Project Report

Software Engineering

For Implementing SDLC while developing

Stock Management System

Group Leader :- Muhammad Faraz (9536)

Student Name : Syed Owsaja Hasan	***Student ID: 9489***
Student Name : Syed Wajih Haider	***Student ID: 9476***
Student Name : Zaka Ullah Qaiser	***Student ID: 9374***
Student Name : Tuaha Rasool	***Student ID: 9383***
Student Name : Osama Hussain	***Student ID: 9200***

Modules :-

1. *Dashboard (Wajih Haider)*
2. *Brand (Osama Hussain)*
3. *Categories (Syed Owsaja Hasan)*
4. *Products (Zaka Ullah Qaiser)*
5. *Order (Tuaha Rasool)*

December, 2021

Submitted to: Dr. Umema Hani

CoCIS, PAF Kiet University, Karachi, Pakistan.

Executive Summary

This report covers major "Software Development" activities on our selected Software. This project activity lasts for duration of 3.5 month time period.

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2. **Requirement Engineering and Configuration Management** _____ **V**
3. **Project Management and Risk Management** _____ **VI**
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1. PROJECT INITIATION: PROPOSAL FORM

PAF-Karachi Institute of Economics & Technology
(The Center of Excellence)
College of Computing and Information Sciences
Software Engineering Course Project Proposal Form

Sno.	*Stud. ID*	*Names*	*Course Name/CID*
1	9476	Syed Wajih Haider	Software Engineering (108093)
2	9489	Syed Owsaja Hasan	
3	9374	Zaka Ullah Qaiser	
4	9383	Tuaha Rasool	
5	9200	Osama Hussain	

Project Title:_ [Inventory Management System] _

1. Motivation:

The motivation should clearly specify why this project is being made

It this system admin can add , update and remove the brand's information. In product section , the admin can add the product information and manage the stock. In order section , the application will manage the stock of the product and generates the total amount of payment to be pay by the client. The application can also generates the orders report on base on the month you select.

2. Functional Features

Specify the features of your project which would make it significant for the evaluators.

1. *If you are designing a project, which is in common use then you should specify those features which are making your project distinctive/unique in comparison with the existing ones "Totally a professional concept of implementing a CRUD based Product".*
2. *Indicate the utilization/benefits of your project "Will demonstrate implemention of all engineering activities expected under different pahses of SDLC on Product Development".*

System Features

Inventory Management System will help businesses to manage their products stock and will also help them in order of their products

Inventory Management

Description and Priority

User will be able to add and maintain products and keep track of product pieces available in their warehouse which will help them in purchasing their products on time.

Stimulus/Response Sequences

User will login first then he will add brand and category first and then he will add features, prices and stock of product

Functional Requirements

- *User should have valid username and password to login.*
- *User should also have all details of product to add products effectively.*

Order Management

Description and Priority

User will be able to add and maintain orders and generate invoice of the orders and also track status of order which will help them in maintain their orders effectively.

Stimulus/Response Sequences

User will login first then he will go to order page and will enter order details and generate bill invoice of order he can also track order status in order page.

Functional Requirements

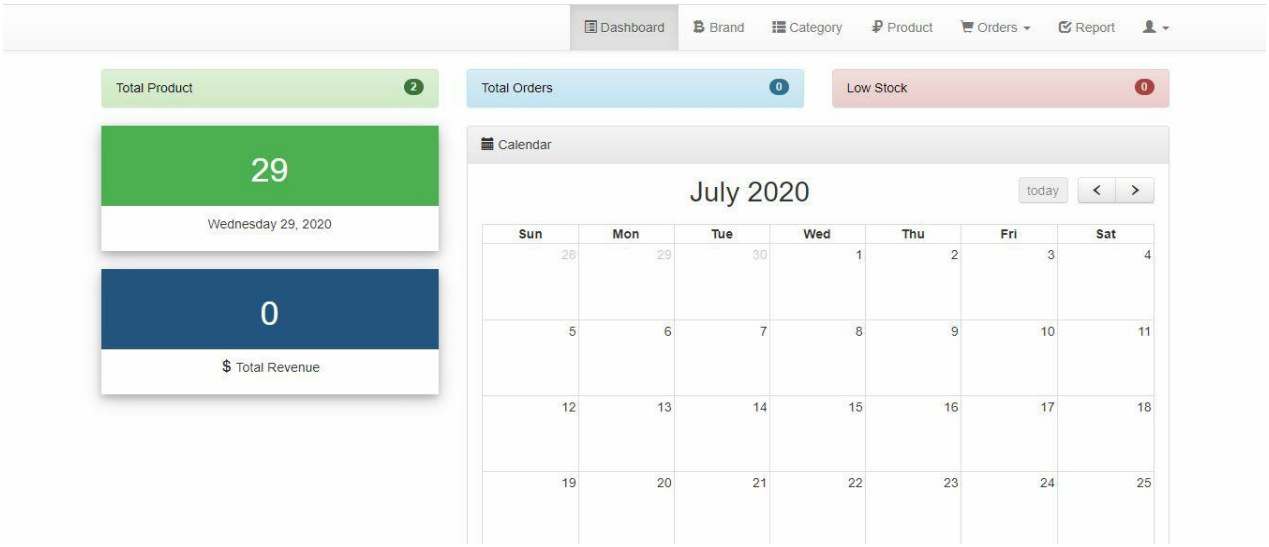
- *User should have valid username and password to login.*
- *User should also have all details of order to add order effectively and generate bill invoice.*

3. *List down 5 unique but relevant Modules/Features for 5 members*
   a. *Module 1: Login Authentication (Common for all members)*
   b. *Module 2: Dashboard*
   c. *Module 3: Brand*
   d. *Module 4: Category*
   e. *Module 5: Product*
   f. *Module 6: Order*

4. *Expected Detail of all Modules to be covered by each Member*

Member 1: Login + Dashboard

Test Case ID	1
TC Name	Login Account
Test Case Description	It will test the login process
Dependency	Database connected and does user exist?
Expected Result	Successful login and allowing to enter
Actual Result	Successfully login and continue.
Estimated Time	Maximum 2 minutes or depends on system speed
Bugs, errors	Nil



Member 2: Login + Brand

Test Case ID	1
TC Name	Login Account
Test Case Description	It will test the login process
Dependency	Database connected and does user exist?
Expected Result	Successful login and allowing to enter
Actual Result	Successfully login and continue.
Estimated Time	Maximum 2 minutes or depends on system speed
Bugs, errors	Nil

Test Case ID	3
TC Name	Brand
Test Case Description	Testing the crud of brands either they are updating, adding, creating and deleting the items or not.
Dependency	Successful login Proper connection with database
Expected Result	Successfully perform the crud of items
Actual Result	Successfully performing
Estimated Time	Maximum 2 minutes or depends on speed of system
Bugs, errors	Nil

Member 3: Login + Category

Test Case ID	1
TC Name	Login Account
Test Case Description	It will test the login process
Dependency	Database connected and does user exist?
Expected Result	Successful login and allowing to enter
Actual Result	Successfully login and continue.
Estimated Time	Maximum 2 minutes or depends on system speed
Bugs, errors	Nil

Test Case ID	5
TC Name	Category
Test Case Description	Testing the crud of category either they are updating, adding, creating and deleting the items or not.
Dependency	Successful login Proper connection with database
Expected Result	Successfully perform the crud of items
Actual Result	Successfully performing
Estimated Time	Maximum 2 minutes or depends on speed of system
Bugs, errors	Nil

Member 4: Login + Product

Test Case ID	1
TC Name	Login Account
Test Case Description	It will test the login process
Dependency	Database connected and does user exist?
Expected Result	Successful login and allowing to enter
Actual Result	Successfully login and continue.
Estimated Time	Maximum 2 minutes or depends on system speed
Bugs, errors	Nil

Test Case ID	2
TC Name	Product
Test Case Description	Testing the crud of products either they are updating, adding, creating and deleting the items or not.
Dependency	Successful login Proper connection with database
Expected Result	Successfully perform the crud of items
Actual Result	Successfully performing
Estimated Time	Maximum 2 minutes or depends on speed of system
Bugs, errors	Nil

Member 5: Login + Order

Test Case ID	1
TC Name	Login Account
Test Case Description	It will test the login process
Dependency	Database connected and does user exist?
Expected Result	Successful login and allowing to enter
Actual Result	Successfully login and continue.
Estimated Time	Maximum 2 minutes or depends on system speed
Bugs, errors	Nil

Test Case ID	4
TC Name	Order
Test Case Description	Testing the crud of orders either they are updating, adding, creating and deleting the items or not.
Dependency	Successful login Proper connection with database
Expected Result	Successfully perform the crud of items
Actual Result	Successfully performing
Estimated Time	Maximum 2 minutes or depends on speed of system
Bugs, errors	Nil

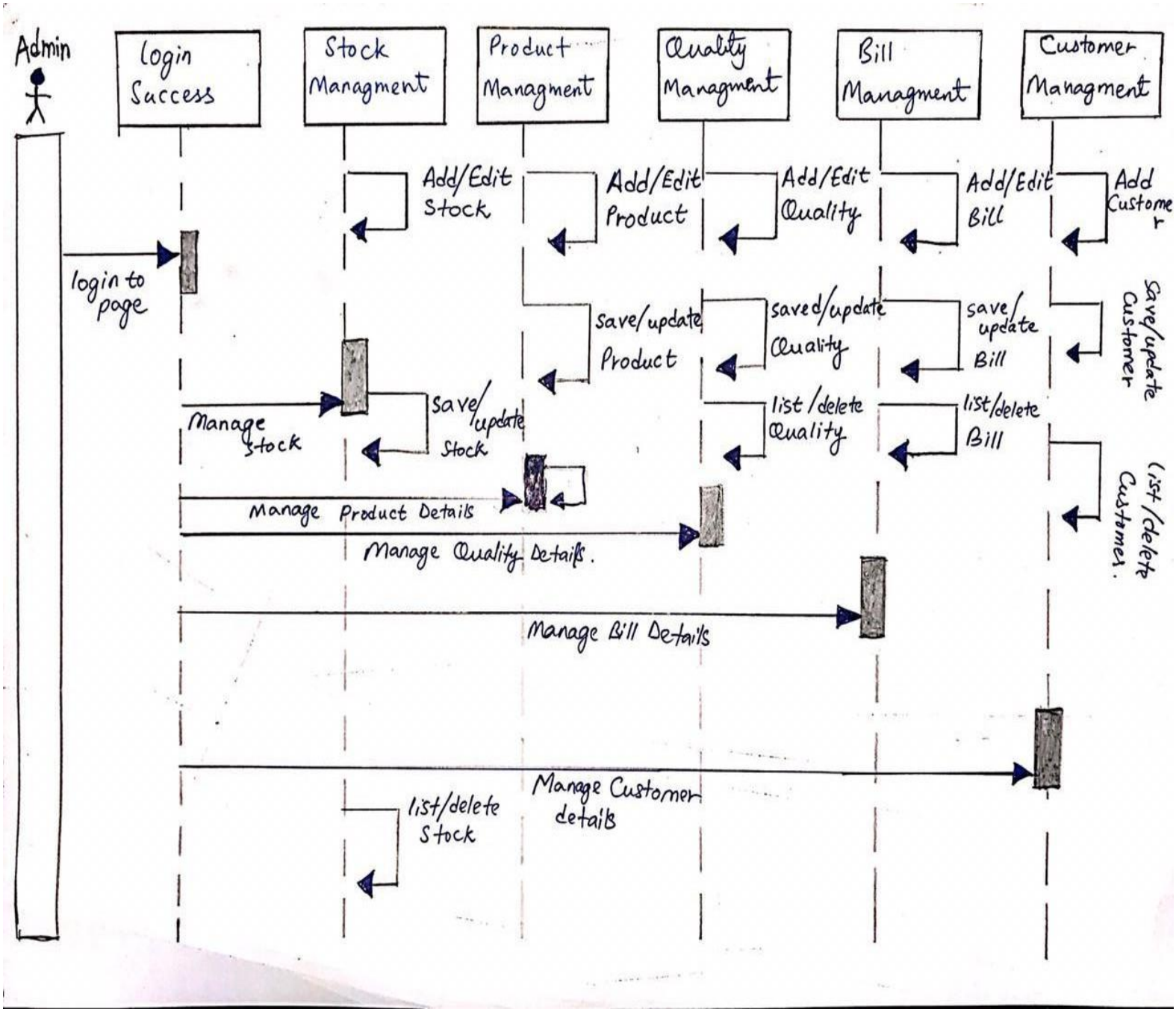
3. Project Planning

Provide a detailed schedule for the successful completion of the project using Gantt charts for this purpose. (You may attach some extra sheet)

Task Name	*Week 1*	*Week 2*	*Week 3*	*Week 4*	*Week 5*	*Week 6*	*Week 7*	*Week 8*	*Week 9*
Planning									
Requirement									
Designing									
Building									
Testing									
Deployment									

4. Diagrammatic Representation of the Overall System

A detailed flow diagram of the overall system is needed.



2. REQUIREMENT ENGINEERING AND CONFIGURATION MANAGEMENT

Software Requirements Specification (SRS)

of

Inventory Management System

Group Leader: - Wajih Haider 9476

Sno.	*Stud. ID*	*Names*
1	9489	Syed Owsaja Hasan
2	9374	Zaka Ullah Qaiser
3	9383	Tuaha Rasool
4	9200	Osama Hussain

February 11, 2021

Table of Contents

1. Introduction
2. The General Description
3. Specific Requirements
4. Supporting Information

1. Introduction

1.1 Purpose

This document describes the software requirements for the Automated Railroad Reservation System built for the Chinese Railway Ministry (CRM).

1.2 Scope In

The CRM is requesting proposals to build a prototype of an Automated Railroad Reservation System (ARRS) for their current system. This new ARRS needs to be scalable enough so that it can accommodate the increase in reservations caused by new railroad building in China.

The system will be designed to provide an electronic version of the railway passenger reservation system in China. The system will have a user-friendly graphical interface and will be more cost effective compared to the current non-electronic version of the reservation system.

The objectives of this development effort are:

1. To provide existing clerks with a new environment in which to make reservations for railroad travel.
2. To provide an avenue for customers to get their tickets in a more convenient way.
3. To regain control of the railway ticket sales to avoid scalping and overselling of tickets.
4. To implement a prototype of a scaled down version of the final system to test the solution and further develop requirements.
5. To collect statistics in a more efficient manner for future railroad development and construction.
6. To increase efficiency of railroads.

1.3 Scope Out

The following features will not be the part of this Project:

1.

1.3 Definitions, Acronyms, and Abbreviations.

APPM – AsiaPac Marketing Manager
ARRS – Automated Railroad Reservation System
CASE – Computer Aided Software Engineering
CITS – China International Travel Agency
CRM – Chinese Railroad Ministry
PP - Project Plan
SDD - Software Design Description

SRS - Software Requirement Specification
SDS – Software Design Specification
SPMP - Software Project Management Plan
GUI – Graphical User Interface
QAM – Quality Assurance Manager
PDM – Project Development Manager
PMP – Project Management Professional
TBD – To be determined
UML – Unified Modeling Language

1.5 Overview

Chapter 2 of the SRS is a brief description of the characteristics of the software to be built, its functions, its users, its constraints and its dependencies.

Chapter 3 is about specific requirements, such as functional requirements, external interface requirements, performance requirements, and also design constraints and quality characteristics.

Finally, chapter 4 includes all the supporting information, such as the Table of Contents, the Appendices, and the Index.

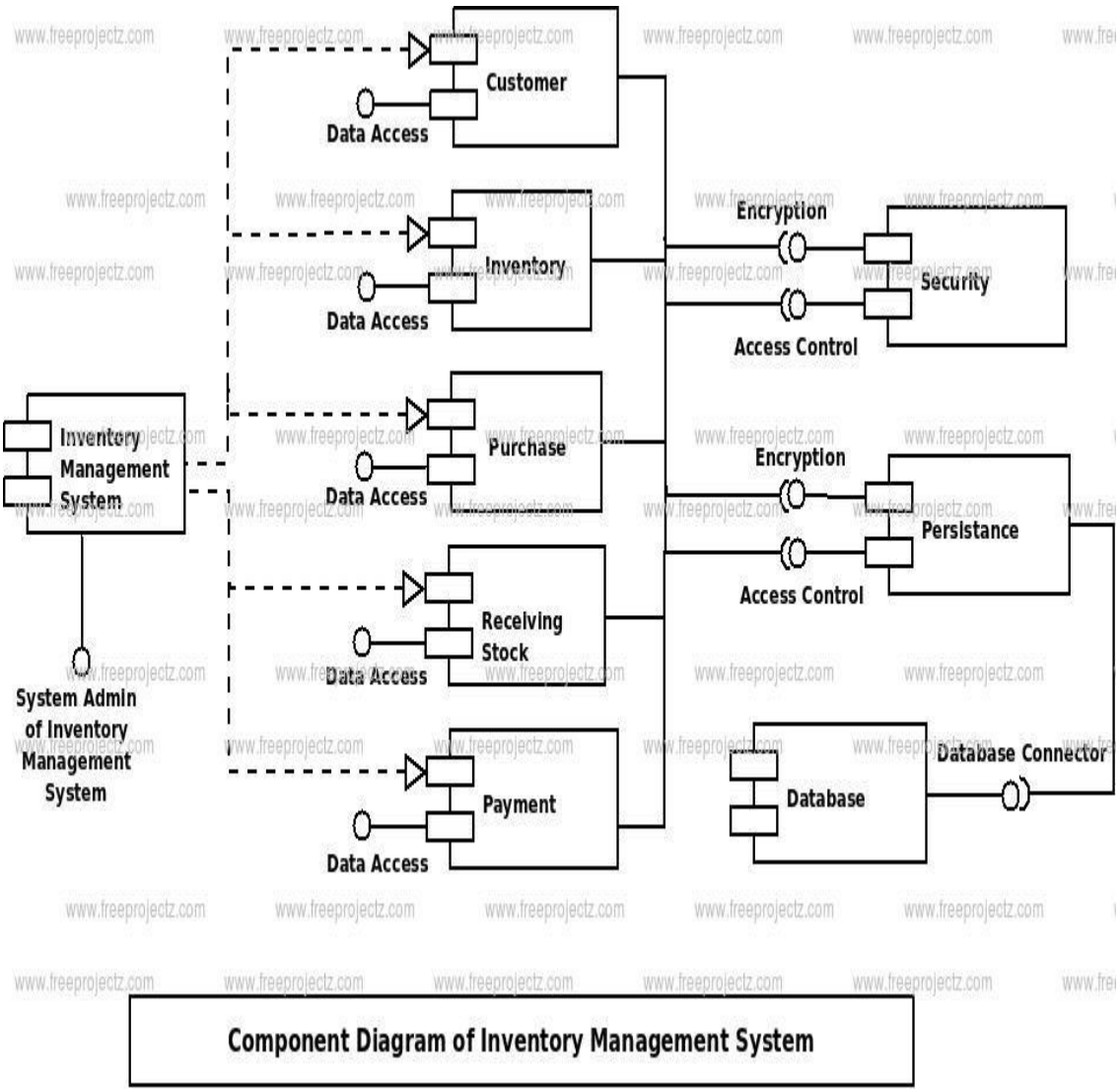
2. The General Description

This section describes the general factors that affect the product and its requirements. This section consists of five subsections that follow. This section does not state specific requirements. Each of the subsections makes those requirements easier to understand, it does not specify design or express specific requirements. Such detail is provided in section 3.

2.1 Product Perspective

The Automated Railway Reservation System diagram showing the overview of the system's modules and the relationship of the system to external interfaces is presented in Figure 2.1.

Figure 2.1 Overview/Architecture Diagram of the Stock Management System



Functions of System Components:

Database:
- Stores data
- Creates reports
- Provides access to data
- Updates information

Server:
- Provides access to the database
- Authenticates users
- Processes reservations
- Performs backups
- Produces reports

External Interfaces:

Terminal
- Users use terminals to access the server
- Passengers and travel agents use terminals to reserve the tickets and to get information about the available seats on particular trains.
- Railroad administration may use terminals to see the reports generated by the database software.

Personal Computers
- Users (passengers, travel agents, and railroad administration) may use personal computers to obtain a remote access to the server and the reservation database via the Internet.

Cell Phones
- Serve as a medium of accessing the server and the reservation database.
- Passengers may use cell phones and the latest telecommunication technologies to access the server and the reservation database via Internet, or they may use cell phones to call travel agents to inquire about railroad and ticket information.

Computer Hardware and Peripheral Equipment to be used:
- 30 workstations, which include CPUs, monitors, keyboards, and mice
- Printers
- Network
- Terminals
- Cell phones to test connection to the server via remote access

2.2 Product Functions

This section provides a summary of the functions that the software will perform.

2.2.1 Function Relationships

Figure 2.2 to 2.6 depict the relationships among the functions to be implemented by the system.

2.2.2 Function Descriptions (Functional Requirement Listings)

2.2.2.1 Log In Function

Description: This function ensures that only authorized users gain access to the Reservation databases. An authorized user is a user who has an account on the system. Users include passengers, train officials, and CRM ministry officials. The user must type a valid username and password to gain access.

Test Case ID	1
TC Name	Login Account
Test Case Description	It will test the login process
Dependency	Database connected and does user exist?
Expected Result	Successful login and allowing to enter
Actual Result	Successfully login and continue.
Estimated Time	Maximum 2 minutes or depends on system speed
Bugs, errors	Nil

2.2.2 Module 1: Dashboard

Description: This function allows the user to [Make | Drop | View | Update] a inventory for a particular stock on a particular date for a certain number of orders.

2.2.3 Module 2: Brand

Test Case ID	3
TC Name	Brand
Test Case Description	Testing the crud of brands either they are updating, adding, creating and deleting the items or not.
Dependency	Successful login Proper connection with database
Expected Result	Successfully perform the crud of items
Actual Result	Successfully performing
Estimated Time	Maximum 2 minutes or depends on speed of system
Bugs, errors	Nil

2.2.4 Module 3: Category

Test Case ID	5
TC Name	Category
Test Case Description	Testing the crud of category either they are updating, adding, creating and deleting the items or not.
Dependency	Successful login Proper connection with database
Expected Result	Successfully perform the crud of items
Actual Result	Successfully performing
Estimated Time	Maximum 2 minutes or depends on speed of system
Bugs, errors	Nil

2.2.5 Module 4: Product

Test Case ID	2
TC Name	Product
Test Case Description	Testing the crud of products either they are updating, adding, creating and deleting the items or not.
Dependency	Successful login Proper connection with database
Expected Result	Successfully perform the crud of items
Actual Result	Successfully performing
Estimated Time	Maximum 2 minutes or depends on speed of system
Bugs, errors	Nil

2.2.6 Module 5: Order

Test Case ID	4
TC Name	Order
Test Case Description	Testing the crud of orders either they are updating, adding, creating and deleting the items or not.
Dependency	Successful login Proper connection with database
Expected Result	Successfully perform the crud of items
Actual Result	Successfully performing
Estimated Time	Maximum 2 minutes or depends on speed of system
Bugs, errors	Nil

2.3 User Characteristics

The main users of the system will be the passengers buying train tickets, the travel agents that process reservations for passengers, and the CRM administration that access the reports generated by the system. The users are not required to have knowledge in the computer field. The graphical interface provides an easy way of using the ARRS system with minimum of training.

2.4 General Constraints

The constraints for the project are:

- The functional prototype should be available after 30 days upon the arrival of the management team to China. This may prove to be a serious time constraint on the development of a successful prototype.
- Communication with the Chinese team members may prove to be difficult since some Chinese developers do not speak English and the management team does not speak Chinese. Even with the presence of a translator, communication may be difficult. Absence of the translator may severely affect project development.
- Team members are restricted from bringing their own equipment, and insufficient equipment supply may hinder project development.
- Team members are restricted to bringing only the analysts of the team to China. This might affect the project development if more people are needed or the required skills are not available.
- The majority of the Chinese population does not have or have a limited access to the Internet.

2.5 Assumptions and Dependencies or Business Logic

The assumptions for the project are:

- Ten trains transport the passengers between three cities known as Guangzhou, Shanghai and Nanjing. These trains originate only in cities Guangzhou and Shanghai, and they make a stop at Nanjing before arriving to their destination.

