supplier* : A supplier of products and items.
3. *Bank* : A bank containing the customer's account.

Use Case :

1. *Login* : The customer logs into the system.
2. *Search Product* : The customer searches for a product.
3. *View product details* : The customer views product details.
4. *Place order* : The customer places an order.
5. *Supply Product* : The supplier supplies a product.
6. *Deliver Product* : The supplier delivers the product.

7. *Make Payment* : The customer makes a payment with the help of the bank.
8. *Purchase Product* : The customer purchases a product.

Advanced Use Case Diagram

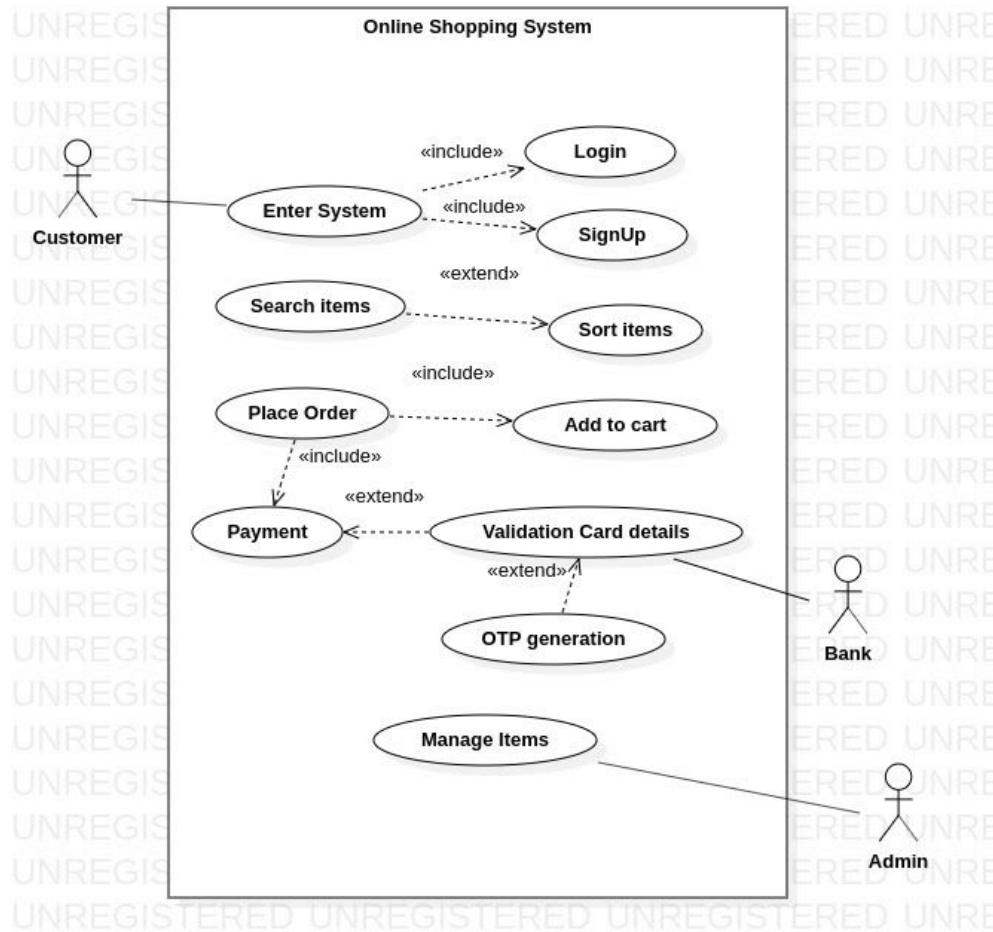


Figure 5.2 :Advanced Use Case Model

Actors :

1. *Admin* : The administrator of the system.

Use Case :

1. *Enter System* : The customer enters into the system. It includes Login and SignUp.
2. *Sort items* : The customer sorts the search results.
3. *Add to cart* : The customer adds a product to his cart.
4. *Payment* : The customer pays for the product.
5. *Validation Card details* : The bank verifies the customer's card details.
6. *OTP generation* : An extension of Validation Card details.
7. *Manage items* : The admin adds, updates or deletes items from the system.