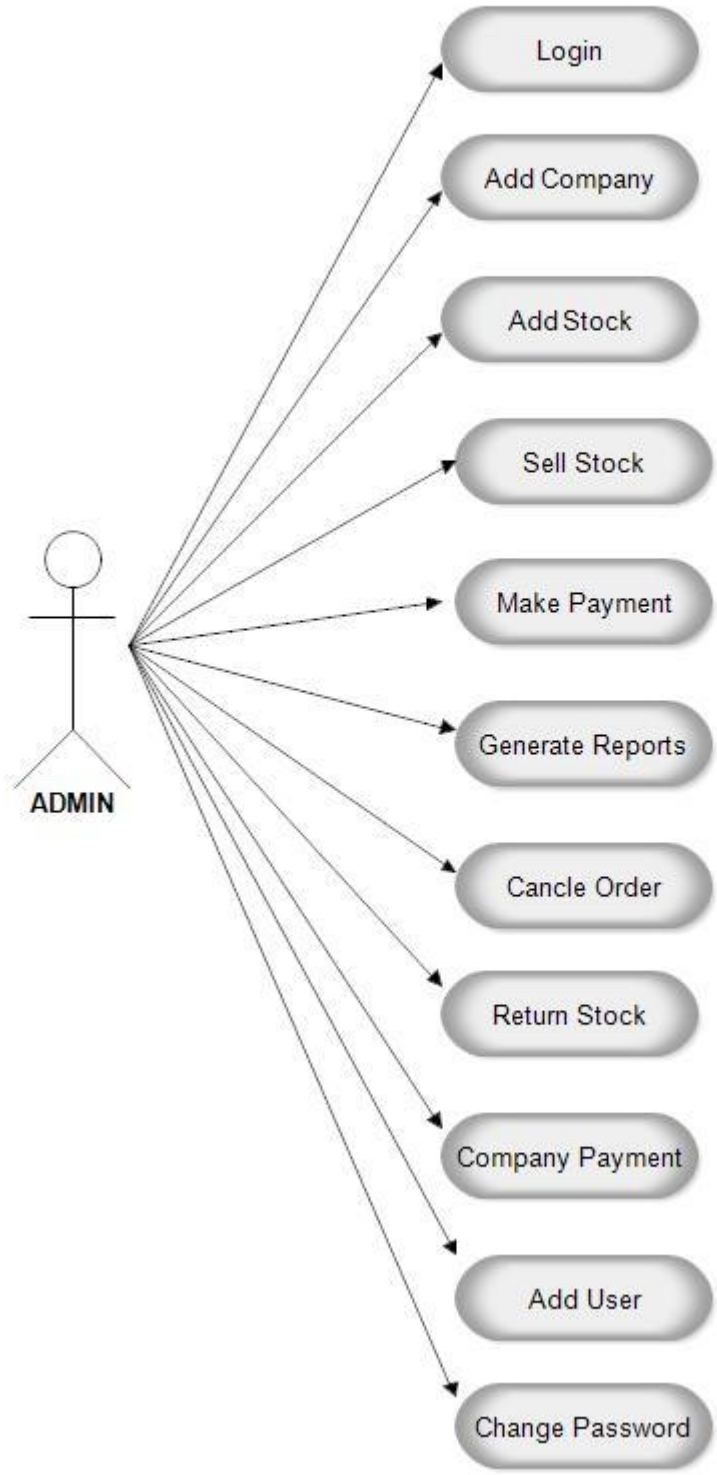
- There are five classes of tickets as listed below
  - Sleeping (soft) - compartment style coaches - 4 passenger per compartment
  - Sleeping (hard) - compartment style coaches - 6 passenger per compartment

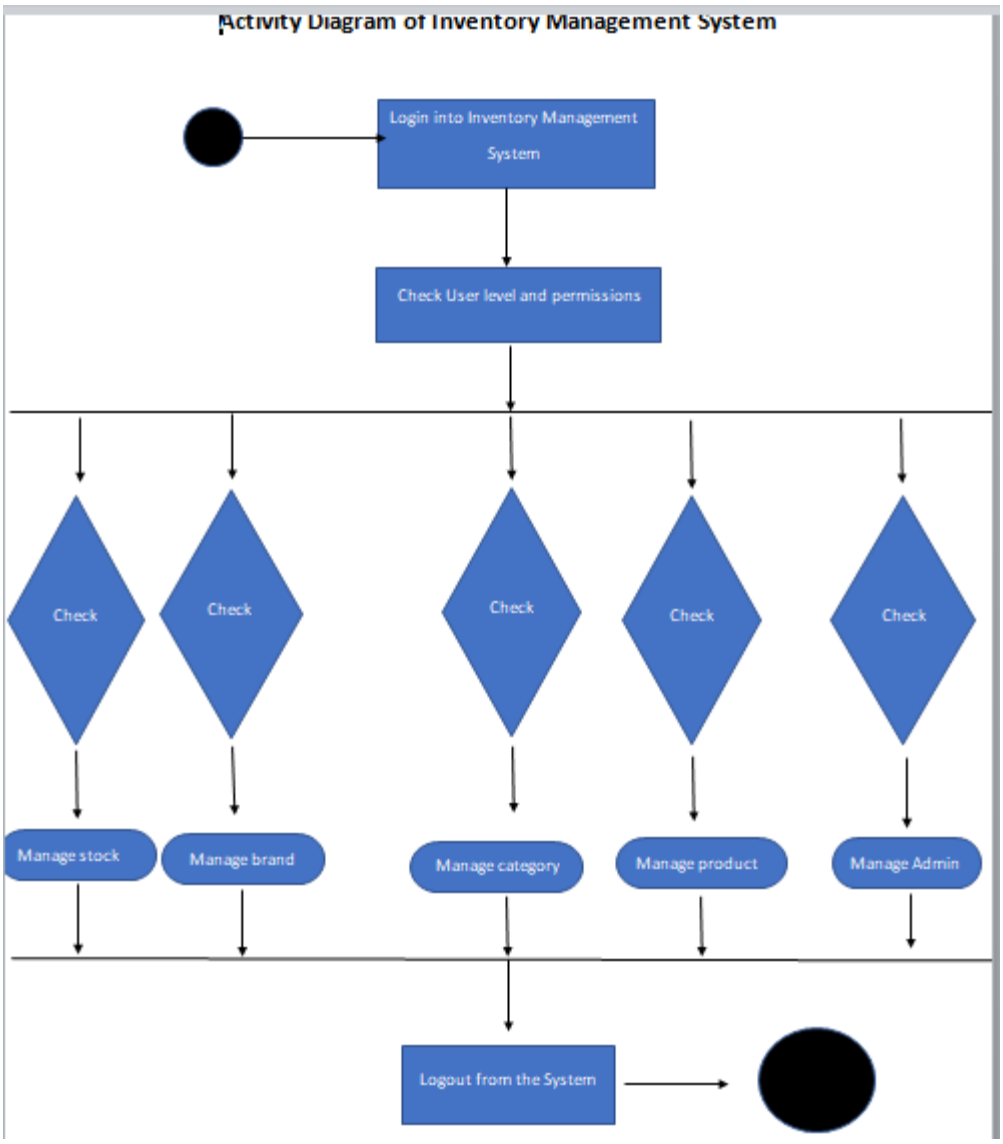
- Reservation can be made up to one month before a particular trip.
- Seats are assigned during reservation.
- Phone reservation involves tickets being purchased within 24 hours after making the reservation. Otherwise, the reservation will be cancelled.
- No reservations can be made 48 hours prior to the trip. Rather, it will be done on a first come first serve basis from that point on.
- Passenger lists will be provided for conductors at each stop.
- The expected reservations during test period may amount to approximately 25,000 per day. This volume varies by hour, day, and season.

- Chinese Ministry will provide us with information about identification process used in China, so that it can be applied to the reservation system and scalping of tickets is avoided.
- Network connection will always remain established.

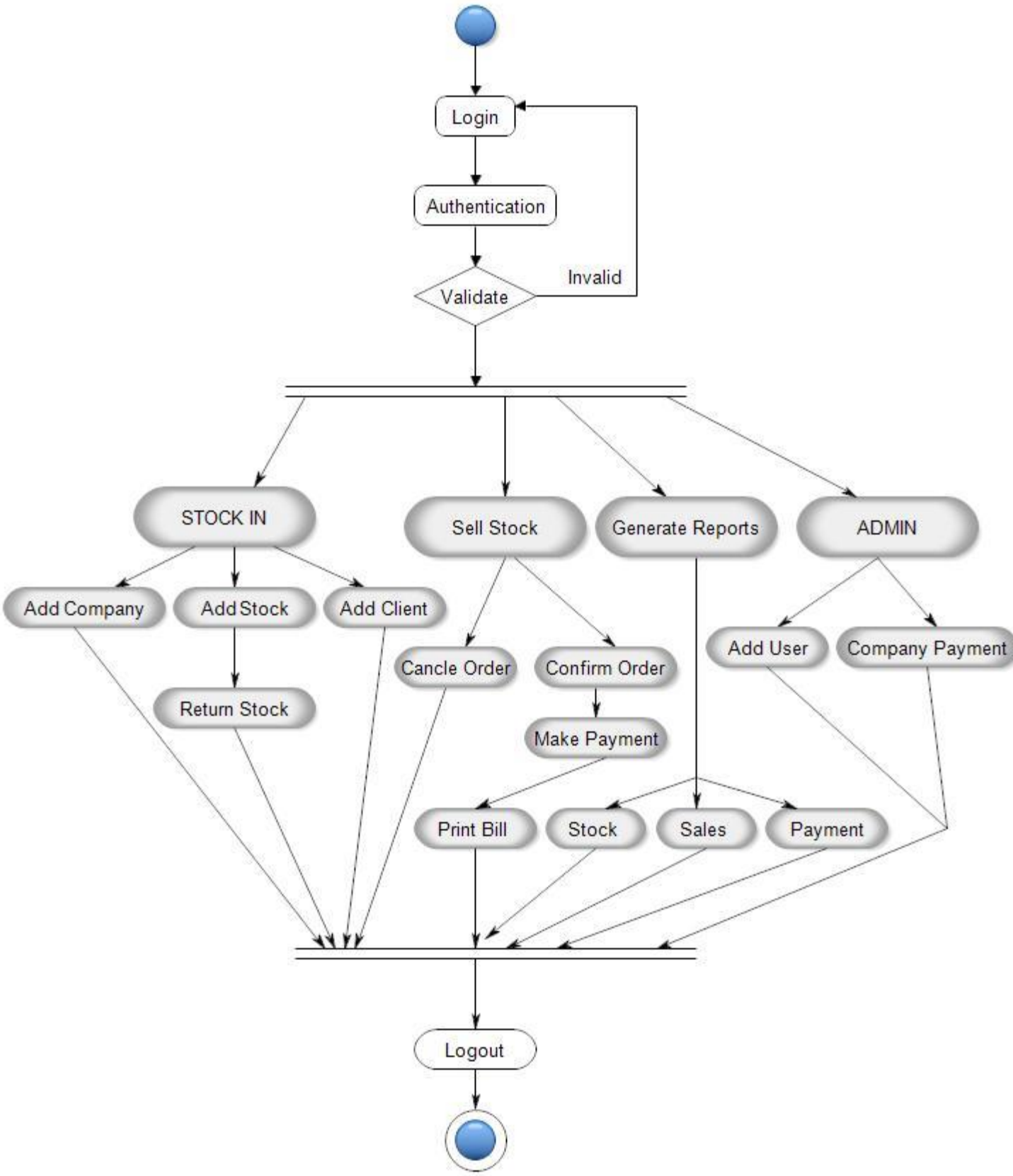
<ADD OOAD REPORT DIAGRAMS HERE>

Use Case Diagram - Stock Management System

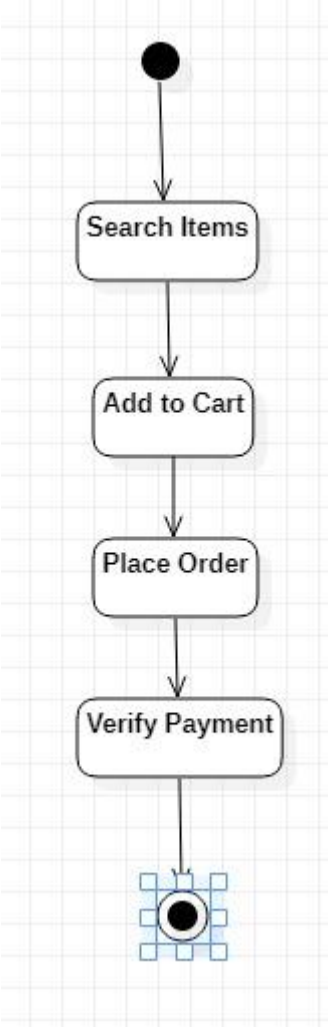



Activity Diagram of Inventory Management System
Login into Inventory Management System
Check User level and permissions
Check
Check
Check
Check
Check
Manage stock
Manage brand
Manage category
Manage product
Manage Admin
Logout from the System

Activity Diagram- Stock Management System



State Chart :-



Narrations :-

Use Case Descriptions

Actor Action:	System Response:
Login	Check validation
Add Order	Ask for product availability and product id
Update Order	Modification in order
Delete Order	Remove from order list
Print Order	Prints order list

Use Case Descriptions

Actor Action:	System Response:
Login	Check validation
Add product	Ask for product name, status, quantity, category etc
Update product	Ask for modification in products
Delete product	Removes the product from the list

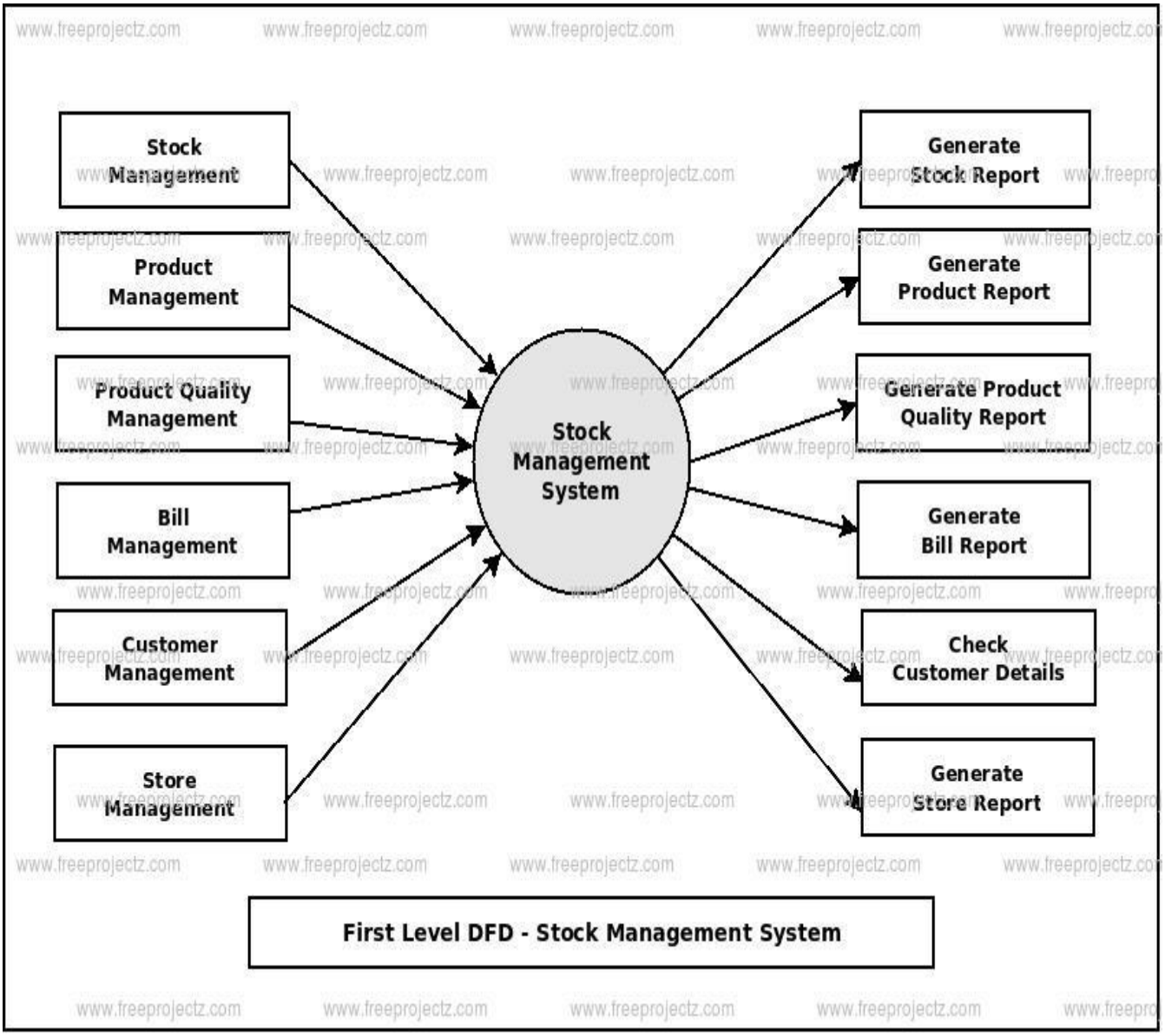
NARRATION

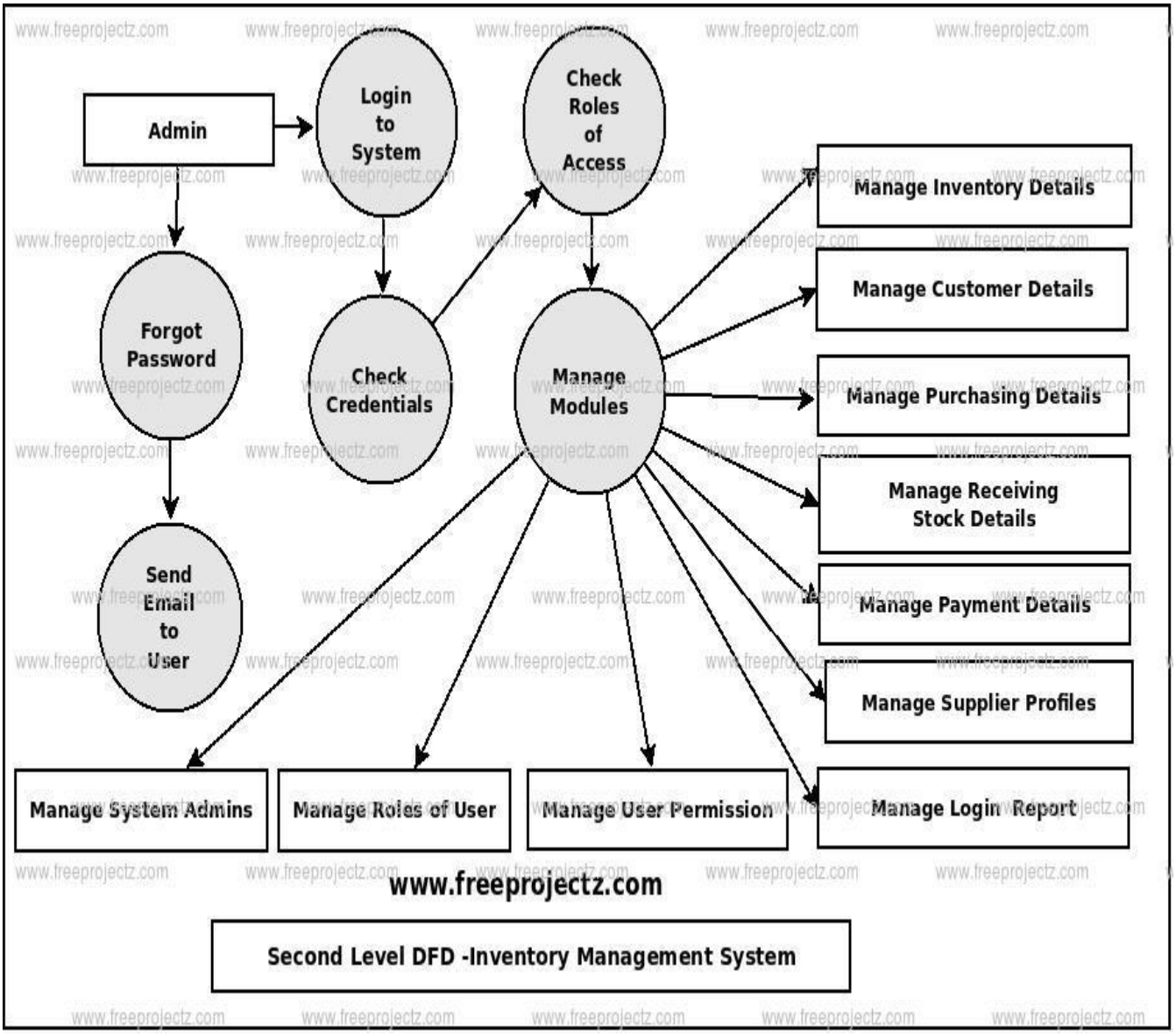
Actor Action:	System Response:
Login Add Category Update Category Delete Category View Category	Check validation Ask for product availability and product id Modification in category Remove from category list View Category list

Use Case Description

Actor Action	System Response
Login	Check Validity
Add Brand	Ask for brand name and availability status
Update Brand	Edit brand name and availability status
Delete Brand	Remove brand from list

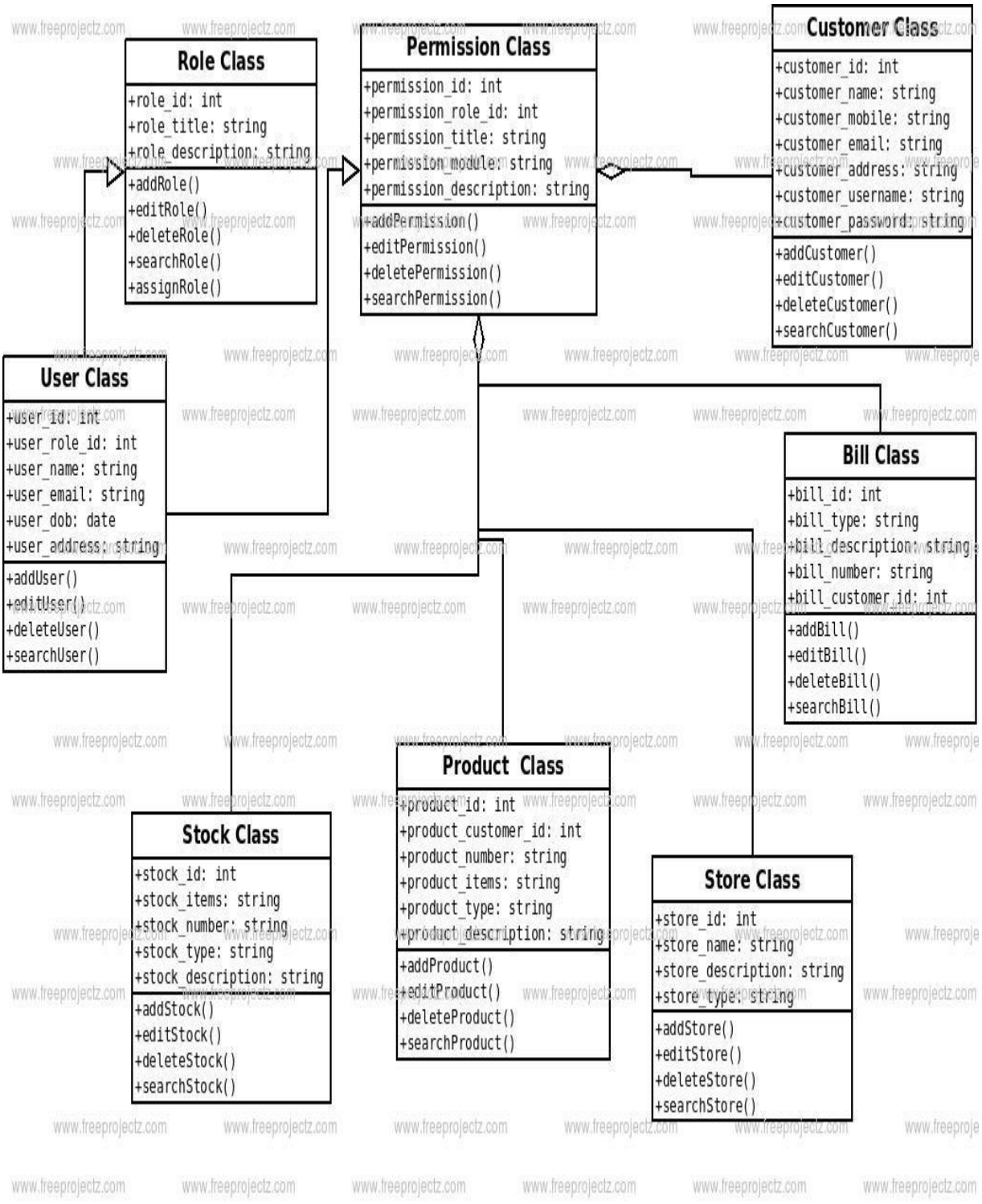
Flow Diagram :-





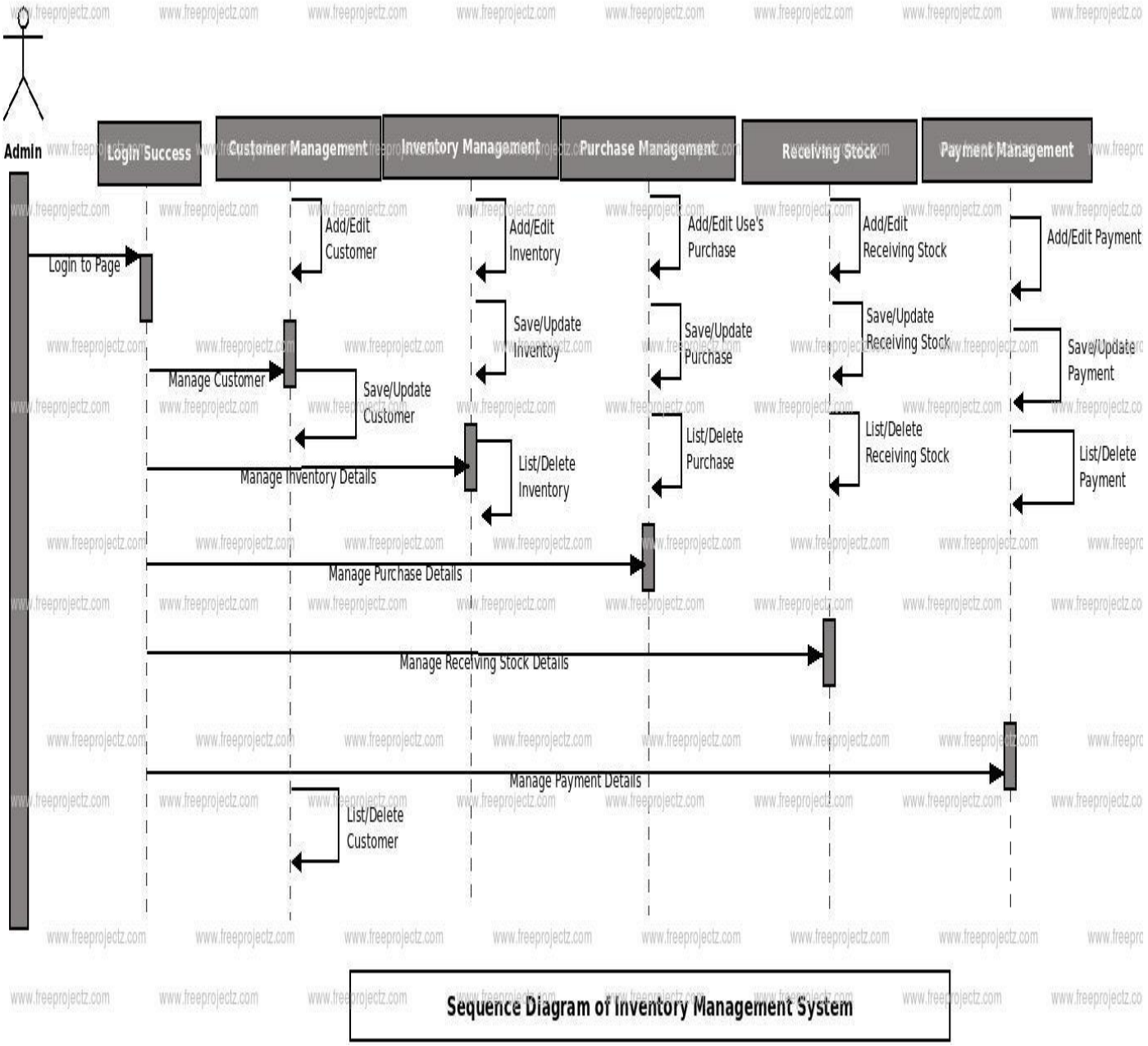
Second Level DFD -Inventory Management System

Class Diagram :-



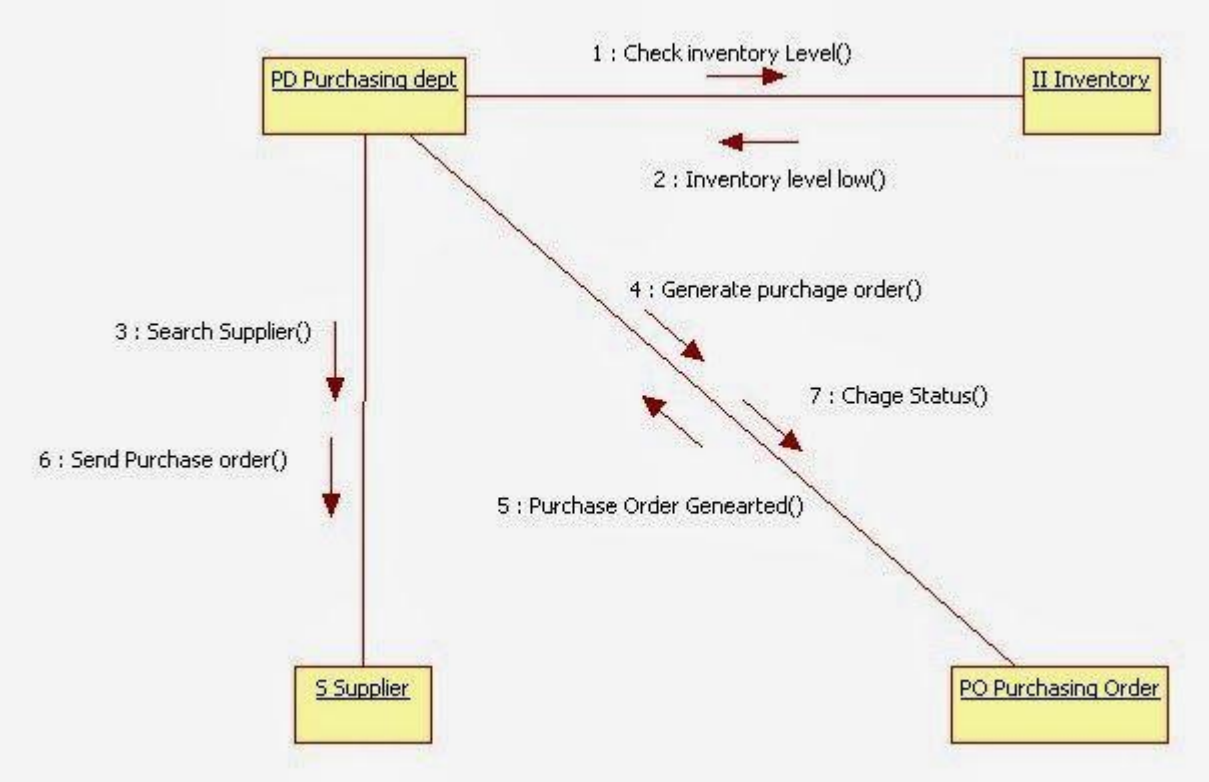
Class Diagram of Stock Management System

Sequence Diagram :-



Sequence Diagram of Inventory Management System

Collaboration Diagram :-



3. Specific Requirements

This section of the SRS contains design requirements for the Stock Management System

3.1 Functional Requirements

3.1.1 Log In Function

a) ***Description:*** This function ensures that only authorized users gain access to the Reservation databases. An authorized user is a user who has an account on the system. Users include passengers, train officials, and CRM ministry officials. The user must type a valid username and password to gain access.

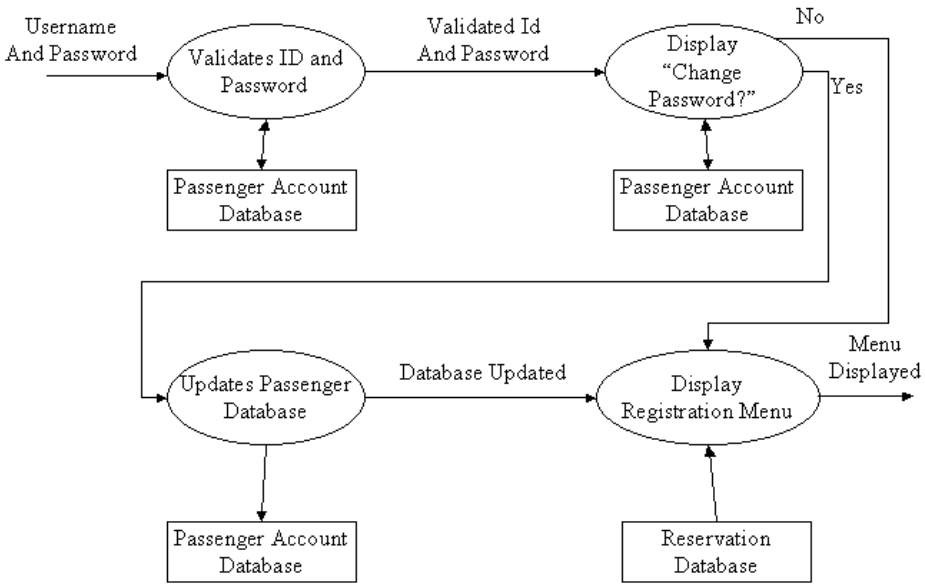
b) ***Usage Scenario/ Use case Description/ Specification:***

Description	Allows access to online ARRS
Inputs	Username, password
Source	1. User inputs username and password 2. Press Login Button
Alternate case	
Outputs	Successful login; unsuccessful login
Destination	None
Precondition	Authorized User
Post Condition	No change to Passenger Accounts Database
Side Effects	Failures and successful logins are sent to Reservation Database

c) Detailed Use case Diagram for Login: optional

d) Use case Realization for Login: optional

e) Flow of Event or Data Flow Diagram for Login: optional



f) ***Sequence Diagram for Login: optional***

g) Collaboration Diagram for Login: optional

h) Activity Diagram for Login: optional

i) Class Diagram for Login: optional

j) State Chart Diagram for Login: optional

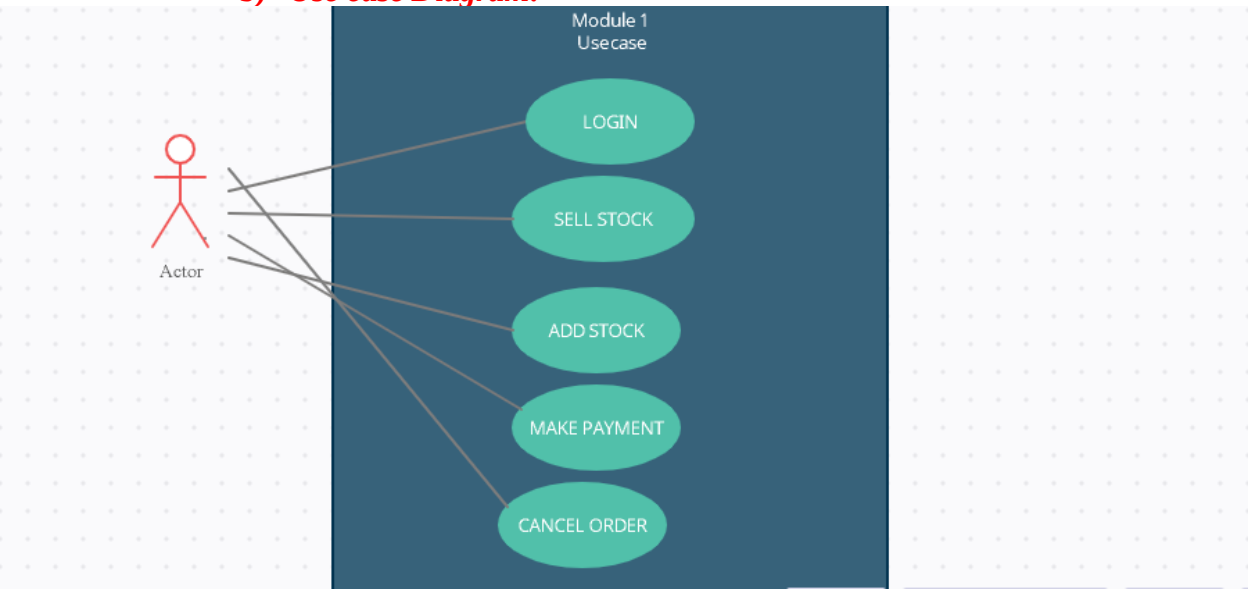
3.1.2 Module 1 complete CRUD Dashboard (Syed Wajih Haider)

Description: This function allows the user to [Make | Drop | View | Update] a inventory for a particular stock on a particular date for a certain number of orders.

a) ***Usage Scenario/ Use case Description/ Specification:***

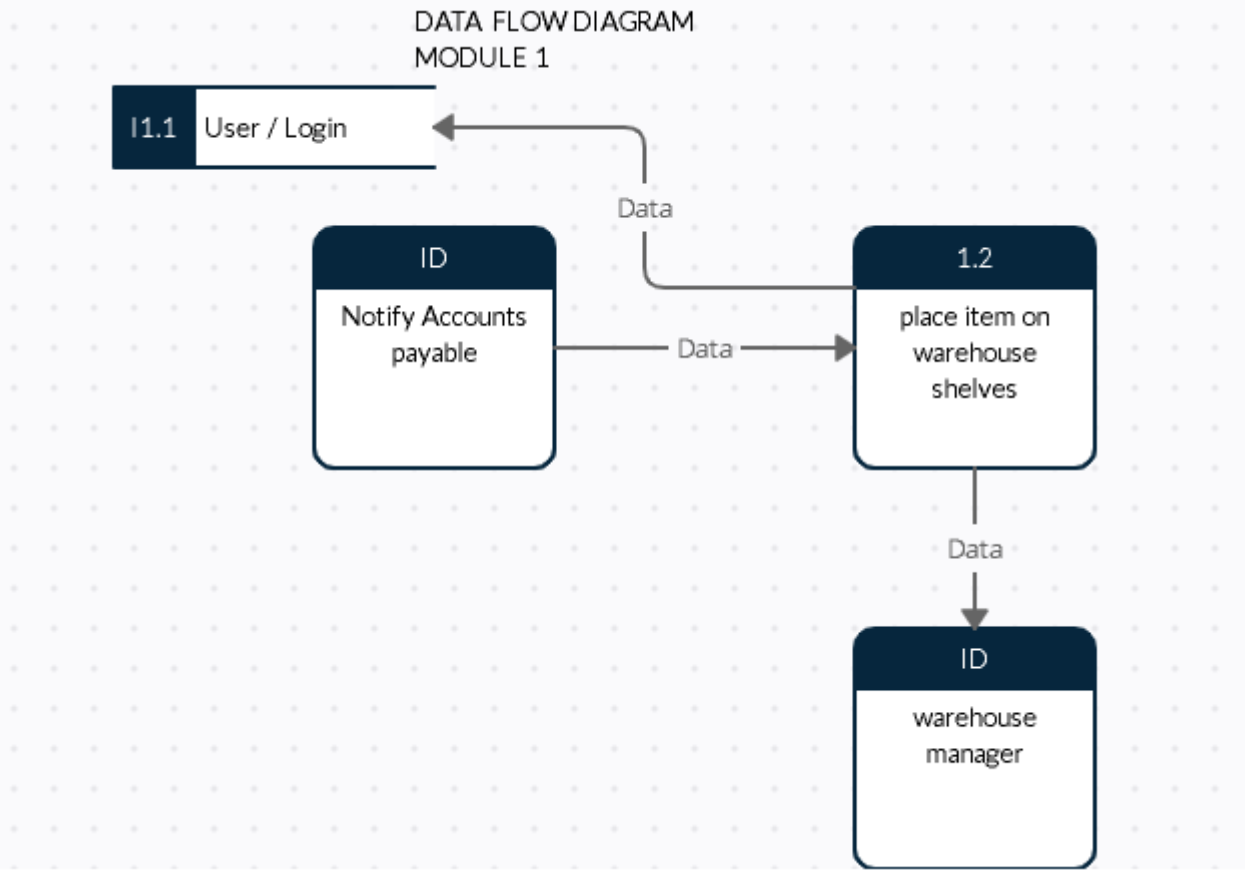
Description	[make | drop | view | update] a reservation to the user's account
Inputs	From city, to city, seat type, travel date, return date and time
Source	1. User inputs from city, to city, seat type, travel date, return date and time 2. Press Button …
Alternate Case	
Outputs	Added | Deleted | Viewed | Modified reservation
Destination	Computer screen Reservation database Passenger Account database
Precondition	Valid information; train route and tickets available; user does not have another reservation at the same time
Post Condition	Reservation added to passenger account
Side Effects	User's current reservations adjusted Balance due adjusted

b) Use case Diagram:

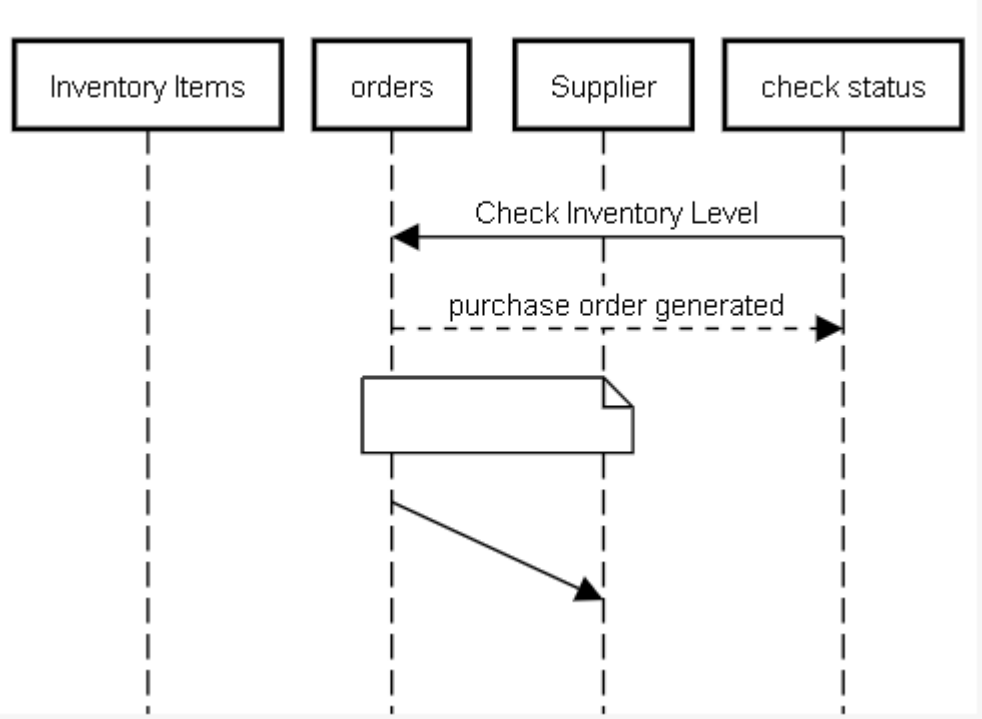


c) Use case Realization:

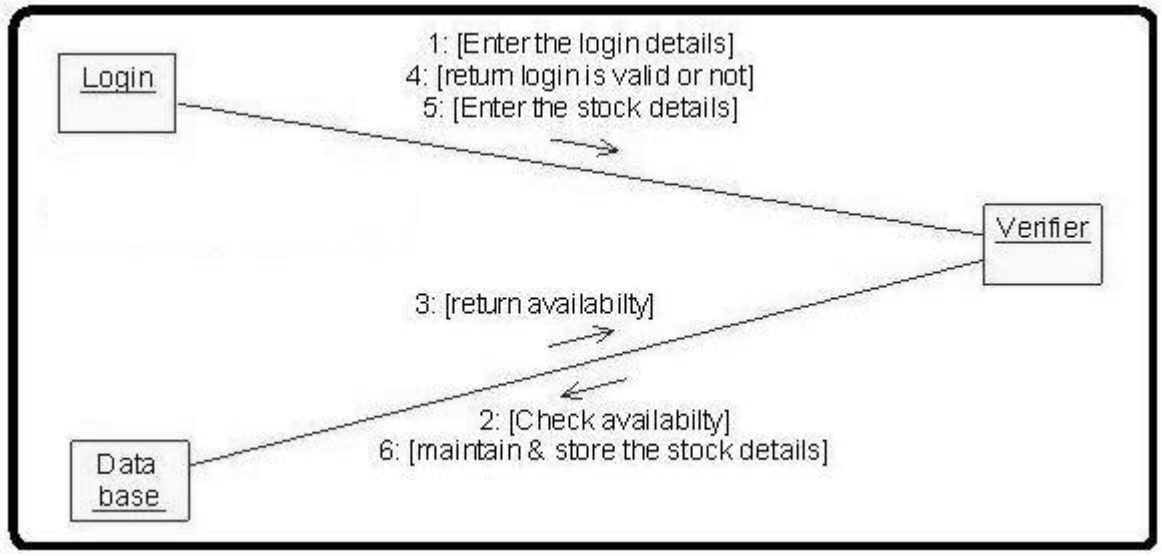
d) Flow of Event or Data Flow Diagram:



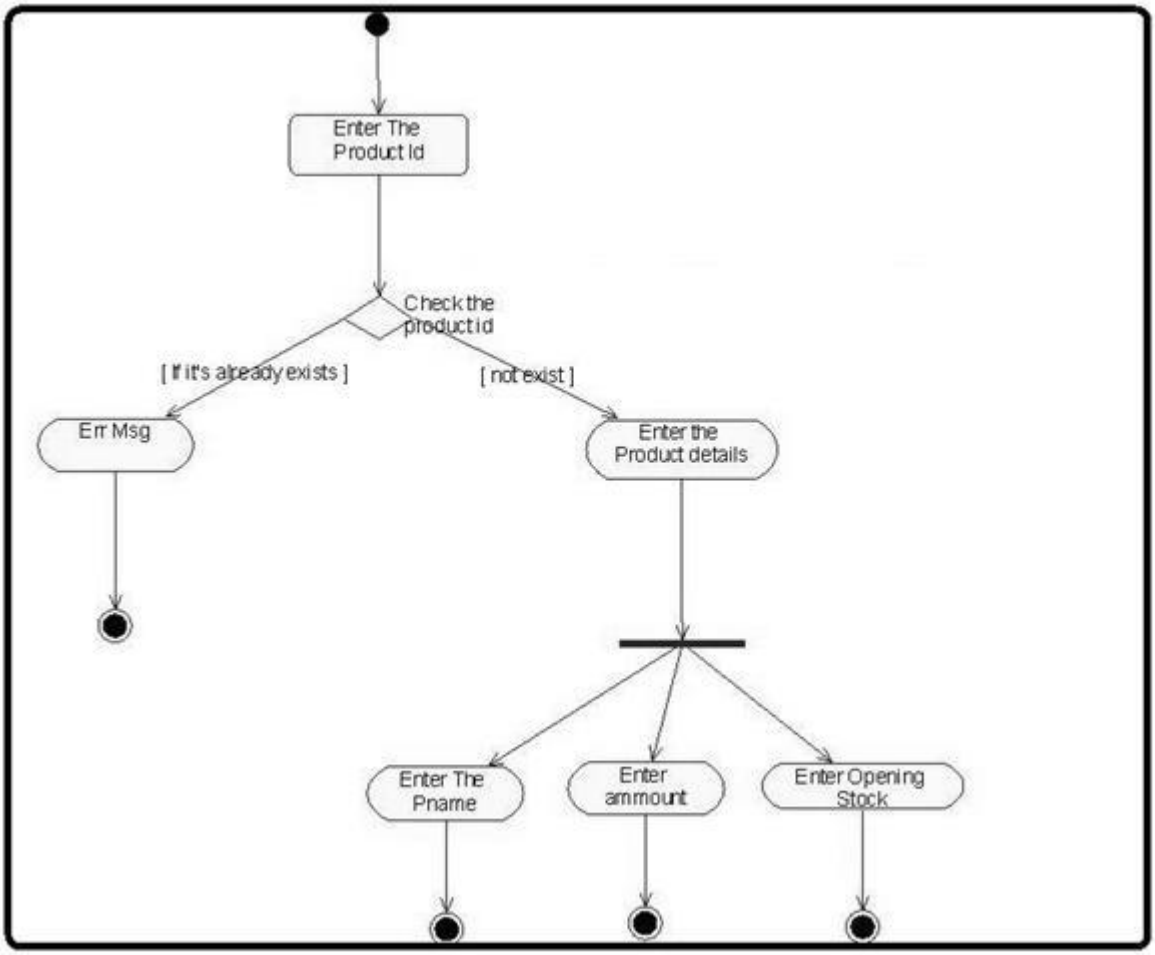
e) ***Sequence Diagram:***



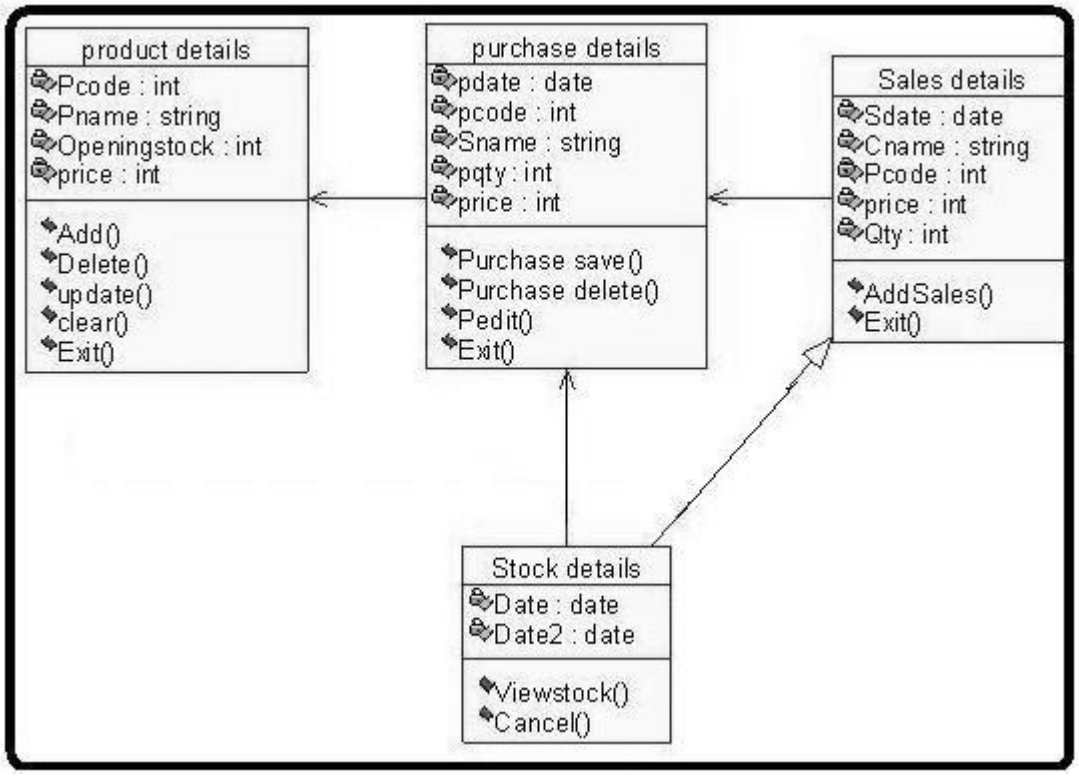
f) Collaboration Diagram:



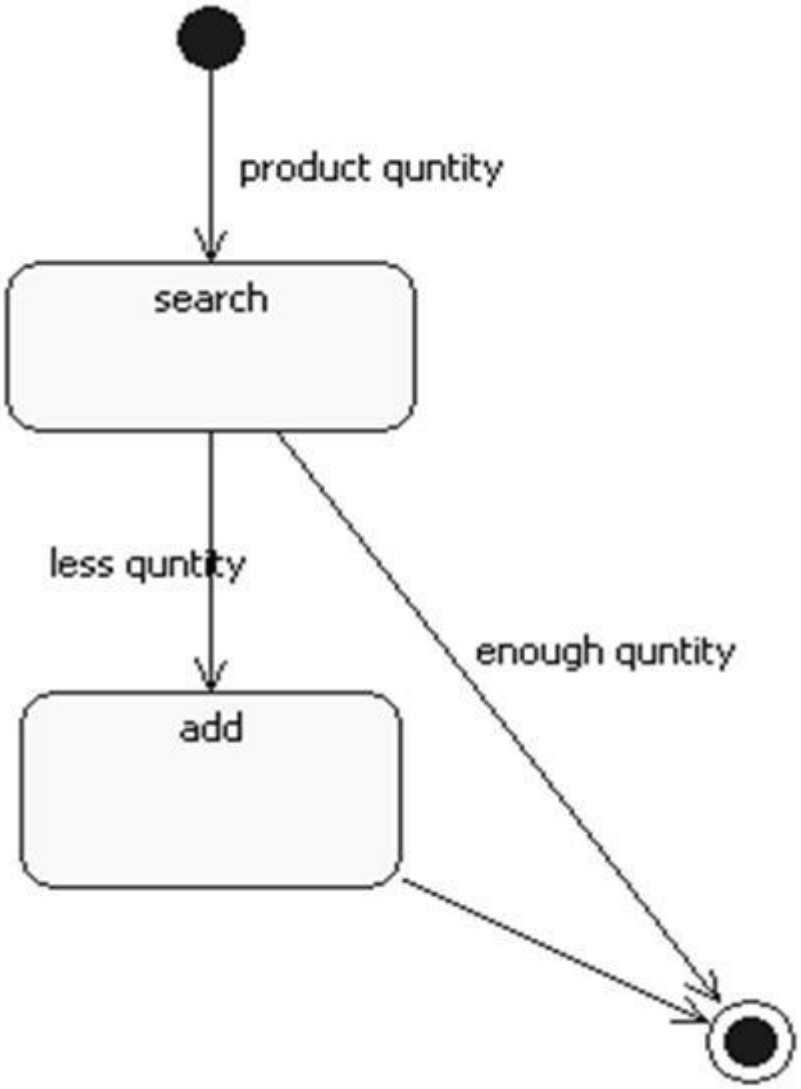
g) Activity Diagram:



h) Class Diagram

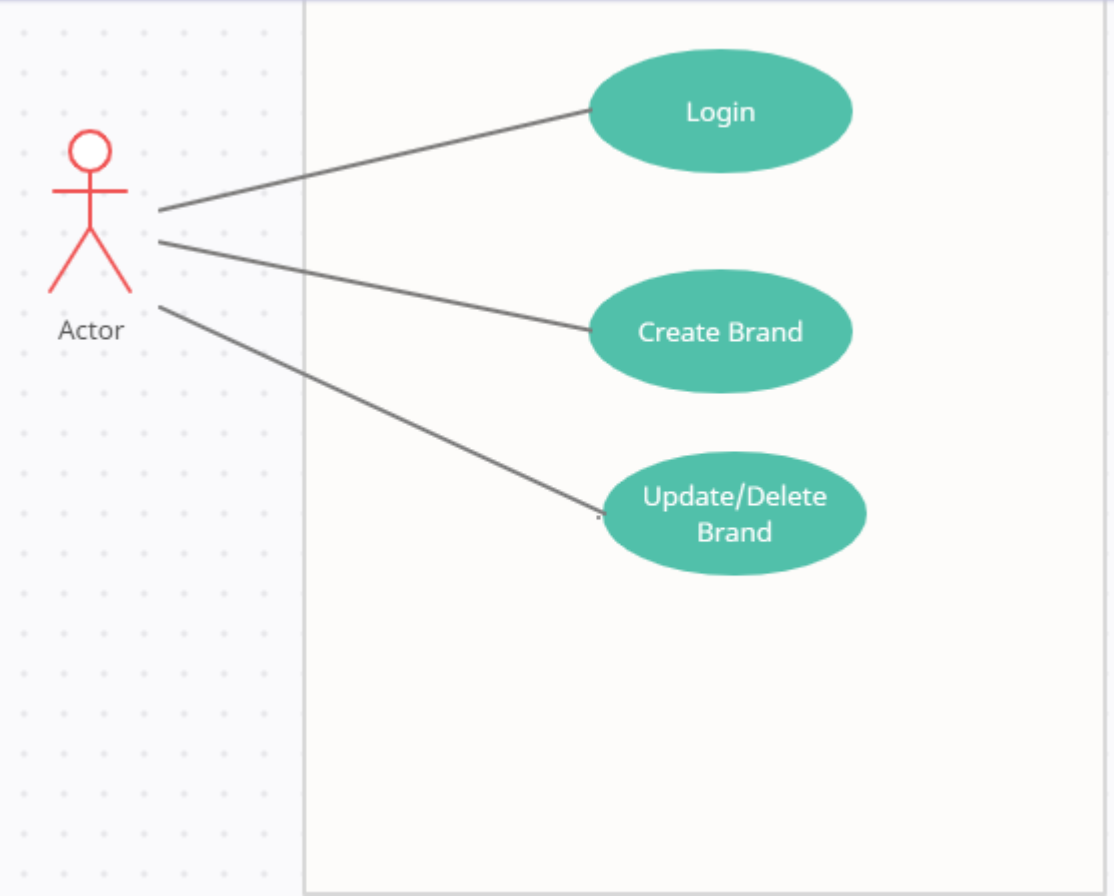


i) State Chart Diagram:

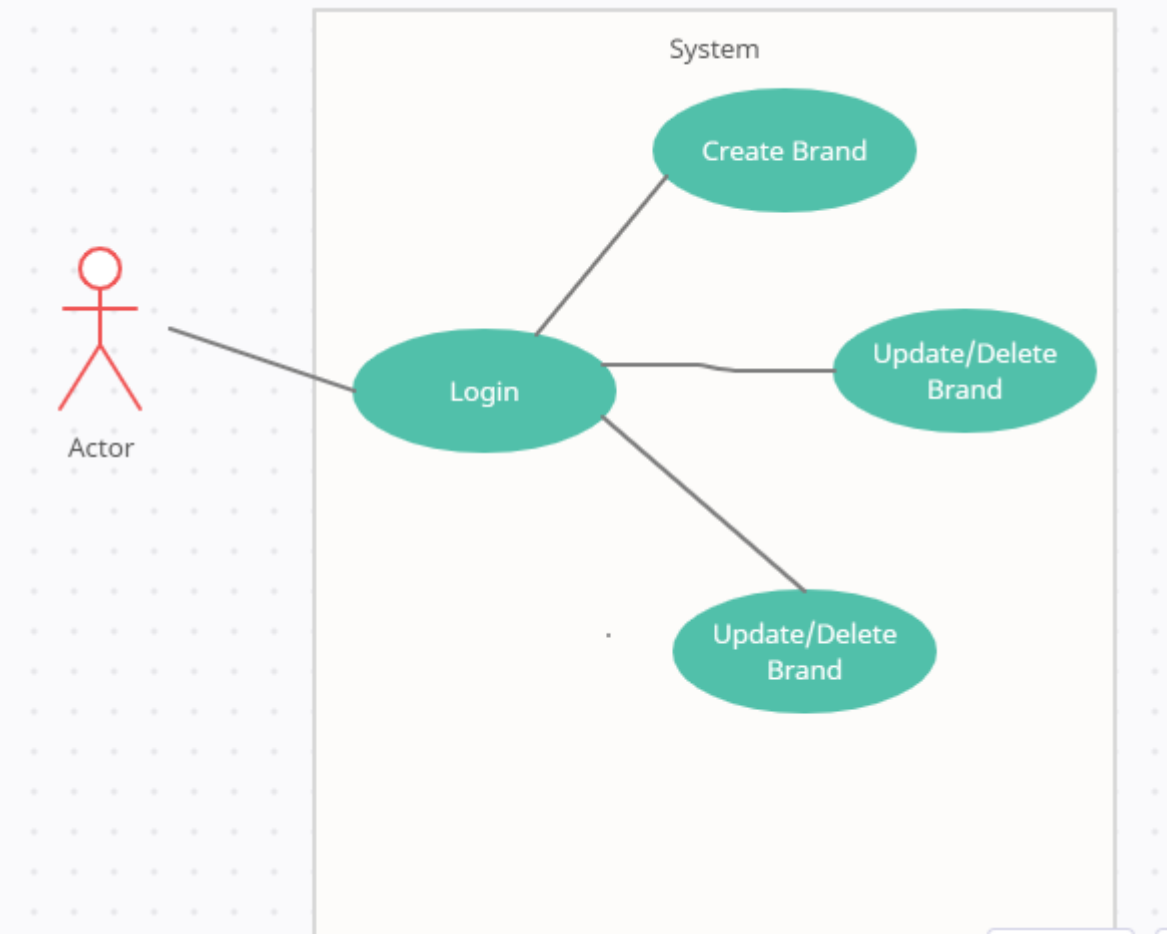


3.1.3 Module 3 complete CRUD Brand (Osama Hussain)

Usecase Diagram :-



Usecase Realization :-

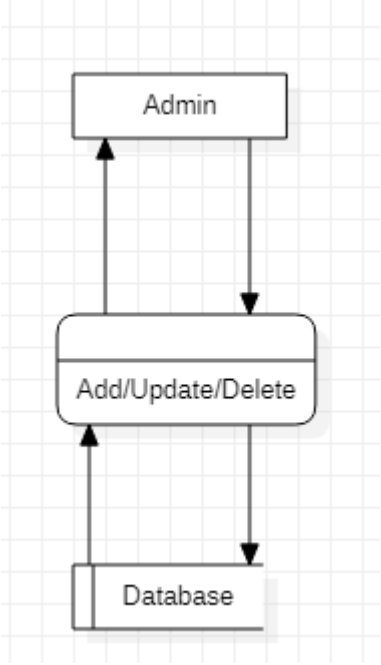


Usecase Narrations :-

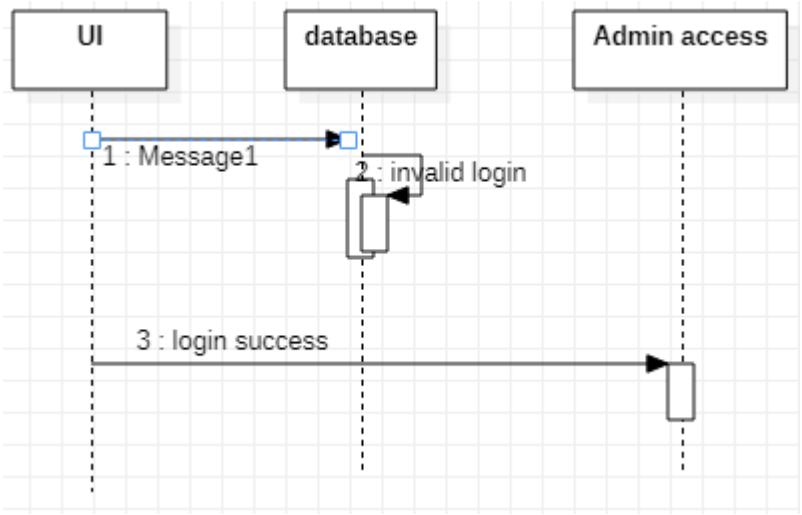
Use Case Description

Actor Action	System Response
Login	Check Validity
Add Brand	Ask for brand name and availability status
Update Brand	Edit brand name and availability status
Delete Brand	Remove brand from list

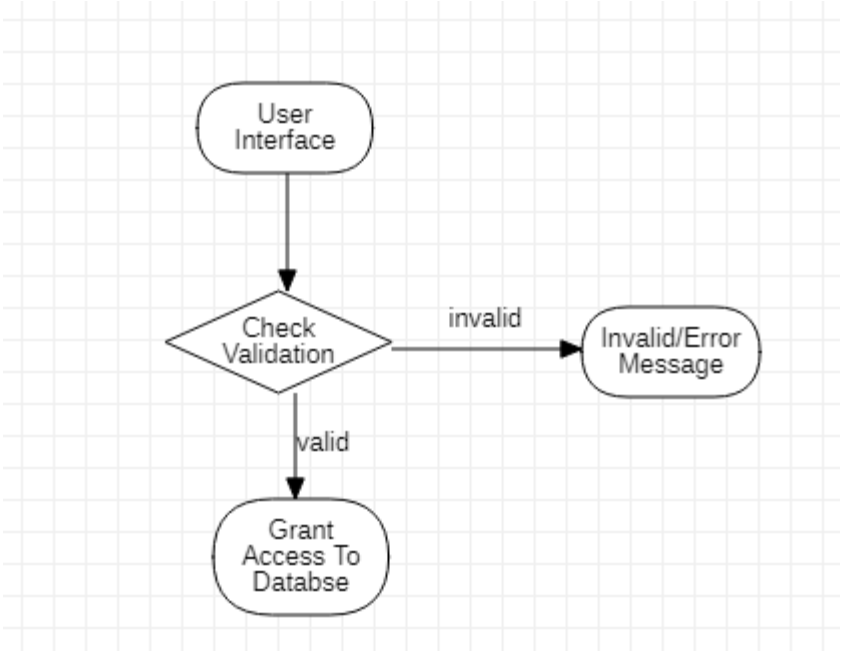
Flow Diagram :-



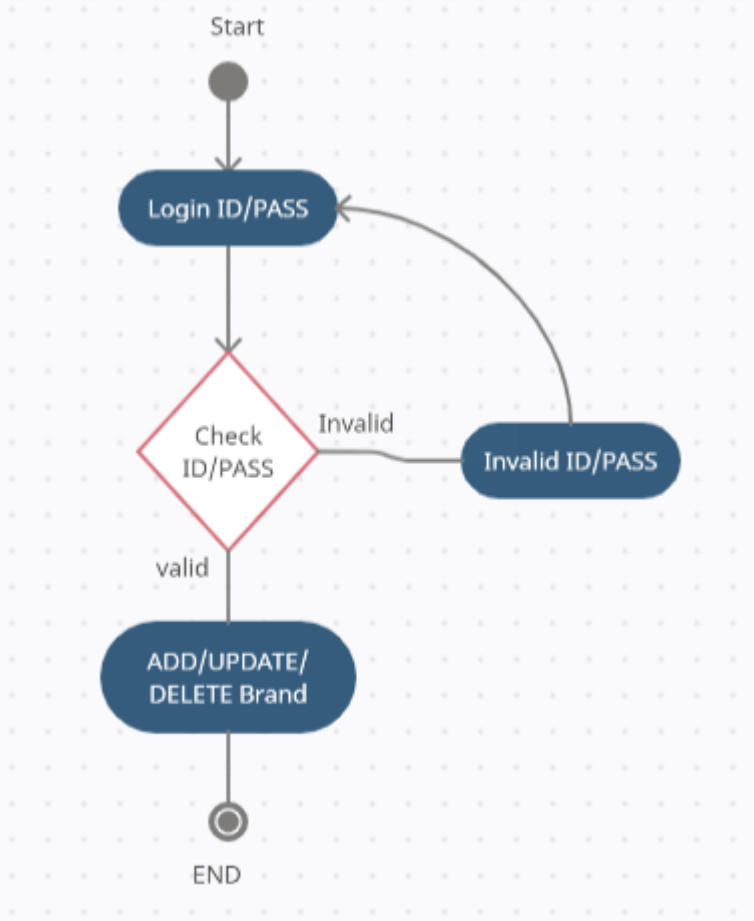
Sequence Diagram :-



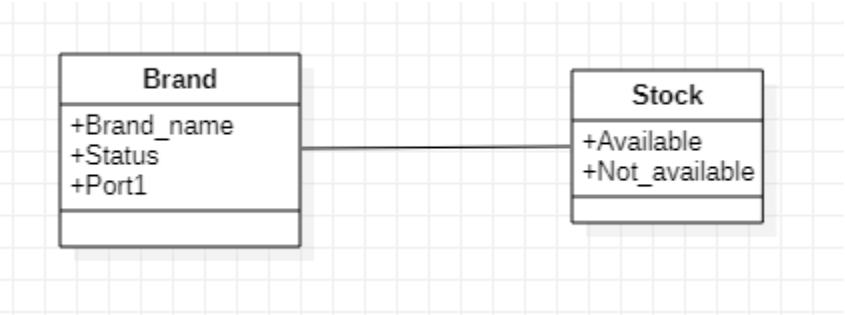
Collaboration Diagram :-



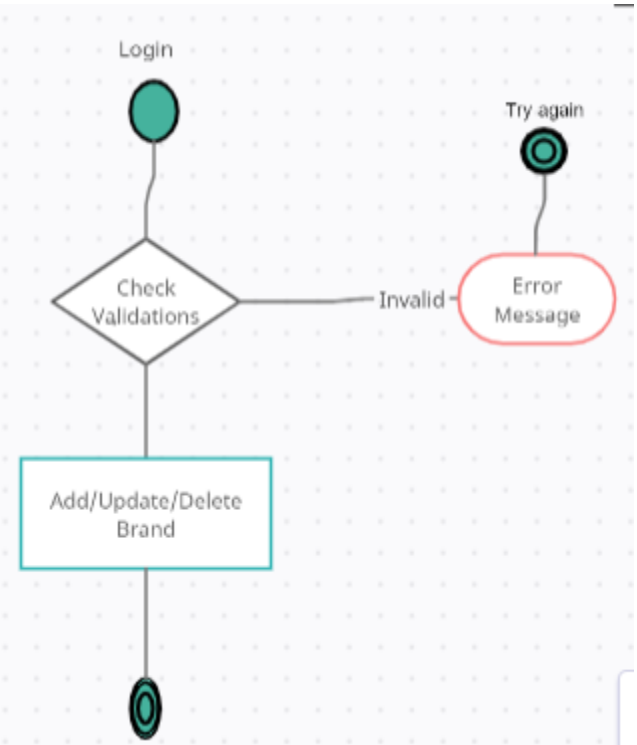
Activity Diagram :-



Class Diagram ;-

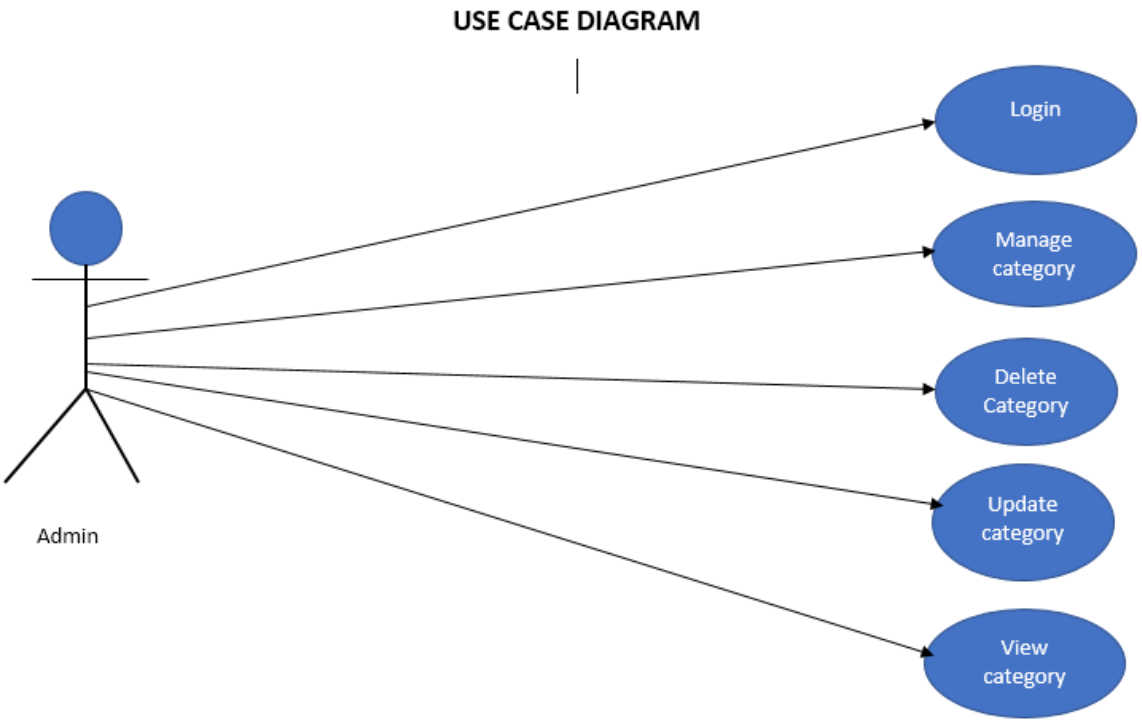


State Chart Diagram :-

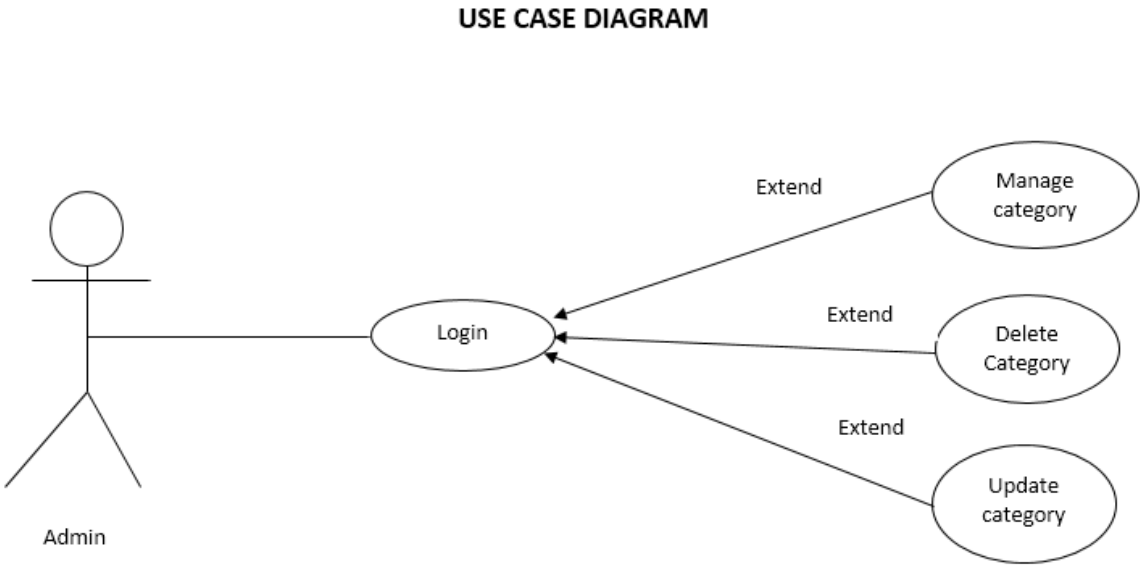


3.1.4 Module 4 complete CRUD Categories (Syed Owsaja Hasan)

Use case Diagram :-



Use case Realization :-

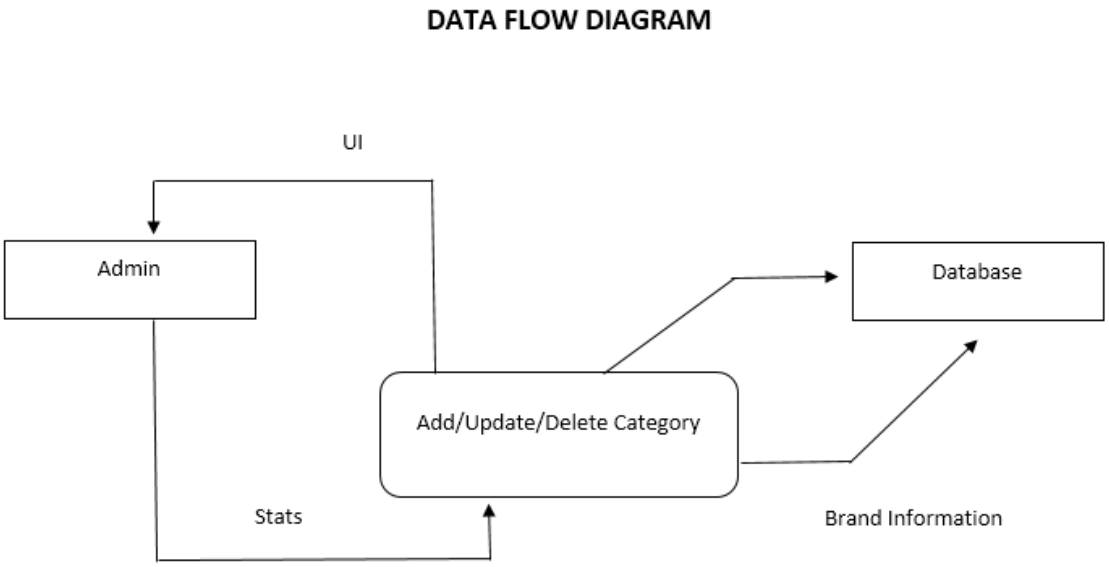


Use case Narrations :-

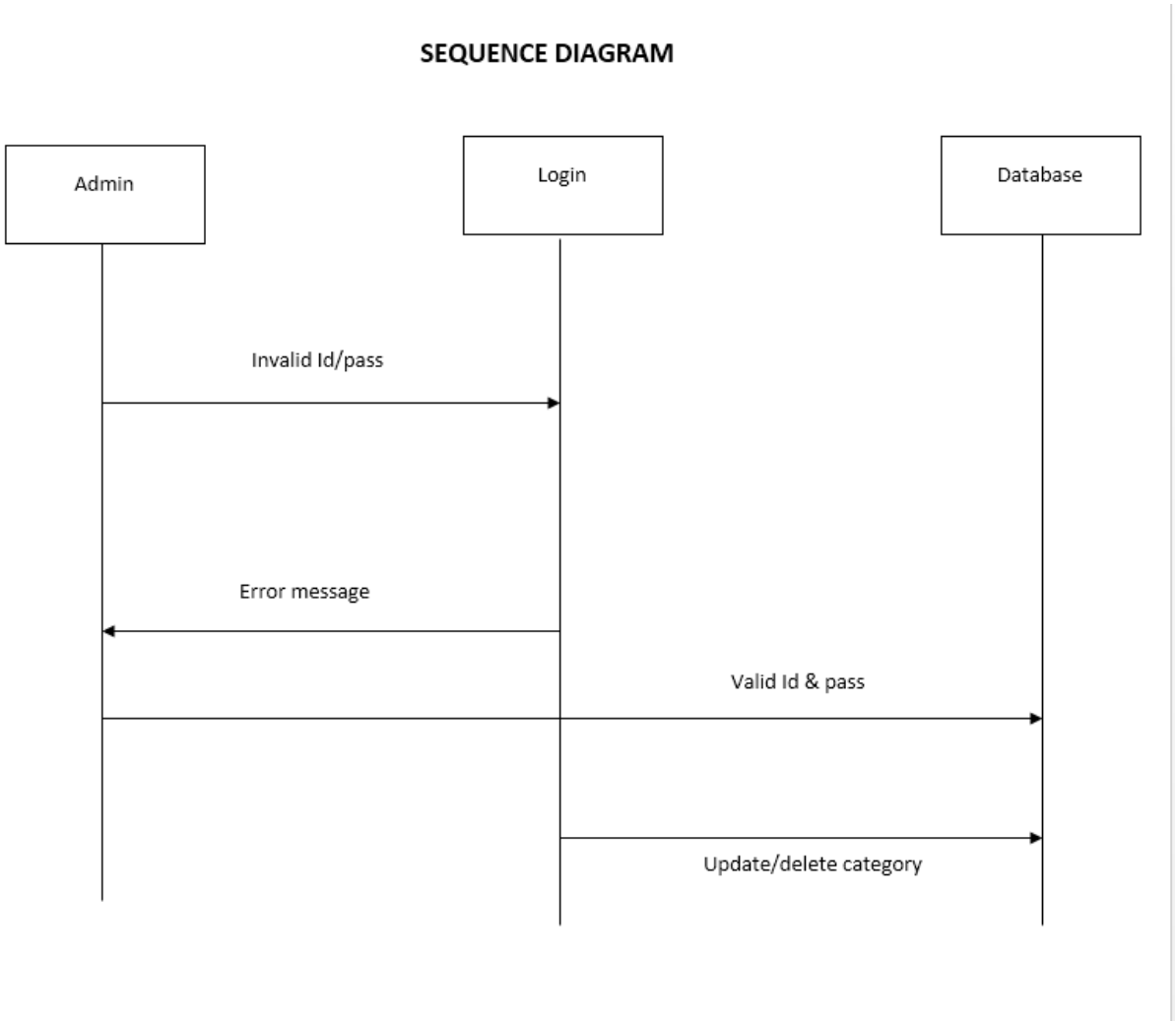
NARRATION

Actor Action:	System Response:
Login	Check validation
Add Category	Ask for product availability and product id
Update Category	Modification in category
Delete Category	Remove from category list
View Category	View Category list