6. Railway Reservation System

Use Case Diagram

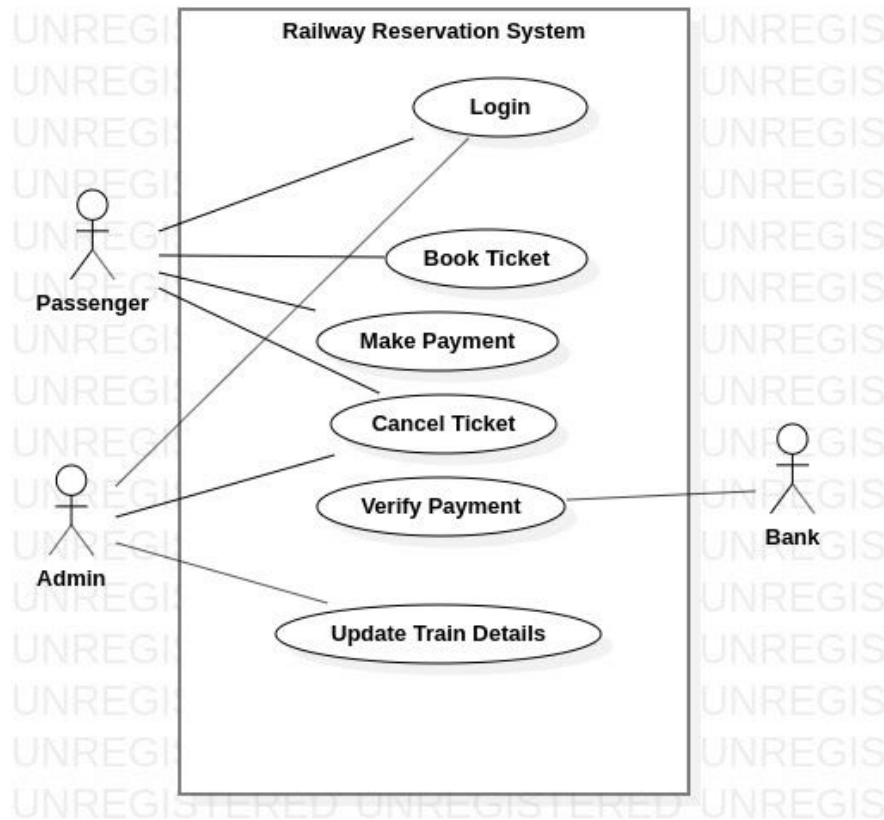


Figure 6.1 : Use Case Model

Actors :

1. *Admin* : The administrator of the system.
2. *Bank* : A bank containing the passenger's account.
3. *Passenger* : A person who uses the system.

Use Case :

1. *Login* : The actors login to the system.
2. *Book Ticket* : The passenger books a ticket.
3. *Make Payment* : The passenger pays for the booked ticket.
4. *Cancel Ticket* : The actors cancel a booked ticket.
5. *Verify Payment* : The bank verifies the passenger's payment.
6. *Update Train Details* : The admin updates train details.