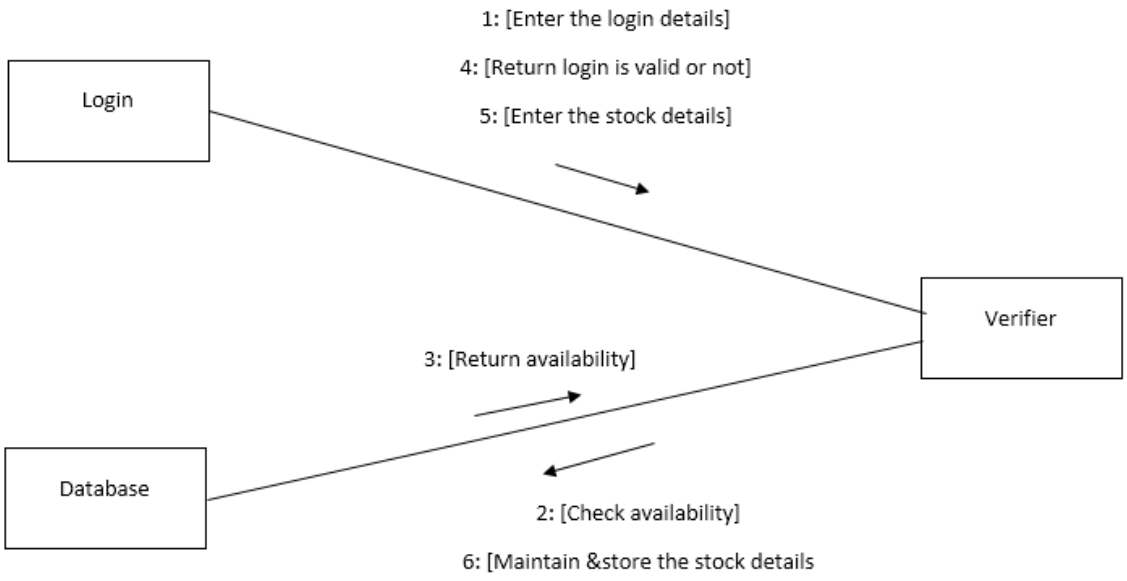
Flow Diagram :-



Sequence Diagram :-

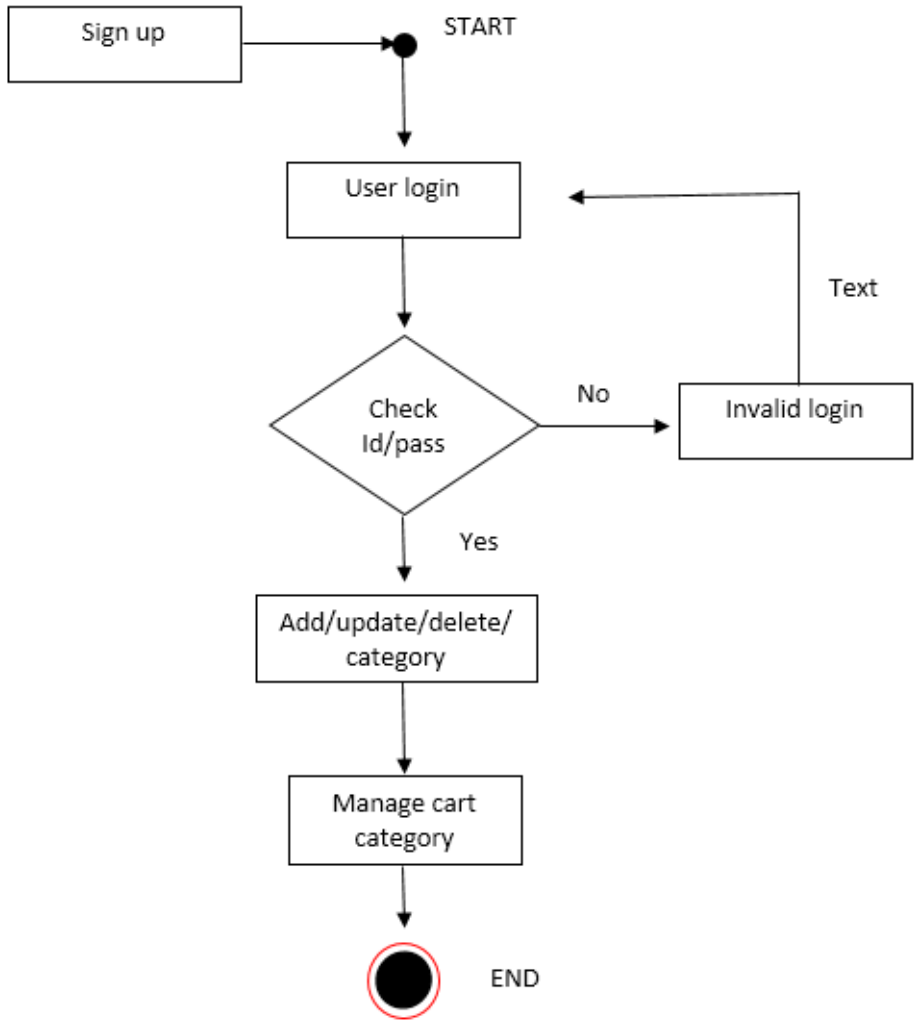


Collaboration Diagram :-



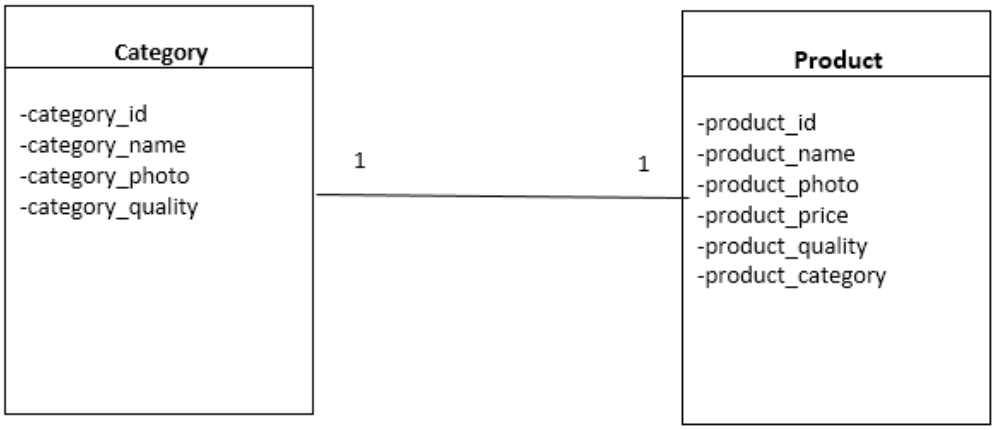
Activity Diagram :-

ACTIVITY DIAGRAM

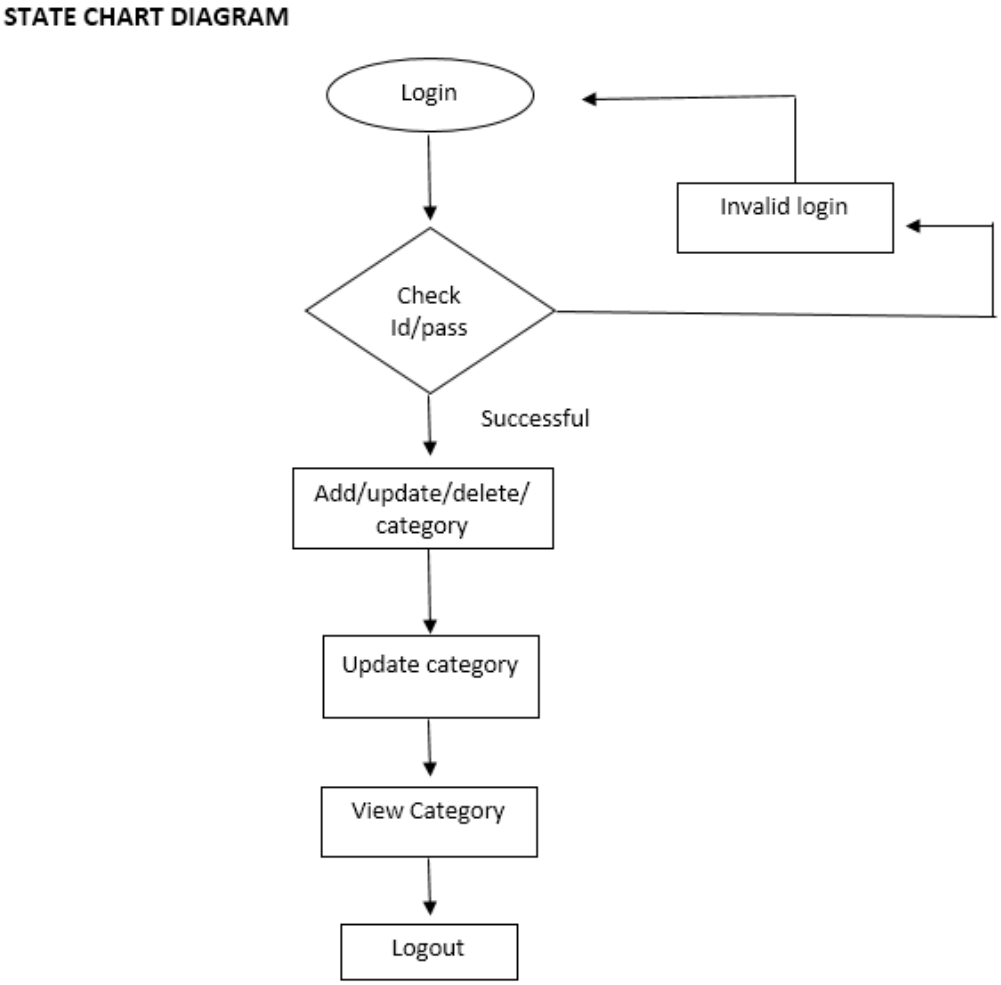


Class Diagram :-

CLASS DIAGRAM

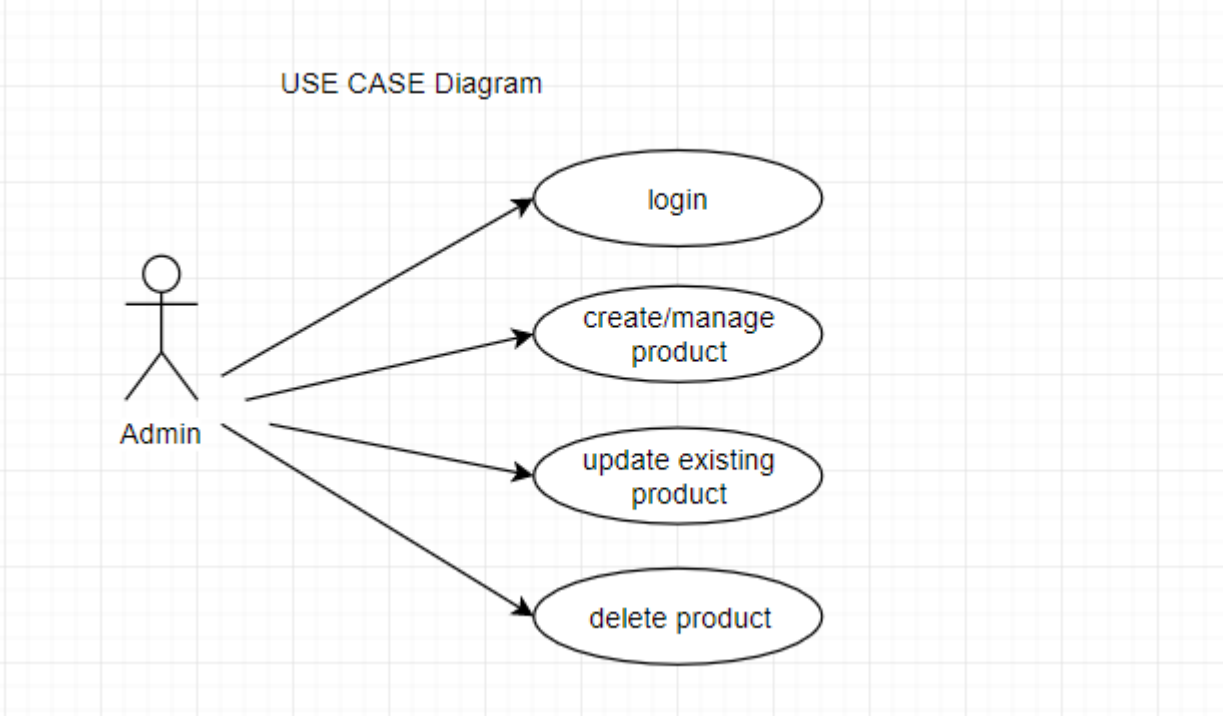


State Chart Diagram :-

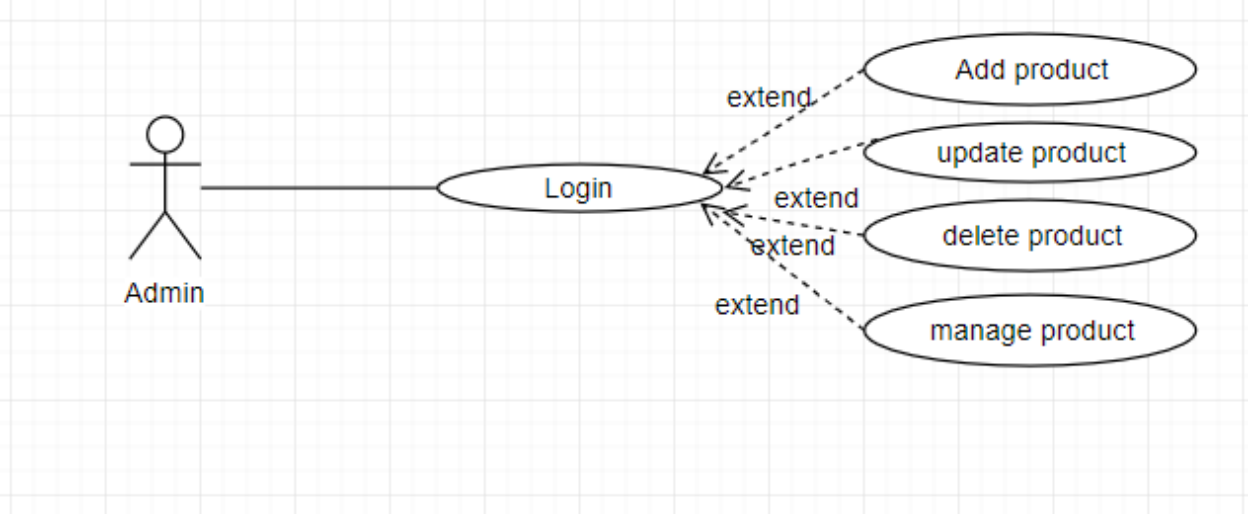


3.1.5 Module 5 complete CRUD Products (Zaka Ullah Qaiser)

Use case Diagram :-



Use case Realization :-

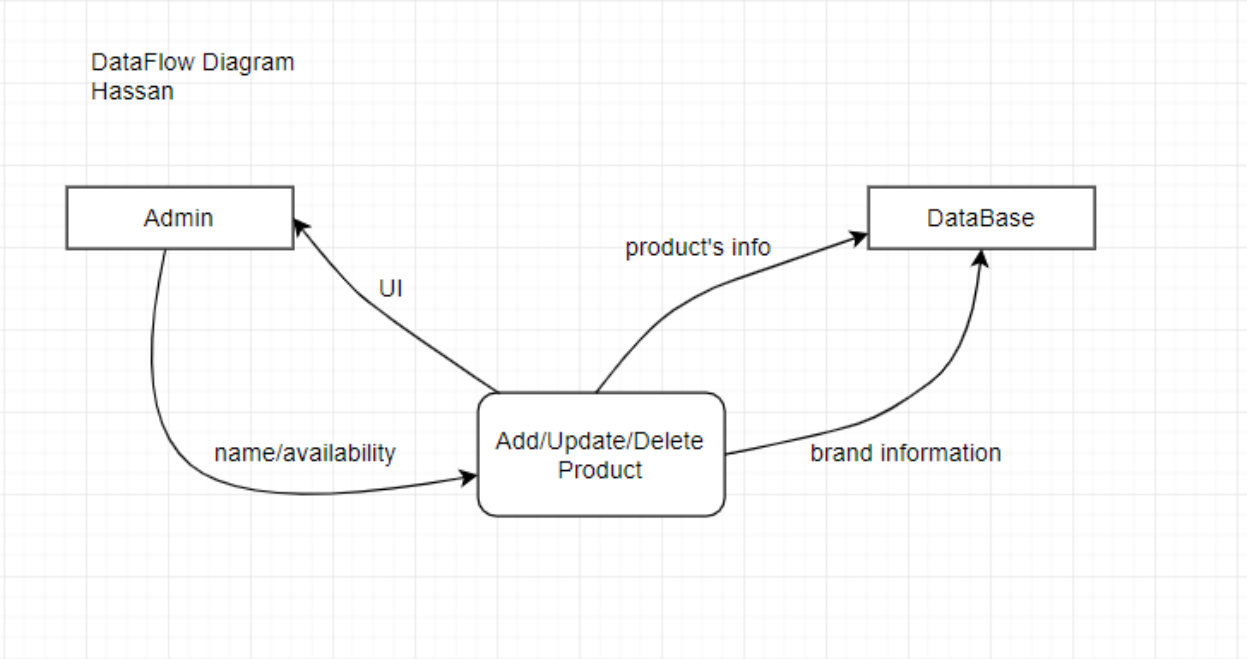


Use case Narrations :-

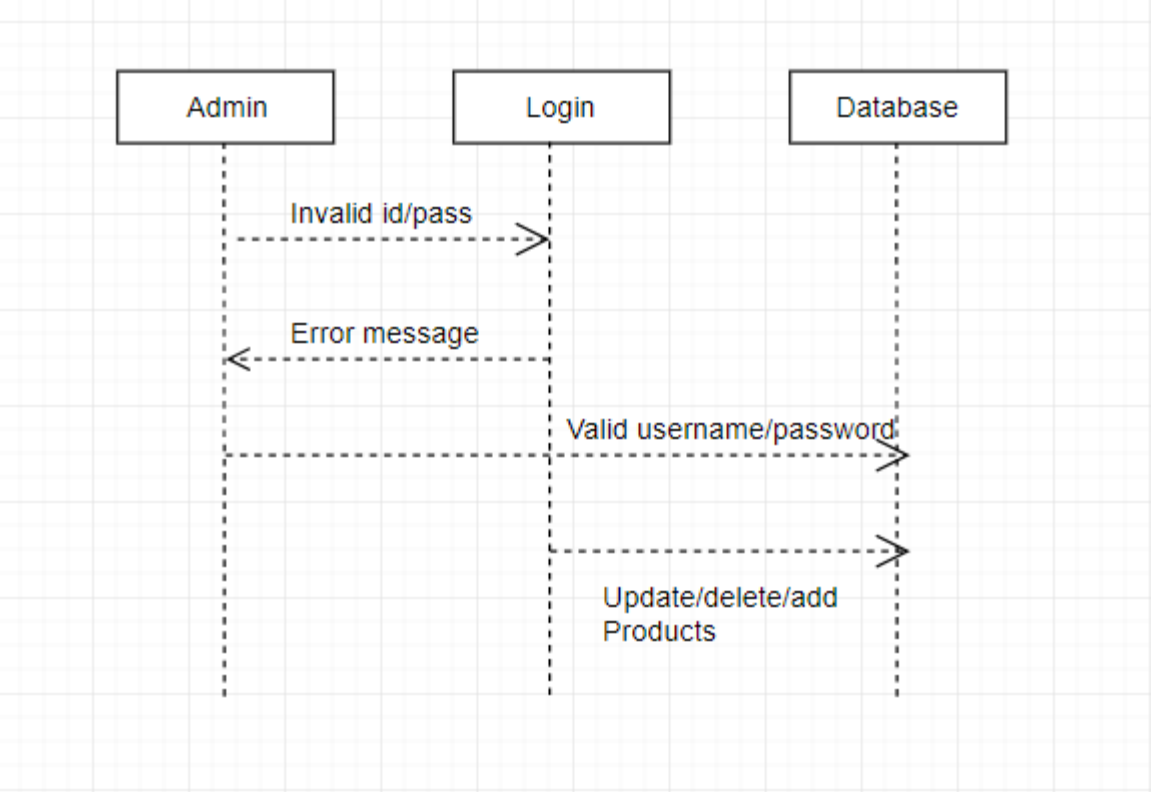
Use Case Descriptions

Actor Action:	System Response:
Login	Check validation
Add product	Ask for product name, status, quantity, category etc
Update product	Ask for modification in products
Delete product	Removes the product from the list

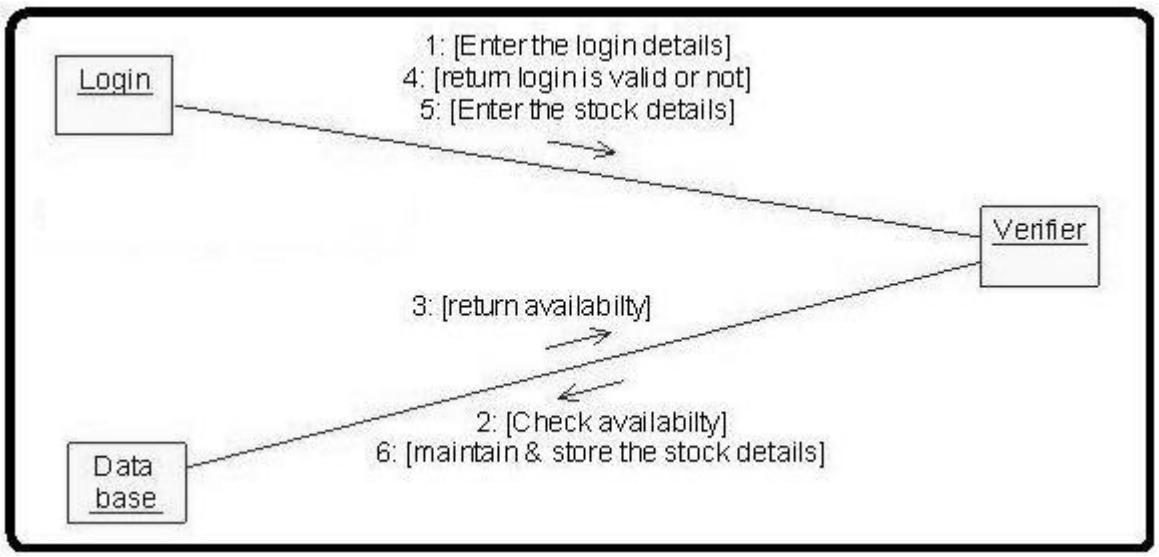
Flow diagram :-



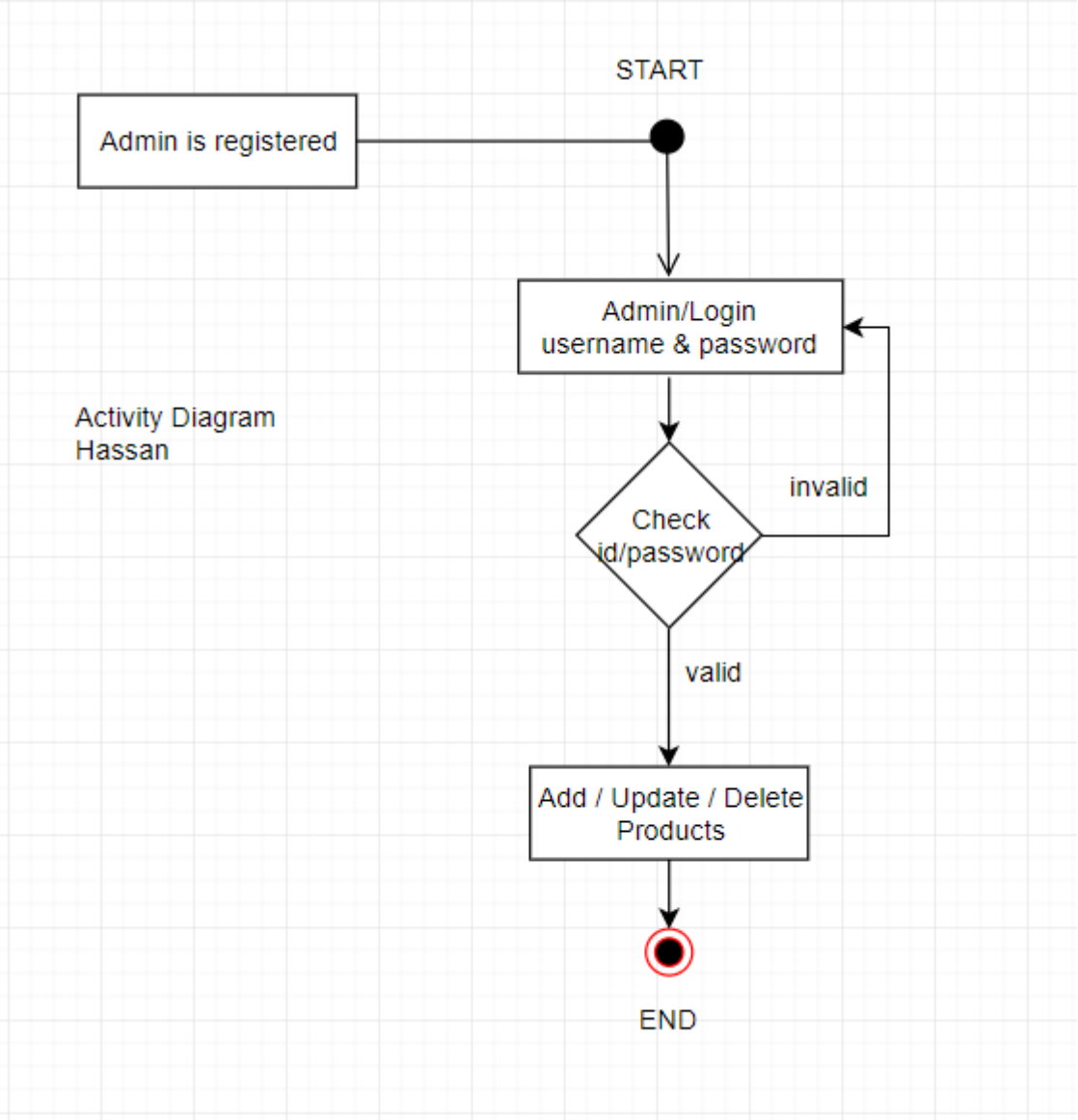
Sequence Diagram :-



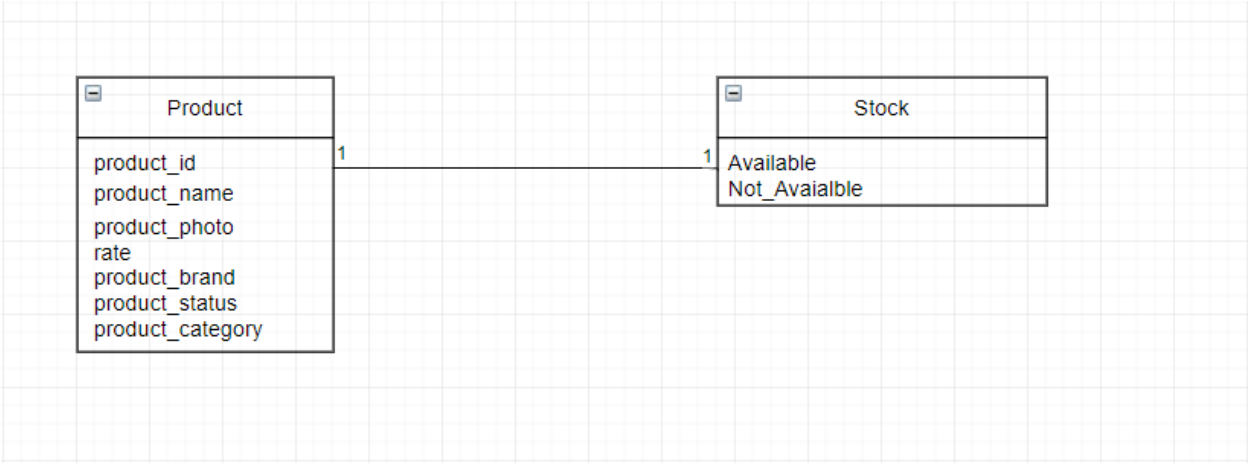
Collaboration Diagram :-



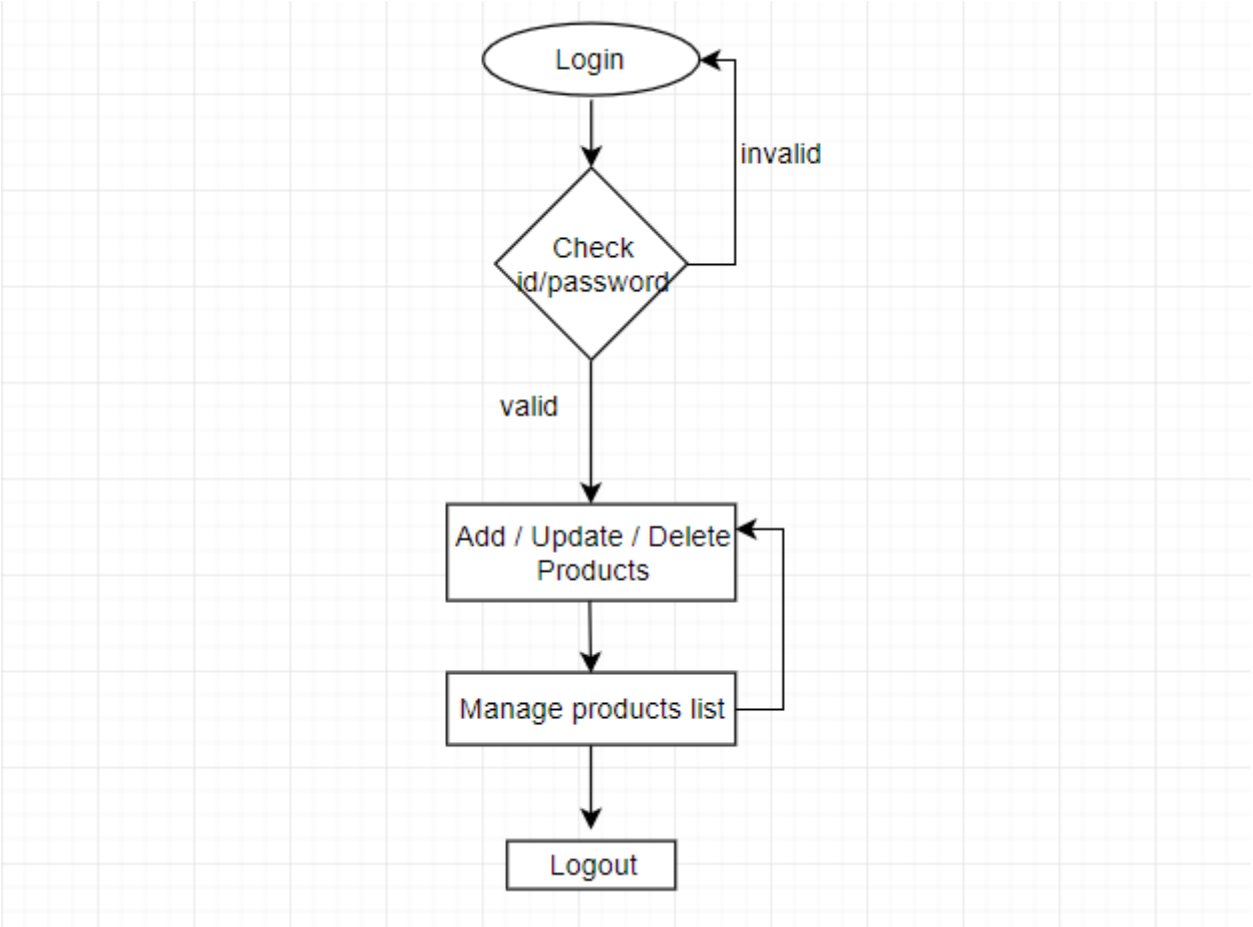
Activity Diagram :-



Class diagram :-

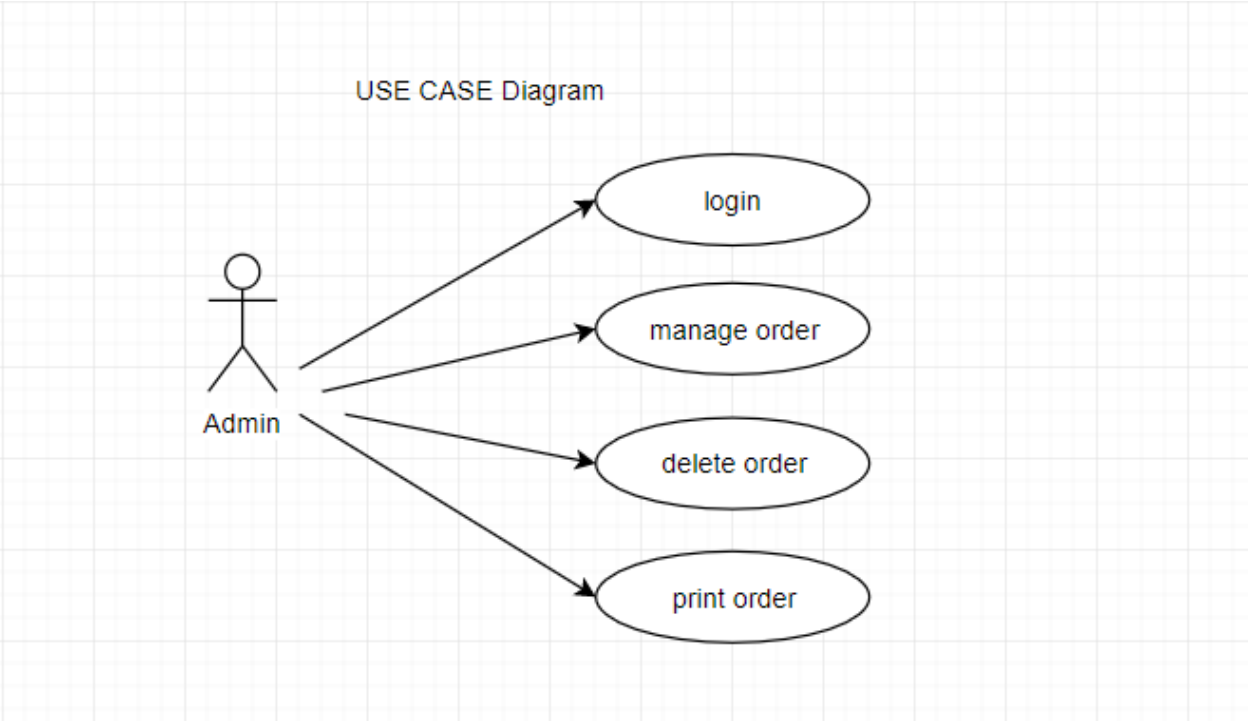


State Chart Diagram :-

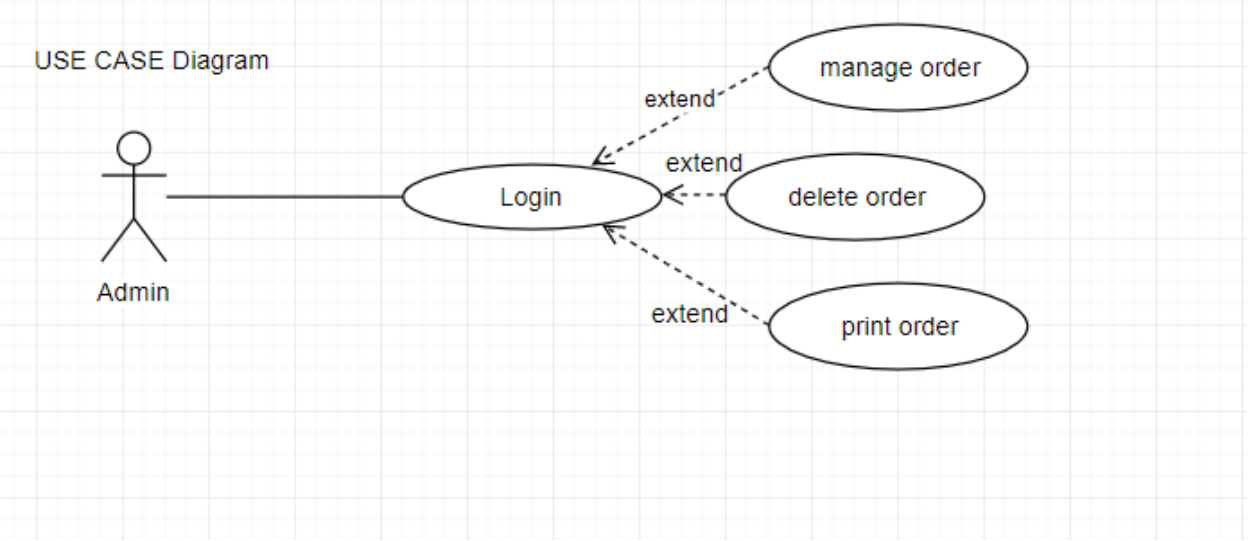


3.1.6 Module 6 complete CRUD Order (Tuaha Rasool)

Use case diagram :-



Use case Realization :-

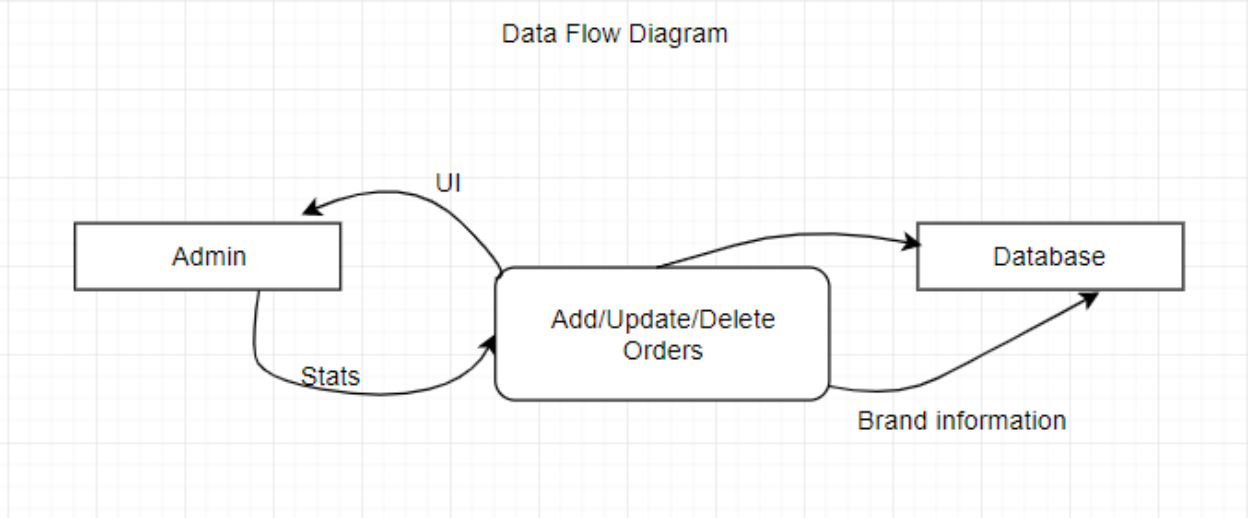


Use case Narrations :-

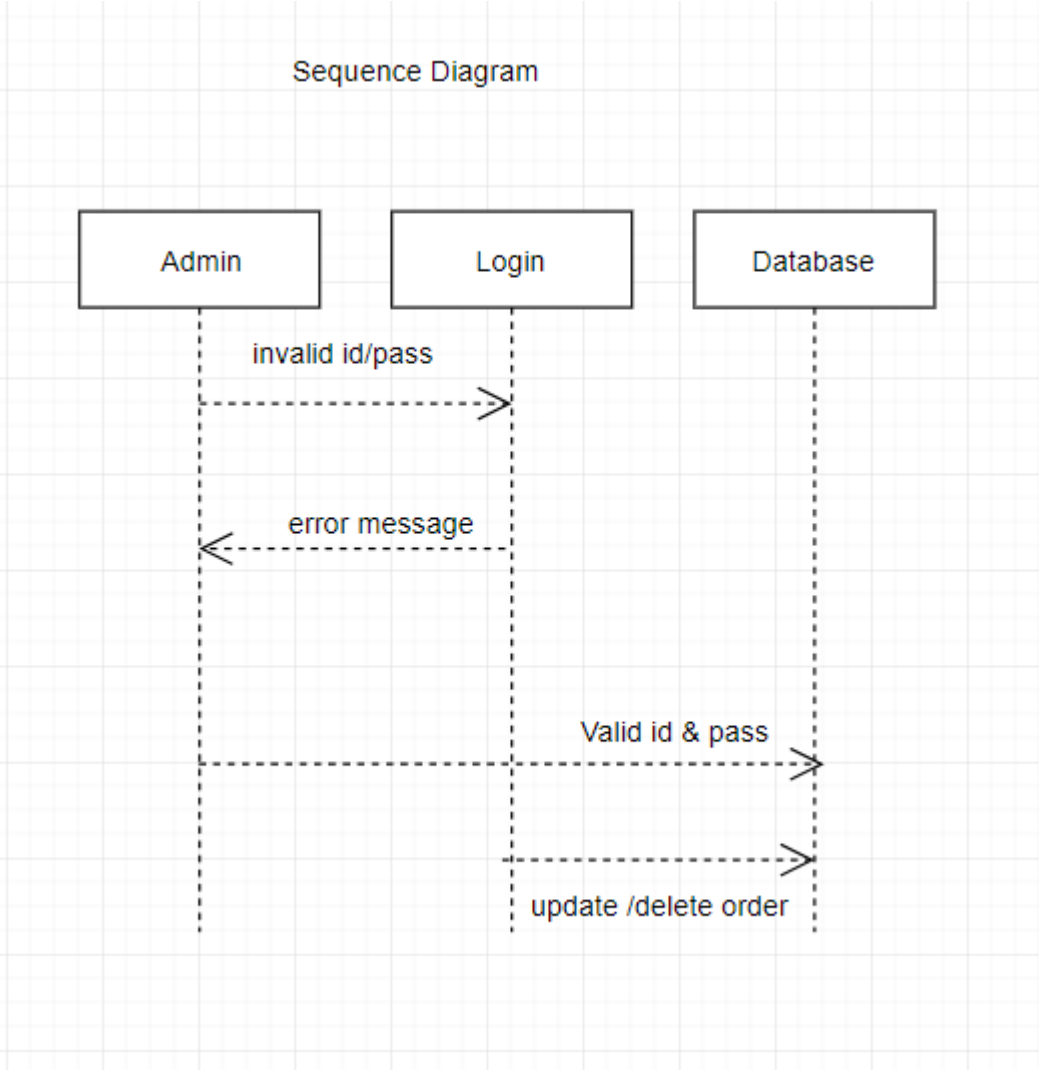
Use Case Descriptions

Actor Action:	System Response:
Login	Check validation
Add Order	Ask for product availability and product id
Update Order	Modification in order
Delete Order	Remove from order list
Print Order	Prints order list

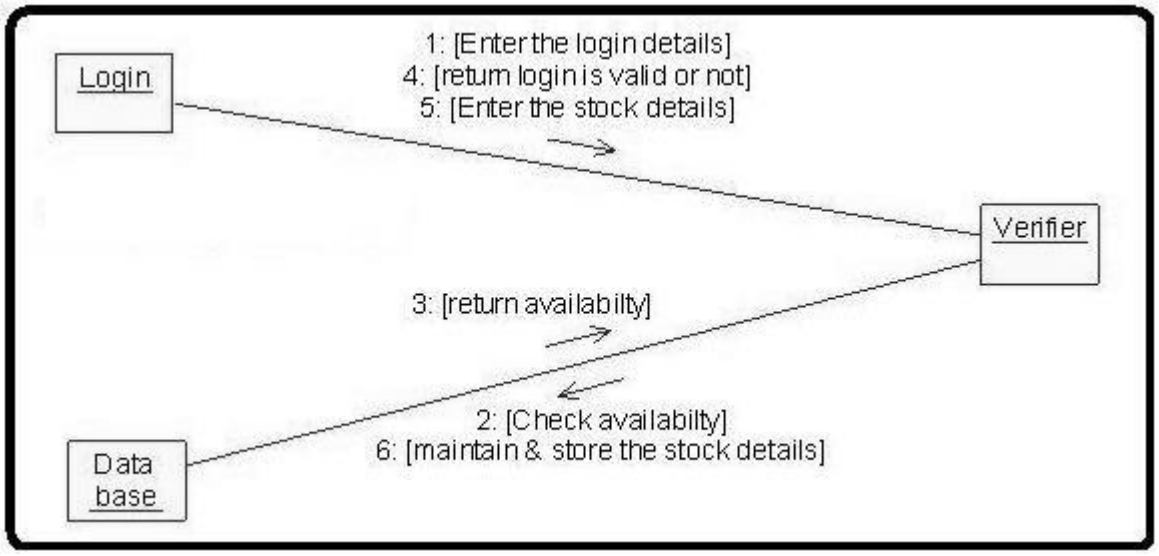
Flow Diagram :-



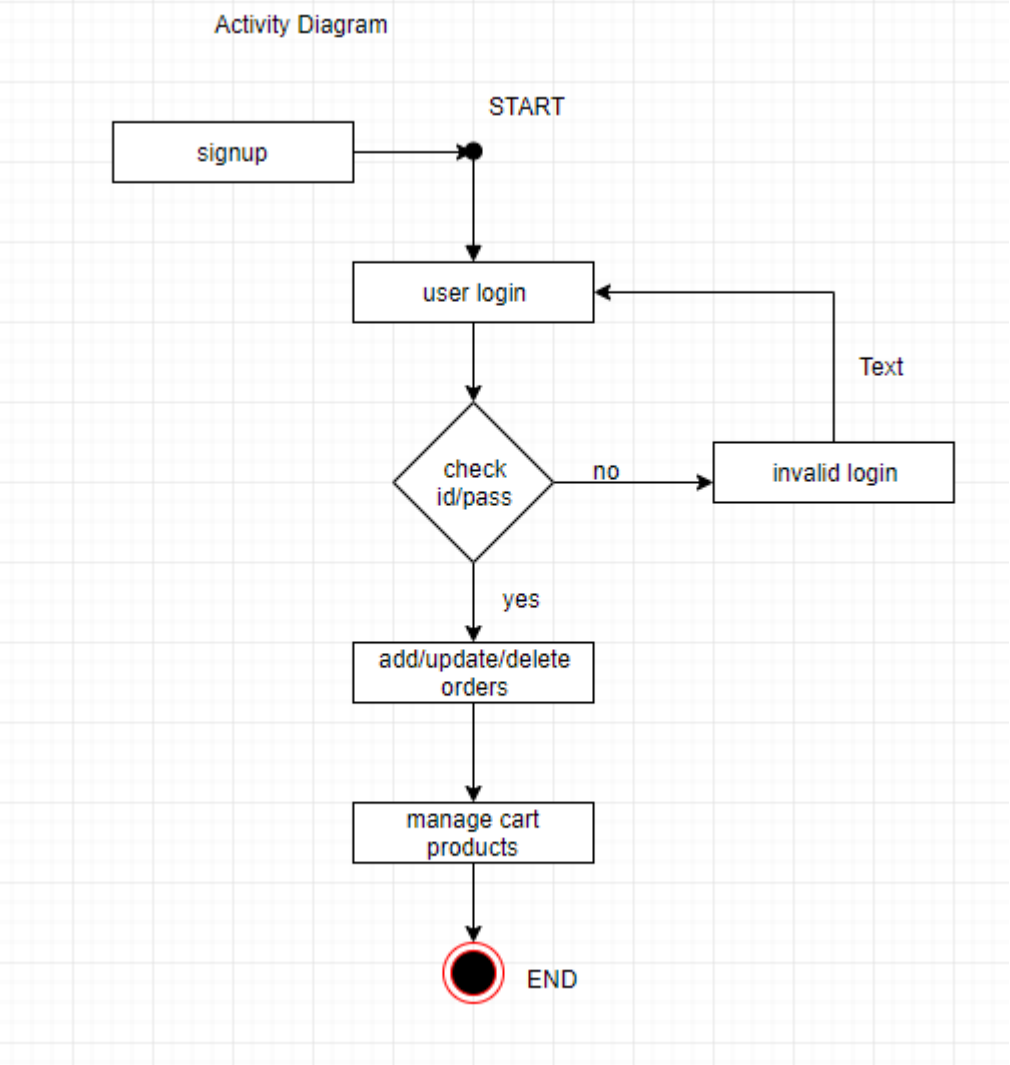
Sequence Diagram :-



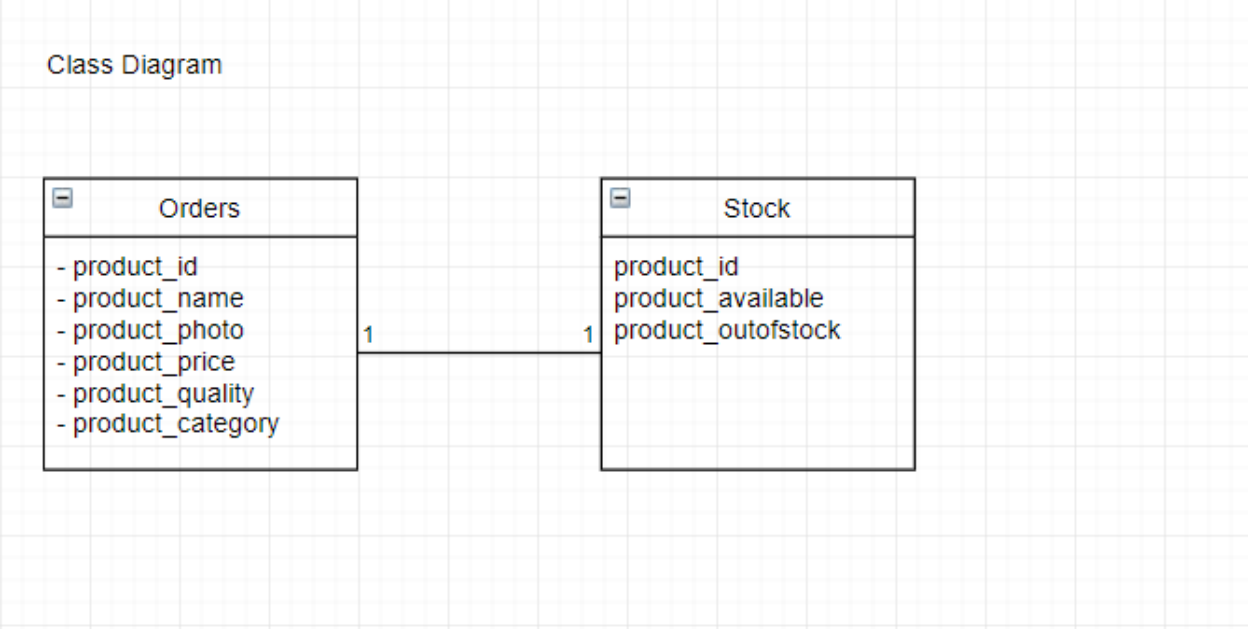
Collaboration Diagram :-



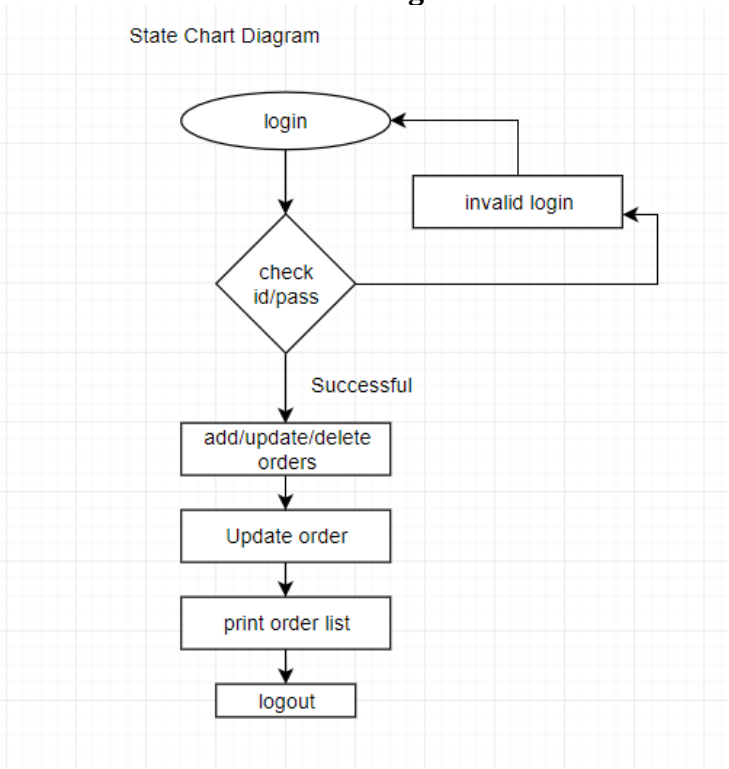
Activity diagram :-



Class Diagram :-



State Chart Diagram :-



7. PROJECT MANAGEMENT AND RISK MANAGEMENT

Form PM - 01

Project Management Plan/Charter

By: Syed Wajih Haider 9476
Individual work

Project Management Plan/Charter

By: Syeda Umema Hani

PROJECT MANAGEMENT PLAN TEMPLATE

Date: 4/December/ 2021

Release #: 1st

Project Manager: Syeda Umema Hani

Approvals:

Project Manager	
State Organization Management	**User Management- HR**
Department of Finance	***Other:***

1. Project Summary (Syed Wajih Haider)

Information in the project summary areas was started during the project concept phase and should be included here.