Advanced Use Case Diagram

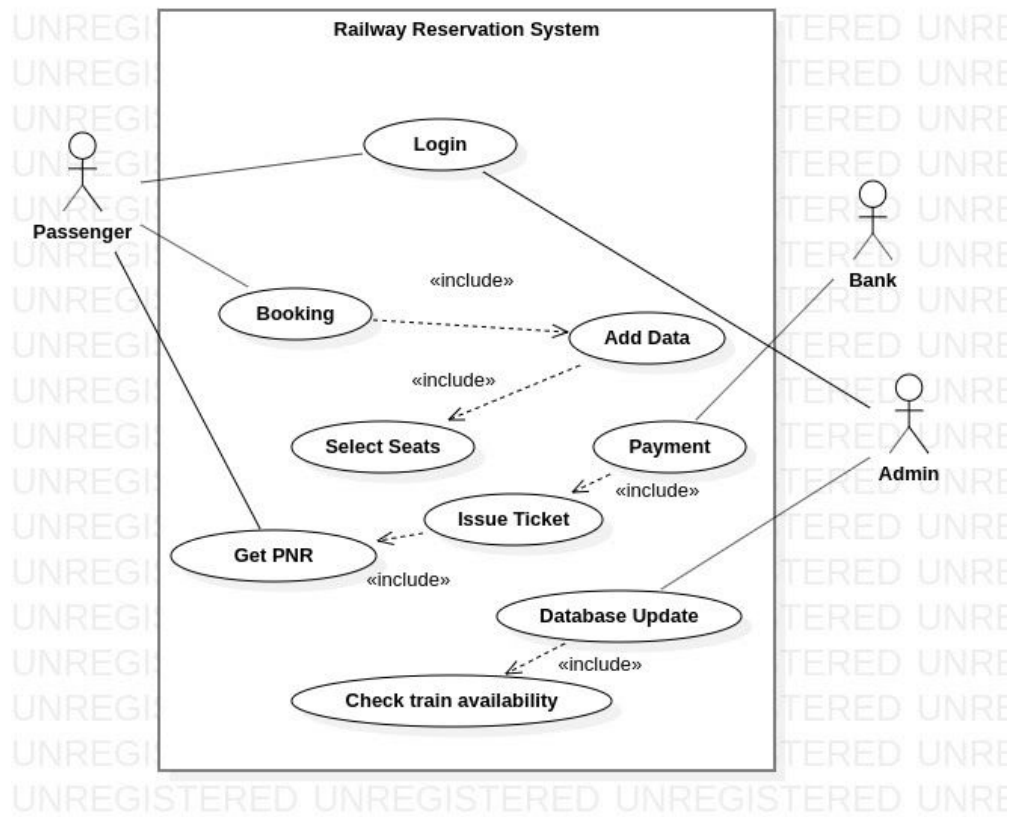


Figure 6.2 :Advanced Use Case Model

Use Case :

1. *Booking* : The passenger books a train ticket. This includes Add Data and Select Seats.
2. *Payment* : The bank verifies the payment of the passenger. This include Issue Ticket and Get PNR.
3. *Database Update* : The admin updates the train database. This includes Check train availability.