Project Name:	***GI's ERP HRPRL system***	***Start Date:***	***17/October/2021***
State Organization::	***PAF Kiet University***	***Submitted by:***	***Syed Wajih Haider***
Prime Contractor:	***University***	***Date Awarded:***	***18/December/2021***
Current Stage of Project:	***Development Life Cycle - RAD***		

Project is On Schedule:	***Yes: ☝ ?*** ***No: ☝ ?*** ***Details: ?***	***Project is within Budget:***	***Yes: ☝ ?*** ***No: ☝ ?*** ***Comments: ?***

Project Summary - Continued

Points of Contact (Stake holder)

This should be the list of individuals that will be involved with the project during the execution phase.

Position	Name/Organization	Phone	E-mail
Project Manager	**Dr. Umema Hani/ PAF KIET**		**Dr.umema@pafkiet,edu,pk**
Sponsor	**PAF KIET**		
Customers:	**Saifullah Sattar** **Ahsan Faruqui** **Ghalib Tahir Bajwa**		**saifisattar@gmail.com** **ahsanfaruqui@gmail.com** **ghalibs911@gmail.com**
Other Stakeholders:	**Member 1: Syed Wajih Haider**		**wajihrizvi@gmail.com**
	Member 2: Syed Owsaja Hasan		**Owsaja39@gmail.com**
	Member 3: Tauha Rasool		**tauharasool@gmail.com**
	Member 4: Zaka Ullah Qaiser		**Zakaullahqaiser@gmail.com**
	Member 5: Osama Hussain		**osamahussain@gmail.com**

2. Project Charter (Syed Wajih Haider)

Business Problem.

All projects start with a business problem/issue to solve.

Conduction of business tasks manually, lack of efficiency, low performance time consuming activities.

Statement of Work (Goal).

The statement should be short and to the point. It should not contain language or terminology that might not be understood.

This product aims to replace the current manual system with the automated solution. The main system will comprise of **6 major sub-systems or Modules** the integration of theses sub-system will form the main system. All the sub-systems will be tightly integrated so as to give unanimity to user. The current client setup does not have any automation. Therefore, every department and the section will be developed from scratch as all departments are currently working manually. In this document we are covering **"Inventory Management System"** only. **1. Module 1 Login** **2. Module 2 Dashboard** **3. Module 3 Categories** **4. Module 4 Brands** **5. Module 5 Products** **6. Module 6 Order**

2. Project Charter, continued

Project Objectives:

Provide a brief, concise list of what the project is to accomplish.

The software for General International is an ERP System, which enables automation of centralized system. This system will integrate all the departments of the company. The main divisions of the system are:

1. **Module 2 Dashboard with CRUDS**
2. **Module 3 Categories with CRUDS**
3. **Module 4 Brands with CRUDS**
4. **Module 5 Products with CRUDS**
5. **Module 6 Order with CRUDS**

Success Factors:

List factors that will be used to determine the success of the project.

1. Complete deployment of all 4 modules
2. Smooth integration between all systems
3. A Tested Product

Project Dependencies/Constraints:

1. Project completion is expected in less than 3.5 months duration
2. All requirements will be 100% available during requirement phase
3. Maximum team strength 5,
4. Average loading = 5 ,
5. 15 (5+5+5) = E or 10 (2+2+1) = E **<Write only one after calculating from COCOMO model>**

3. Project Tradeoff Matrix & Status Summary (Syed Owsaja Hasan)

Schedule/Time	**Scope/Modules**	**Resources/Effort/People**
CONSTRAINED	CONSTRAINED / **ACCEPTED**	CONSTRAINED / Need to be **IMPROVED** (need reduction) / ACCEPTED (Cocomo **Effort = 10 -15** not acceptable our constraint is max **5 members in 3 months**)
		E = 16.07, S=7.182, per month 2 persons, 3 months 5 to 6 persons = **est 7 person**

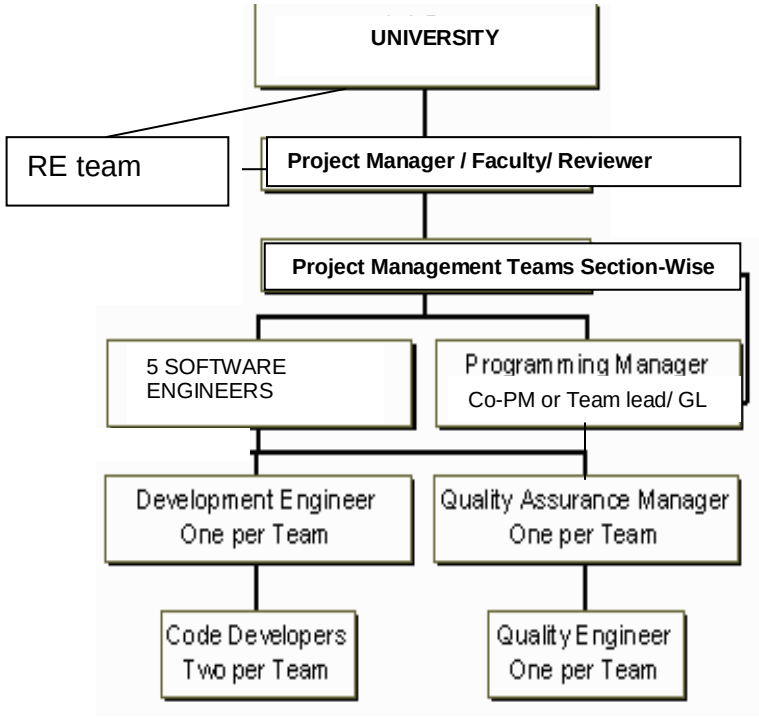
Identify variable to be CONSTRAINED, IMPROVED, ACCEPTED

Comments:

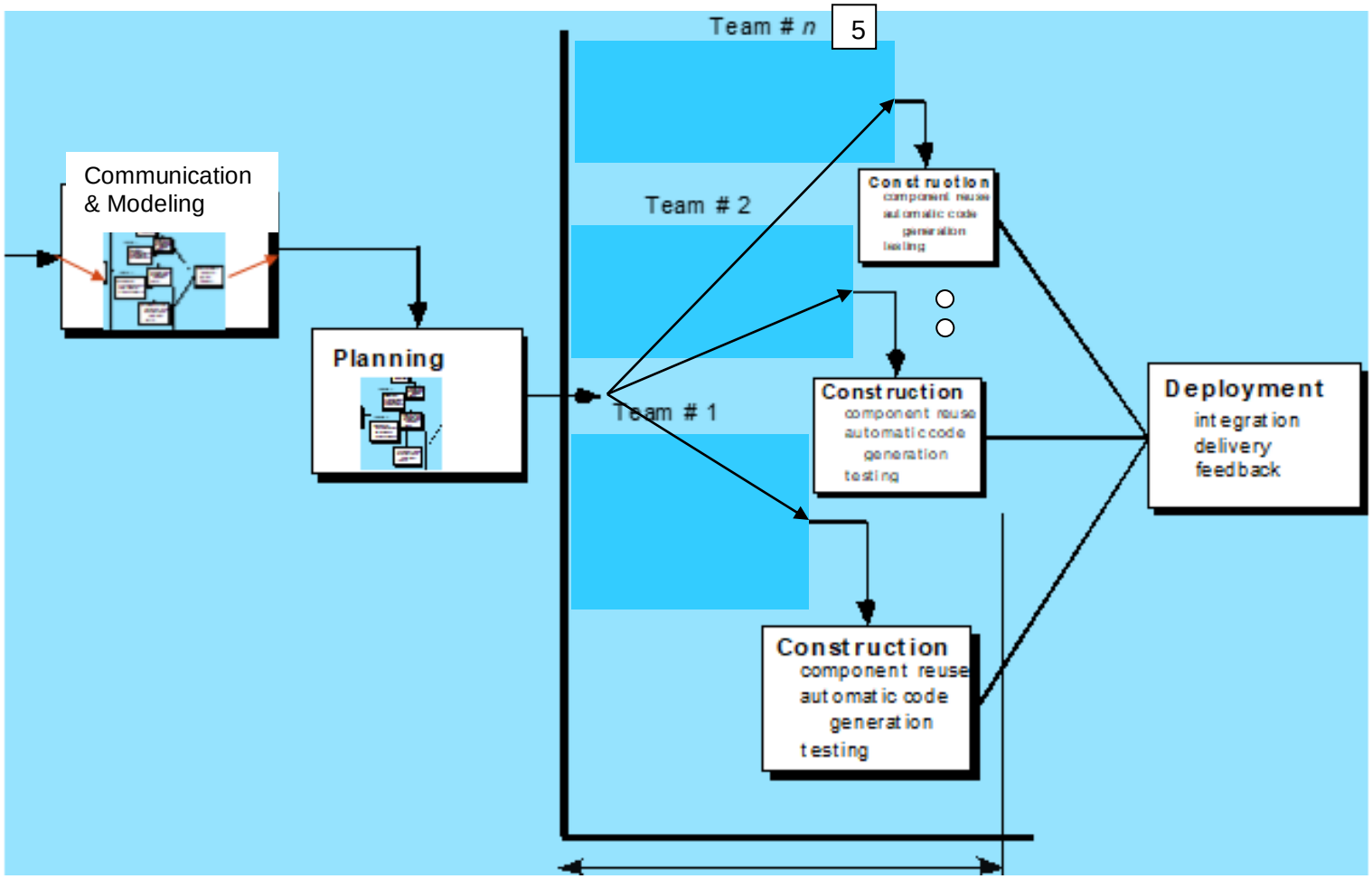
Accepted

4. Project Organization (Syed Owsaja Hasan)

Provide an organization chart that defines the person responsible for at least the following functions: project manager, development manager, quality assurance, and configuration management.



SDLC Process Model:



5. Activity List (Work Breakdown Structure) (Zaka Ullah Qaiser)

Provide an activity list (work breakdown structure) that describes each task required by the project, with a reference to the statement of work. For large projects, work packages might be included that describe in detail how specific tasks will be completed by specific project teams. These work packages describe required schedule, identify requirements to be completed and describe specific work to be performed

1. **First Estimating FP then from it E and S. <Correctly Re calculate for your Project>**

Software Size Estimation using Function Point Method

A) Detail of 5 Transaction Types, at most 5 under each category

	Write down exact Screen or Forms names, or Tables, or Reports name for each count value.
EI	1. Dashboard Form 2. Brand Form 3. Category Form 4 Product Form 5. Order Form
EO	1. Dashboard Table 2. Brand Table 3. Category Table 4 Product Table 5. Order Table
EQ	1. Search Dashboard 2. Search Brand 3. Search Category 4 Search Product 5. Search Order
ILF	1. Dashboard 2. Brand 3. Category 4 Product 5. Order
ELF	1. Dashboard Detail 2. Brand Detail 3. Category Detail 4. Product Detail 5. _Order Detail_

B) Unadjusted Function Point Value calculation

Definition of Complexities: Your Transactions which are derived from only from 1 Table are to be categorized as Low and if they are derive from 2 tables they can be categorized in Mid-level complexity, and in case of >= 3 they will be placed under High level of complexity.

	Count for screens of Low level complexity (C)	Multiplier Low level complexity (M)	V1 = C * M	Count for screens of Mid-level complexity (C)	Multiplier Mid-level complexity (M)	V2 = C * M	Count for screens of High-level complexity (C)	Multiplier High-level complexity (M)	V3 = C * M	Category wise sum V1+V2+V3

EI	3	3	9	1	4	4	1	6	6	19
EO	3	4	12	1	5	5	1	7	7	24
EQ	3	3	9	1	7	7	1	6	6	22
ILF	3	7	21	1	0	0	1	15	15	36
ELF	0	5	0	1	7	7	1	10	10	17
								Unadjusted Function Point Value =		**118**

C) Value Adjustment Factor (VAF) calculation

Note: Calculate Value Adjustment Factor, where any 5 "General System Characteristics (GSC) must have a value above 2. Also show respect Quality Characteristic mapping of these 5 factors.

	Quality Characteristic	Weight (0-5)		Quality Characteristic	Weight (0-5)
1.	Maintainability	3	8.		3
2.	Reliability	2	9.		2
3.	Speed	1	10.		4
4.	Available	4	11.		1
5.	Reusability	5	12.		3
6.		0	13.		2
7.		1	14.		0

Value Adjustment Factor (VAF) = 21 * 5 = 105

D) Technology Complexity Factor calculation

TCF = 0.65 + (VAF * 0.01)
= 0.65 +(31*0.01)
= 0.96

E) Adjusted Function Point Value (AFPV) or Function Point Value (FP) Calculation

AFPV = _ Unadjusted Function Point * TCF
= 118 * 0.96
= 113.28

F) Conversion of AFPV in to LOC Size metric

the number of LOCs per FP for **C# language 54** and check other languages from https://www.qsm.com/resources/function-point-languages-table, **ASP 51** and **VB.net 52, python 48**

Project Size in LOC = AFPV * LOC/FP

Project Size in LOC = 113.28 * 54 = 6117.12 LOC

G) Software Size: 9.536
Software Size for COCOMO: 9.536 KLOC
Software Type: Business/ Utility/Embedded
Model Mode: Cocomo I – Basic – ORGANIC (0 – 50 KLOC) / Semi detached/Embedded

a) Effort Estimation: Equation
2.4 * 9.536 ^ 1.05 = E
E = 25.6180

b) Schedule Estimation: Equation
2.5 * E ^ 0.38 months = S
S= 2.5 * 25.6180 ^0.38
S = 8.5740

c) Productivity Estimation: Equation
Loc/E = 9.536/25.6180 = 0.3722

d) Average Loading Estimation: Equation
E/S = 25.6180/8.5740
E/S = 2.9878

e) Average Salary of Technical Staff (AS): Equation
Assume = 50,000 RS

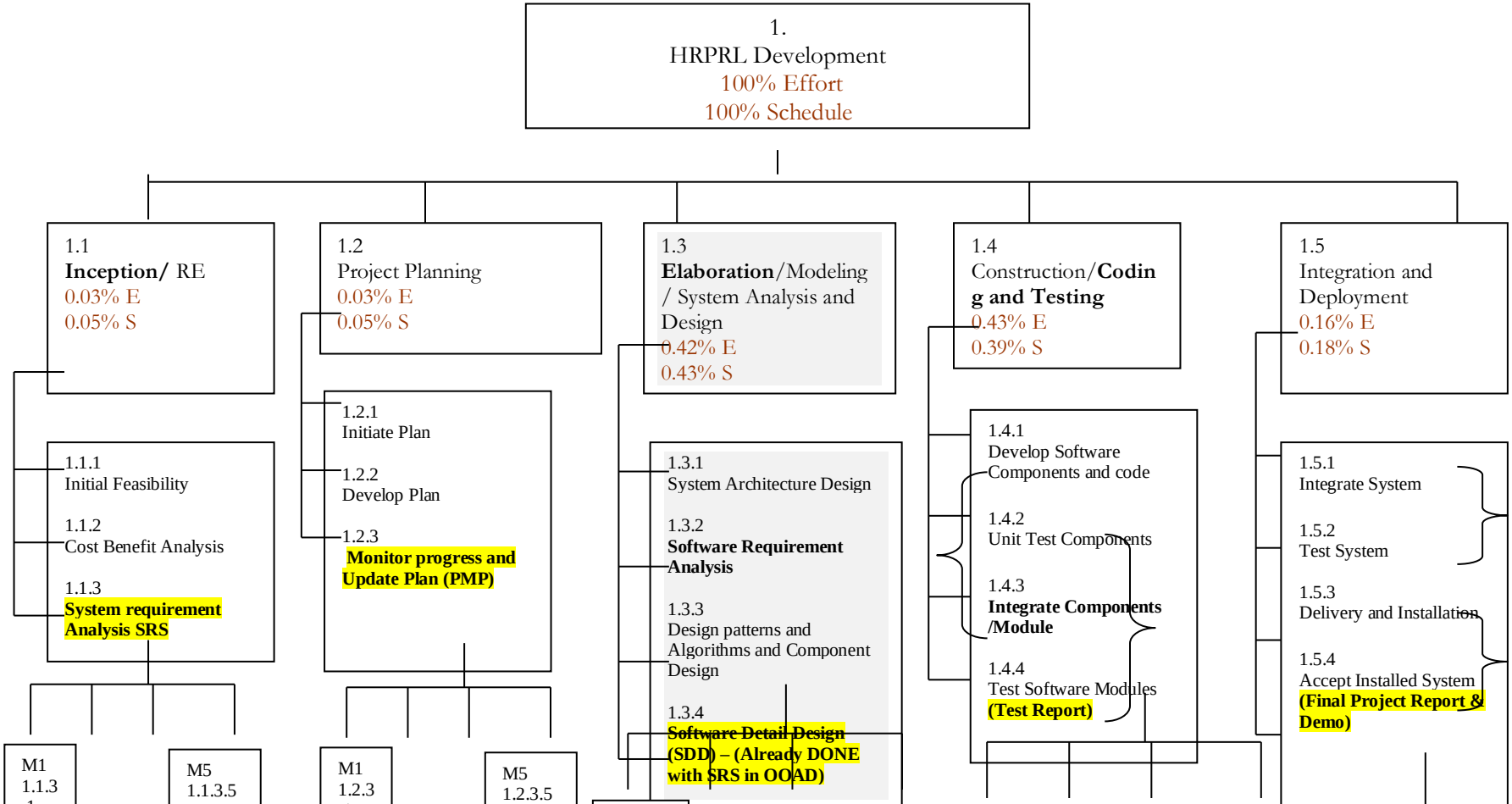
f) Cost for Salary (Cs): Equation
E * Avg salary = Cs
Cs = 25.6180 * 50000
Cs = 1280900

g) Budgeted Cost of Project (Cb): Equation
Cs + Cs * X% = Cb
Cb = 1280900 + (2% of 1280900)
Cb = 1280900 + 25618
Cb = 1306518

2. Calculate the phase-wise percentage distribution wise E and S values as given in detailed COCOMO detailed model.

H) Distribution of Effort and Schedule among Different phases of SDLC							
E = ____25.6180_____ **S = _____8.5740_____**							
Plan and Requirement (E | S)		**Modeling / System Design & Detailed Design (E | S)**		**Module Coding and Unit Testing (E | S)**		**Integration & Deployment (E | S)**	
0.06 * E =	0.10 * S =	(0.16+0.26) * E =	(0.19+0.24) * S =	0.42 * E =	0.39 * S =	0.16 * E =	0.18 * S =
1.5370	0.8574	10.7583	3.6868	10.7595	3.3438	4.0988	1.5433

3. Now adding percentage distribution as given in detailed COCOMO model in the WBS phase-wise. <Write exact E/S values after multiplying with distribution percentages>



Now convert above WBS contents in a Tabular format in order to make a GANTT CHART. <Complete>

Activity #	Activity Name	Activity Name Description	# of Days	Start Date	Dependency on previous tasks	Milestone
1.1	**RE**	**Requirement Engineering**	**28**	**23/11/2021**	**none**	**30/11/2021**
1.1.1	**Initial Feasibility**				**none**	
1.1.2	**Cost Benefit Analysis**	Analysis of cost			**none**	
1.1.3	**System requirement Analysis SRS**	**Gather info (SRS)**	**28**		**none**	
1.1.3.1	System requirement Analysis SRS **for Module 1**	Gather info for module 1	28		**none**	
1.1.3.2	System requirement Analysis SRS **for Module 2**	Gather info for module 2	28		**none**	
1.1.3.3	System requirement Analysis SRS **for Module 3**	Gather info for module 3	28		**none**	
1.1.3.4	System requirement Analysis SRS **for Module 4**	Gather info for module 4	28		**none**	
1.1.3.5	System requirement Analysis SRS **for Module 5**	Gather info for module 5	28		**none**	
1.1.4	Milestone (SRS) and Review meeting		0			

1.2	**Project Planning**	**Project Management Planning**		**11/12/2021**	**1.1**	**18/12/2021**
	Develop plan	Development of project plane			**RE**	
	Implement plan	Implementation of project plane			**RE**	
	Monitor Progress	Take review on each phase			**RE**	
	Monitor Progress for module 1	Planning and monitor progress for module 1			**RE**	
	Monitor Progress for module 2	Planning and monitor progress for module 2			**RE**	
	Monitor Progress for module 3	Planning and monitor progress for module 3			**RE**	
	Monitor Progress for module 4	Planning and monitor progress for module 4			**RE**	
	Monitor Progress for module 5	Planning and monitor progress for module 5			**RE**	
1.3	**Modeling**	**Done in SRS now ERD with Implementation**		**18/12/2021**	**1.1**	**25/12/2021**
	System architecture design	Develop Architecture System Design			**Planning**	
	System requirement	Analysis			**Planning**	
	Software architecture design	Implement Design			**Planning**	
	System detail design	Develop System detail design			**Planning**	
1.4	**Implementation and Testing**	**Database and Code, Test Report**		**18/12/2021**	**1.1**	**25/12/2021**
	Construct/coding/testing	Implantation of coding			**Design**	
	Develop software Components	Implantation of coding			**Design**	

	Unit test components	Implantation of coding			**Design**	
	Integrate components	Test for every Module			**Design**	
	Test software Module	Test at end			**Design**	
1.5	**Deployment/Demo**	**Demo and Report**		**25/1/2022**	**1.1**	**1/1/2022**
	Integrate and development	Development of a project			**Construction/ coding/ testing**	
	Integrate system	Combine module			**Construction/ coding/ testing**	
	Test System	Test all project			**Construction/ coding/ testing**	
	Delivery and installation	Installation / Final test after deploy a project			**Construction/ coding/ testing**	

6. Work Product Identification (Zaka Ullah Qaiser)

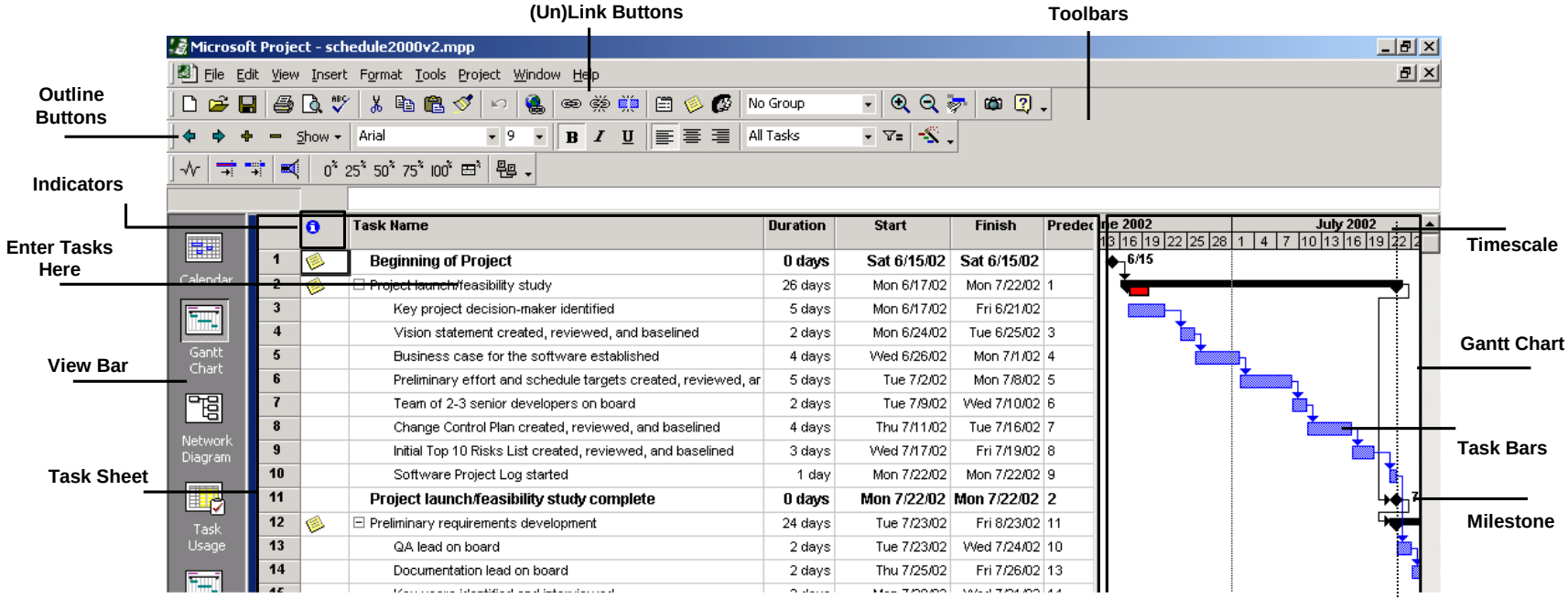
Provide a list of all deliverables required by the project, the date due and the person responsible for the deliverable. Pick Last activities from each phase they are deliverables. **<Complete>**

Deliverable Name	*Due Date*	*Date Delivered*	*Point of Contact*
SRS by Member 1	30/11/2021	06/12/2021	Syed Wajih Haider (9489)
SRS by Member 2	30/11/2021	06/12/2021	Syed Owsaja Hasan (9489)
SRS by Member 3	30/11/2021	06/12/2021	Zaka Ullah Qaiser (9374)
SRS by Member 4	30/11/2021	06/12/2021	Tuaha Rasool (9383)
SRS by Member 5	30/11/2021	06/12/2021	Osama Hussain (9200)
PMP by Member 1	12/24/2021	12/25/2021	Syed Wajih Haider (9489)
PMP by Member 2	12/24/2021	12/25/2021	Syed Owsaja Hasan (9489)
PMP by Member 3	12/24/2021	12/25/2021	Zaka Ullah Qaiser (9374)
PMP by Member 4	12/24/2021	12/25/2021	Tuaha Rasool (9383)
PMP by Member 5	12/24/2021	12/25/2021	Osama Hussain (9200)
Design (DB+GUI) by Member 1	02/01/2022	10/01/2022	Syed Wajih Haider (9489)
Design (DB+GUI) by Member 1	02/01/2022	10/01/2022	Syed Owsaja Hasan (9489)
Design (DB+GUI) by Member 1	02/01/2022	10/01/2022	Zaka Ullah Qaiser (9374)
Design (DB+GUI) by Member 1	02/01/2022	10/01/2022	Tuaha Rasool (9383)
Design (DB+GUI) by Member 1	02/01/2022	10/01/2022	Osama Hussain (9200)

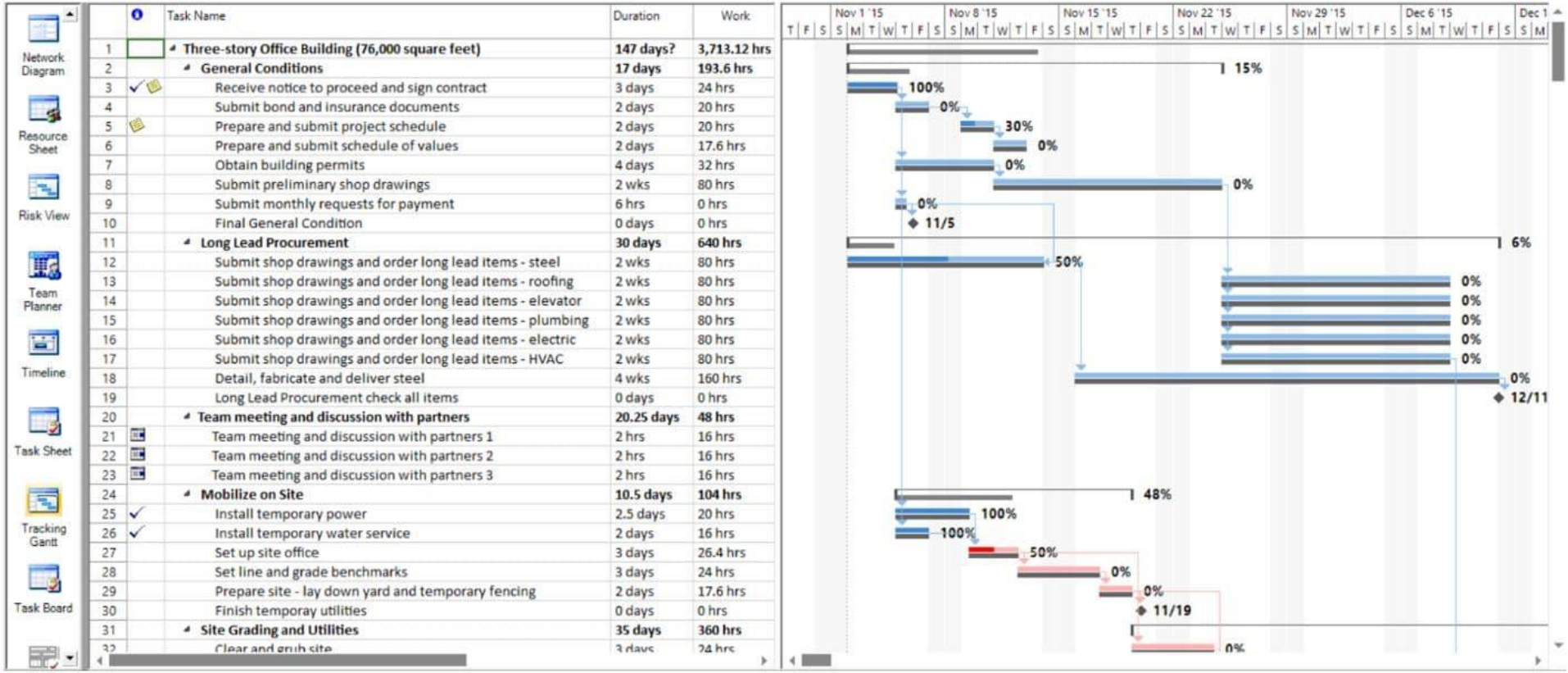
7. SCHEDULE (Tuaha Rasool)

Provide the project schedule, using a **Gantt chart**. The schedule must include milestones, task dependencies (predecessors), task duration, **work product delivery** dates, quality milestones (reviews/**audits**/inspections), configuration management milestones, and action items (with deadlines and responsibilities). (in order to keep the project (T | C |S) in CONTROLL.