7. Graphics Editor

Use Case Diagram

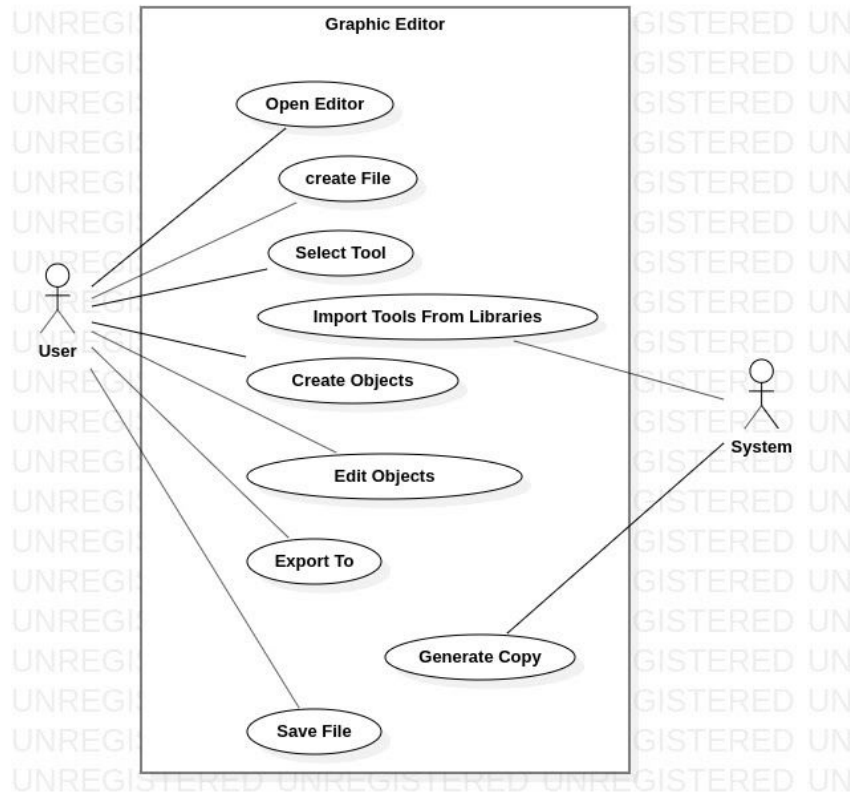


Figure 7.1 : Use Case Model

Actors :

1. *User* : A user of the system
2. *System* : The Graphics Editor system.

Use Case :

1. *Open Editor* : The user opens the editor.
2. *Create File* : The user creates a file.
3. *Select Tool* : The user selects a tool.
4. *Import Tools From Libraries* : The system imports tools from libraries.
5. *Create Objects* : The user creates objects.
6. *Edit Objects* : The user edits objects.
7. *Export To* : The user exports the file in some format.
8. *Generate Copy* : The system generates a copy of the file.
9. *Save File* : The user saves the file.

Advanced Use Case Diagram

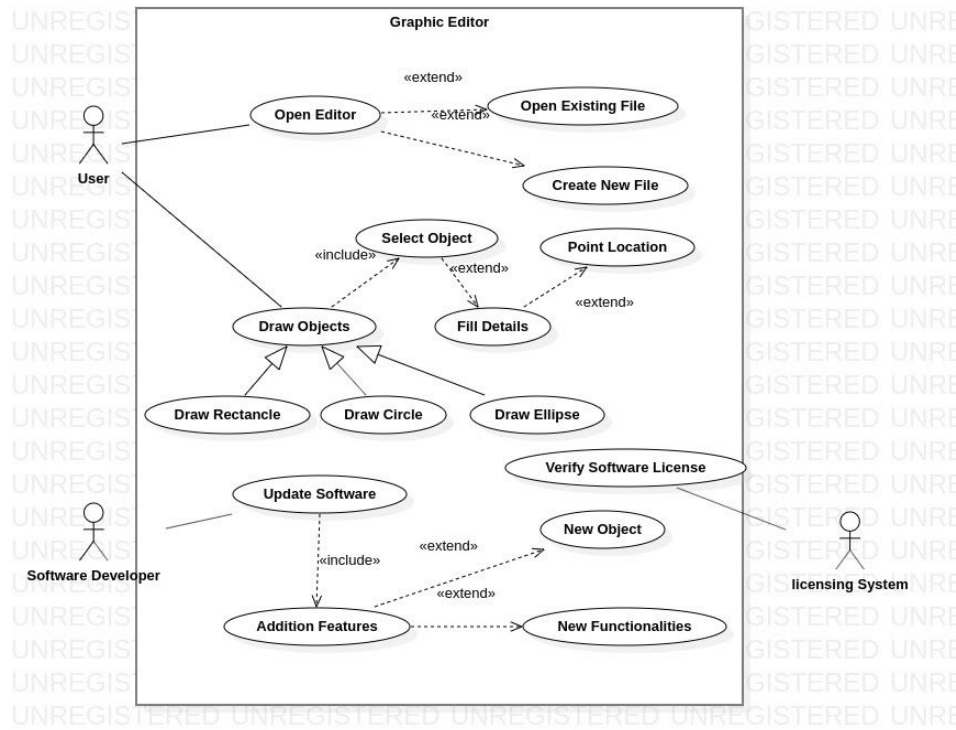


Figure 7.2 :Advanced Use Case Model

Actors :

1. *Software Developer*: The developer of the system.
2. *Licensing System*: The licensing system for the software.

Use Case :

1. *Open Existing File*: The user opens an existing file.
2. *Create New File*: The user creates a new file.
3. *Draw Objects*: The user draws objects.
4. *Update Software*: The software developer updates the software.
5. *Verify Software License*: The licensing system verifies the software license.