<MUST IMPLEMENT GANTT CHART ON ANY SOFTWARE OR WEBAPPLICATION>



<Add % completion in it after submission of PMP expected on 18/12/2021, and also paste screen capture of Tracking Gantt Chart view>



	Task Name	Duration	Work
1	**Three-story Office Building (76,000 square feet)**	**147 days?**	**3,713.12 hrs**
2	**General Conditions**	**17 days**	**193.6 hrs**
3	Receive notice to proceed and sign contract	3 days	24 hrs
4	Submit bond and insurance documents	2 days	20 hrs
5	Prepare and submit project schedule	2 days	20 hrs
6	Prepare and submit schedule of values	2 days	17.6 hrs
7	Obtain building permits	4 days	32 hrs
8	Submit preliminary shop drawings	2 wks	80 hrs
9	Submit monthly requests for payment	6 hrs	0 hrs
10	Final General Condition	0 days	0 hrs
11	**Long Lead Procurement**	**30 days**	**640 hrs**
12	Submit shop drawings and order long lead items - steel	2 wks	80 hrs
13	Submit shop drawings and order long lead items - roofing	2 wks	80 hrs
14	Submit shop drawings and order long lead items - elevator	2 wks	80 hrs
15	Submit shop drawings and order long lead items - plumbing	2 wks	80 hrs
16	Submit shop drawings and order long lead items - electric	2 wks	80 hrs
17	Submit shop drawings and order long lead items - HVAC	2 wks	80 hrs
18	Detail, fabricate and deliver steel	4 wks	160 hrs
19	Long Lead Procurement check all items	0 days	0 hrs
20	**Team meeting and discussion with partners**	**20.25 days**	**48 hrs**
21	Team meeting and discussion with partners 1	2 hrs	16 hrs
22	Team meeting and discussion with partners 2	2 hrs	16 hrs
23	Team meeting and discussion with partners 3	2 hrs	16 hrs
24	**Mobilize on Site**	**10.5 days**	**104 hrs**
25	Install temporary power	2.5 days	20 hrs
26	Install temporary water service	2 days	16 hrs
27	Set up site office	3 days	26.4 hrs
28	Set line and grade benchmarks	3 days	24 hrs
29	Prepare site - lay down yard and temporary fencing	2 days	17.6 hrs
30	Finish temporay utilities	0 days	0 hrs
31	**Site Grading and Utilities**	**35 days**	**360 hrs**
32	Clear and grub site	3 days	24 hrs

8. Estimated Cost at Completion (Tuaha Rasool)

Provide an estimated cost at completion, which is an assessment of the total effort at completion of the contract.

Analysis in Hours / Cost						
WBS No.	**Activity Description**	**Budget Hours** **B**	**Actual Hours** **A**	**Est. to Complete the remaining work – milestone-wise** **ETC** **B - A** **EAC – A**	**Est. @ Completion** **EAC** **A + ETC**	**Variance (+ = More)** **V = (A-B/A)**
1st miles tone		**8 workin g days** **60**	**40**	**60 – 40 = 20**	**40 + 20 = 60**	**(-1 -- 0 -- +1)** **(40 - 60)/ 40 = - 0.5** **Under the budget 50V** **60-60 / 60 = 0/60 = 0** **100% completion 0V** **(70 – 60)/70 = + .14** **Ahead of budget 14V**

2nd miles tone		**60**	**40**	**60 – 40 = 20**	**40 + 20 = 60**	**(40-60)/ 40 = - 0.5** **Under the budget 50** **60-60 / 60 = 0/60 = 0 100% completion** **(70 – 60)/70 = + .14** **Ahead of budget 14**
					%remaining	

9. Resource Loading Profiles – Staffing (Osama Hussain)

Provide a staffing plan that shows the number of personnel, by type, that will be required on the project on a monthly basis.

<table>
<tr><th colspan="8">Resource Loading Profiles</th></tr>
<tr><td colspan="8">E = ____16_____
S = _____7.1_____

Avg Loading = 2 person per month

Since loading gives same value of effort for all months, therefore, we have used Detailed COCOMO's Effort distribution as already done in part 5.2</td></tr>
<tr><th colspan="2">Plan and Requirement</th><th colspan="2">Modeling / System Design & Detailed Design</th><th colspan="2">Module Coding and Unit Testing</th><th colspan="2">Integration & Deployment</th></tr>
<tr><td>0.06 * E = 0.96</td><td>0.10 * S = 0.71</td><td>(0.16+0.26) * E = 7</td><td>(0.19+0.24) S = 3</td><td>0.42 * E = 7</td><td>0.39 * S = 2.76</td><td>0.16 * E = 2.56</td><td>0.18 * S = 1.2</td></tr>
<tr><td colspan="2">Designation: PM, <s>BA, Domain Expert</s> = 0.96 1 person</td><td colspan="2">BA, Analyst, Domain Expert = 7 names</td><td colspan="2">Coders and Testers 7 names</td><td colspan="2">Senior Tester, TL 2.5</td></tr>
<tr><td colspan="2">Job Description:
Assisting in building SPMP, SRS and prototype, as well as doing the necessary requirement and risk analysis for the project</td><td colspan="2"></td><td colspan="2"></td><td colspan="2"></td></tr>
<tr><td colspan="2">Contact information:
email, mobile</td><td colspan="2"></td><td colspan="2"></td><td colspan="2"></td></tr>
</table>

11. Risk Identification (Osama Hussain)

Provide a description of all risks identified for the project. A risk is anything that might detrimentally affect the successful completion of the project if left unaddressed. The contractual, management, and technical risks associated should be **identified** and **assessed** as to the **probability of the risk occurring**, the **cost to correct** if the risk occurs, the impact of the risk on the project, and the suggested mitigation activities and cost of mitigation.

Risk Worksheet

Risk Management Steps:

1	Identify the project's top10 risk items
2	Present a plan for resolving each risk item
3	Update list of top risk items, plan, and results monthly
4	Highlight risk-item status in monthly project reviews. Compare with previous month's ranking status
5	Initiate appropriate corrective actions

Top 10 Risk Items	
Risk Items	**Risk Management Techniques**
Personnel Shortfalls	Staffing with top talent, job matching; team building; morale building; cross training; pre-scheduling key people
Unrealistic schedules and budgets	Detailed, multi-source cost and schedule estimation; design to cost; incremental development; software reuse; requirement scrubbing
Developing the wrong software functions	Organizational analysis; mission analysis; ops-concept formulation; user surveys; prototyping; early users' manuals
Developing the wrong user interface	Task analysis; prototyping; scenarios; user characterization (functionality, style, workload)
Gold Plating	Requirement scrubbing; prototyping; cost-benefit analysis; design to cost

Continuing stream of requirement changes	High change threshold; information hiding; incremental development (defer changes to later increments)
Shortfalls in externally furnished components	Benchmarking; inspections; reference checking; compatibility analysis
Shortfalls in externally performed tasks	Reference checking; pre-award audits; award-fee contracts; competitive design or prototyping team building
Real-time performance shortfalls	Simulation; benchmarking; modeling; prototyping; instrumentation; tuning
Straining computer-science capabilities	Technical analysis; cost-benefit analysis; prototyping; reference checking

	Potential Risk	**Risk Monitoring Preventive measures**	**Risk Management and mitigation**	**Risk Exposure = Probability of Risk Occurrence * Cost of Risk**	**Prioritize Till next Review**
1.	**Size of the software** being very large and larger number of **users** than planned due to using eval SDLC and no confirmation of Requirements in RE phase. (Fp→Loc→Effort)	Reviewing **constant feedbacks from the customers** in **project meetings**	**Being flexible** in the **software design** to accommodate the necessary changes	Cost * Probability of Risk Occurrence = Salary for 2 programmer for 1 month * **0.8** = 60000 *0.8 | 0.4 =48000 | 24000	
2.	The software not being accepted by the CRM	**Response from the CRM,** reviewed on every **project meeting**	Early and **intensive interaction with the customer** for the success of project.		
3.	**Cost factor** involved in this project	Reviewing **reports on expenditure and other cost related** to the estimated cost in the **SPMP**	**Have additional funding** allocated for it in advance and using it in case of emergencies.		

4.	**Customer requirements may change**	**CRM participation in design process** and reviewing feedback information in **group meetings**	**A new prototype** will replace the previous one to **accommodate the change**		
5.	**Technology** will not meet **expectation**	Constantly reviewing **project progress reports** by Project Development Manager and software managers	**Exploring alternatives** for the outdated technologies		
6.	**Lack of training on tools and staff** being inexperienced	Reviewing **progress report** by software managers to determine the **status of the project**	**Providing adequate training** that is necessary for the **completion of the project**		
7.	The **prototype** not being **delivered on time**	Constant reviews **among team members** to ensure **continuous progress** on the prototype	**Setting deadline** before the **actual time** for submission of the project		

12. Configuration Management Plan

Provide a configuration management plan that defines the person responsible for project configuration management, the procedures that will be used, the planned configuration items, planned release dates for configuration items, and resources required to conduct CM.

CCB members:

Configuration Items: Ensure that CM is implemented throughout the project's life cycle.

No.	Item	Comments
1.		
2.		
3.		

Ensure that project has a repository for storing configuration items and associated CM records. Briefly describe. **Git hub repository**

13. Quality Plan

Provide a quality plan that defines the person responsible for project quality assurance, the procedures that will be used and resources required to conduct quality assurance.

QA Manager and Staff:

Planned Quality Event: Ensure that QA is implemented throughout the project's life cycle. Dates include QA audits and reviews, design walkthroughs and other project activities that QA staff will participate in.

No.	Item	Comments
1.		
2.		

3.		

Ensure that project has a repository for storing configuration items and associated QA records.
Ensure that QA audits the baselines and CM activities on a regular basis.

MODELING (ANALYSIS & DESIGN)

a. Data Dictionary/ERD
b. From DFD to Design Patterns (not implemented)
c. Interface design/Prototype/Wireframes

<Already covered in Requirement Engineering>

5. TESTING

a. Write detailed manual “Test Cases” for your selected Modules, keep the Login Test case as it is. Also Execute above developed “Test cases” on your project code and Observe (Pass/fail) Status. Complete <Test Report> by marking “Pass/Fail” status against each executed Test Case

Login Module 1 is a default module and common for all Members – it is completely done already. Attempt your individual modules					
Test Strategy: Unit and Debugging Testing Done					
Test Strategy: Integration Testing and Regression Testing					
Aspects to be covered: (System – Functional Testing, GUI**,** Performance, Security, Usability, Compatibility, Error Handling, Volume, Scalability, Installation, Maintenance, Reliability, Recovery)					
	TC1.1 -1.5	**Purpose**: The user should be able to go to the Home page	**Pre-requisite**: S/w should be compatible with the Operating system. **Login page should appear.** User Id and Password textboxes should be available with appropriate labels. Submit and Cancel buttons with appropriate captions should be available.		
Sr. No	**Test Case Id**	**Test Case Name | Requirement Number | File path**	**Steps/Action**	**Expected Results**	**PASS-FAIL**
1.	TC1.1	Checking **User Interface requirements**.	User views the page to check whether it includes UserId and Password textboxes with appropriate labels. Also expects that Submit and Cancel buttons are available with appropriate captions	Screen displays user interface requirements according to the user.	PASS
2.	TC1.2.	Textbox for **UserId** should: i) allow only alpha-numeric characters{a-z, A-Z} ii) not allow special characters like {'$','#','!','~','*',...} iii) not allow numeric characters like{0-9}	i) User types numbers into the textbox.	i) Error message is displayed for numeric data.	FAIL
			ii) User types alphanumeric data in the textbox.	ii) Text is accepted when user enters alpha-numeric data into the textbox.	
3.	TC31. 3	Checking **functionality of the Password textbox**:	ia) User enters less than 6 characters in the password textbox. EBV: partition 0-5	i) System should not accept. Error message is displayed when user enters less than 6 or greater than 10	

		i) Textbox for Password should accept more than/minimum 6 characters and maximum 10 Characters ii) Data should be displayed in encrypted format.	Ib) User more than 10 characters in the password textbox. EBV: partition 11-14	characters in the password textbox.	
			ii) User enters more than 5 characters and less than 11 in the password textbox. EBV: partition 6-10	System accepts data when user enters more than 5 characters and up to 10 characters into the password textbox.	
			ii) User checks whether his data is displayed in the encrypted format.	System accepts data in the encrypted format else displays an error message.	
4.	TC1.4	Checking functionality of 'SUBMIT' button.	i) User checks whether 'SUBMIT' button is enabled or disabled.	i) System displays 'SUBMIT' button as enabled	
			ii) User clicks on the 'SUBMIT' button and expects to view the 'Home' page of the application.	ii) System is redirected to the 'Home' page of the application as soon as he clicks on the 'SUBMIT' button.	
5.	TC1.5	Checking functionality of 'CANCEL' button.	i)User checks whether 'CANCEL' button is enabled or disabled.	i)System displays 'CANCEL' button as enabled.	
			ii)User checks whether the textboxes for UserId and Password are reset to blank by clicking on the 'CANCEL' button.	ii)System clears the data available in the UserId and Password textbox when user clicks on the 'CANCEL' button.	
6.	**TC1.6**	**Checking Decision functionality** of Input boxes userID and Password	Required list of variables and their values should be available For example: [User Id, Password] a. valid, valid; b. valid, invalid ; c. invalid, valid; d. invalid, invalid; e. empty, empty;		
Test Strategy: System – Functional Testing: GUI, Performance, Security, Usability, Compatibility, Error Handling, Volume, Scalability, Installation, Maintenance, Reliability, Recovery					
Test Strategy: User Acceptance Testing: Alpha					
Test Strategy: User Acceptance Testing: Beta					

TEST CASE BY MEMBER 1 FOR MODULE 2

1	TC2	**Purpose**: The user should be able to perform MODULE 2 Function and go to the Home page	**Pre-requisite**: A successful Login. **Login page should appear.** User Id and Password textboxes should be available with appropriate labels. Submit and Cancel buttons with appropriate captions should be available.		
Sr. No	**Test Case Id**	**Test Case Name | Requirement Number | File path**	**Steps/Action**	**Expected Results**	**PASS-FAIL**
6.	**TC2.6.**	**Checking Decision functionality** of MODULE X Input boxes XXX and YYY	Required list of variables and their values should be available For example: [XXX, YYY] a. valid, valid; b. valid, invalid ; c. invalid, valid; d. invalid, invalid; e. empty, empty;		

TEST CASE BY MEMBER 2 FOR MODULE 3

	TC3	**Purpose**: The user should be able to perform MODULE 2 Function and go to the Home page	**Pre-requisite**: A successful Login. **Login page should appear.** User Id and Password textboxes should be available with appropriate labels. Submit and Cancel buttons with appropriate captions should be available.		
Sr. No	**Test Case Id**	**Test Case Name | Requirement Number | File path**	**Steps/Action**	**Expected Results**	**PASS-FAIL**
6.	**TC2.6.**	**Checking Decision functionality** of	Required list of variables and their values		

		MODULE X Input boxes XXX and YYY	should be available For example: [XXX, YYY] a. valid, valid; b. valid, invalid ; c. invalid, valid; d. invalid, invalid; e. empty, empty;		
TEST CASE BY MEMBER 3 FOR MODULE 4					
	TC2	**Purpose**: The user should be able to perform MODULE 2 Function and go to the Home page	**Pre-requisite**: A successful Login. **Login page should appear.** User Id and Password textboxes should be available with appropriate labels. Submit and Cancel buttons with appropriate captions should be available.		
Sr. No	**Test Case Id**	**Test Case Name | Requirement Number | File path**	**Steps/Action**	**Expected Results**	**PASS-FAIL**
6.	**TC2.6.**	**Checking Decision functionality** of MODULE X Input boxes XXX and YYY	Required list of variables and their values should be available For example: [XXX, YYY] a. valid, valid; b. valid, invalid ; c. invalid, valid; d. invalid, invalid; e. empty, empty;		
TEST CASE BY MEMBER 4 FOR MODULE 5					
	TC2	**Purpose**: The user should be able to perform MODULE 2 Function and go to the Home page	**Pre-requisite**: A successful Login.		

			Login page should appear. User Id and Password textboxes should be available with appropriate labels. Submit and Cancel buttons with appropriate captions should be available.		
Sr. No	**Test Case Id**	**Test Case Name | Requirement Number | File path**	**Steps/Action**	**Expected Results**	**PASS-FAIL**
6.	**TC2.6.**	**Checking Decision functionality** of MODULE X Input boxes XXX and YYY	Required list of variables and their values should be available For example: [XXX, YYY] a. valid, valid; b. valid, invalid ; c. invalid, valid; d. invalid, invalid; e. empty, empty;		
TEST CASE BY MEMBER 5 FOR MODULE 6					
	TC2	**Purpose**: The user should be able to perform MODULE 2 Function and go to the Home page	**Pre-requisite**: A successful Login. **Login page should appear.** User Id and Password textboxes should be available with appropriate labels. Submit and Cancel buttons with appropriate captions should be available.		
Sr. No	**Test Case Id**	**Test Case Name | Requirement Number | File path**	**Steps/Action**	**Expected Results**	**PASS-FAIL**
6.	**TC2.6.**	**Checking Decision functionality** of MODULE X Input boxes XXX and YYY	Required list of variables and their values should be available For example: [XXX, YYY] a. valid, valid; b. valid, invalid ;		

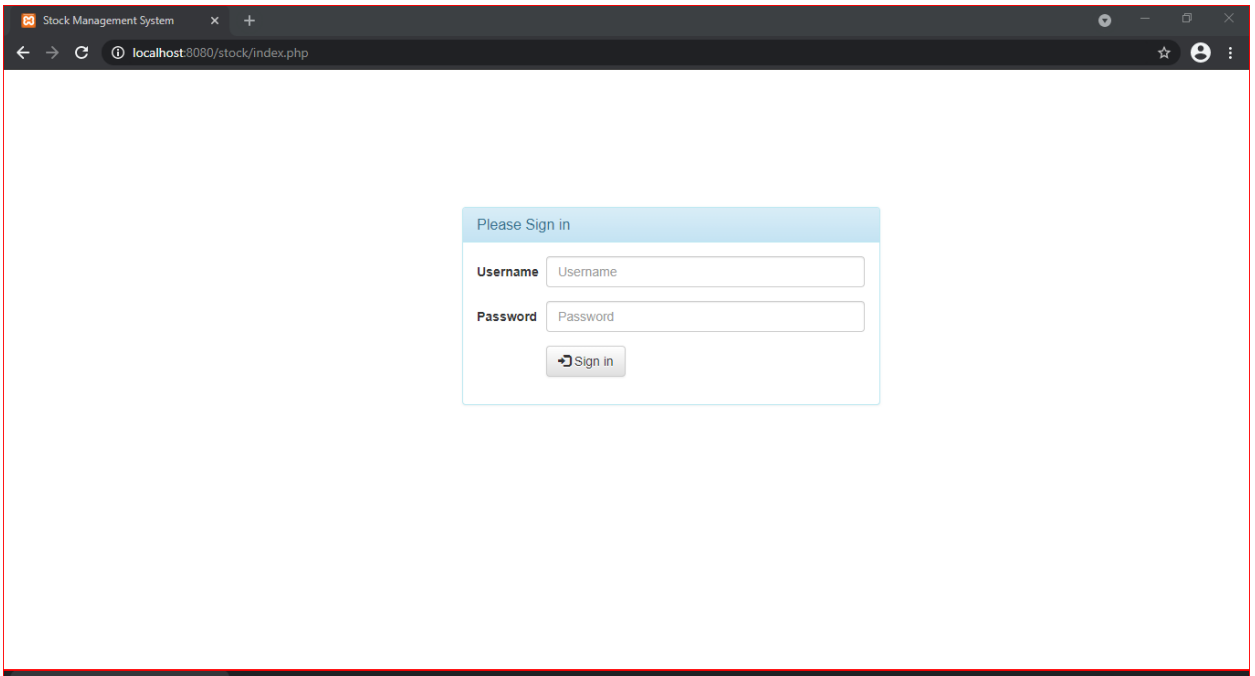
			c. invalid, valid; d. invalid, invalid; e. empty, empty;		

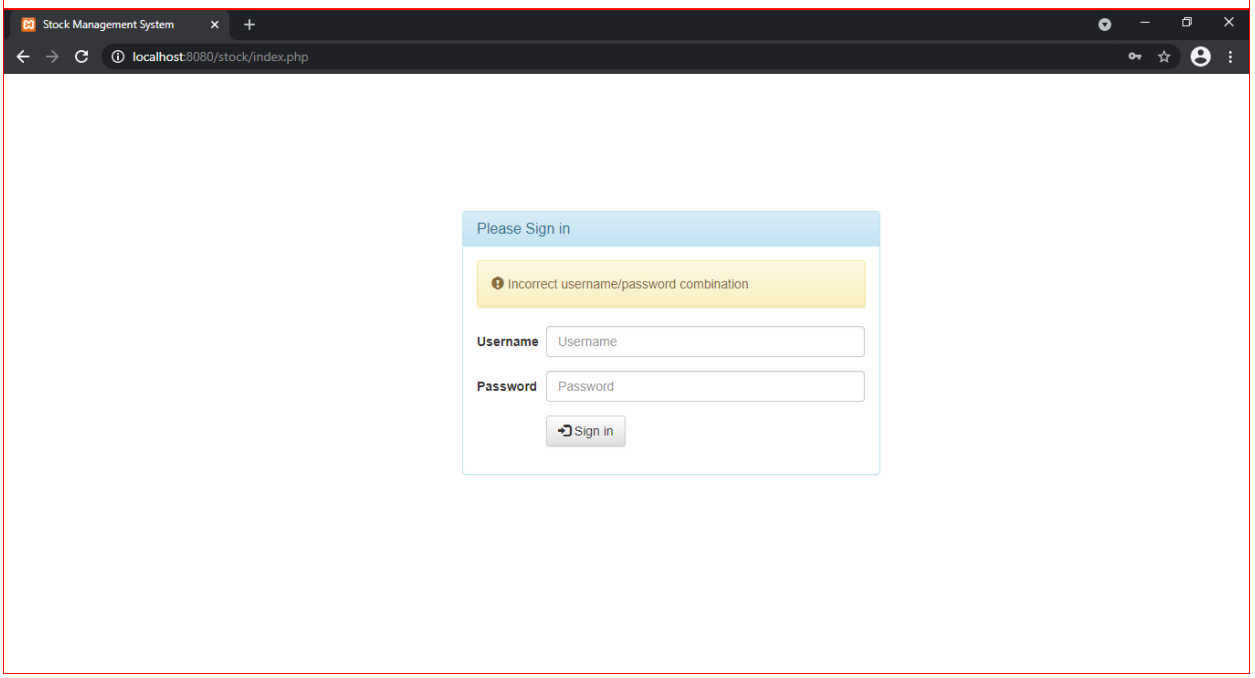
CONCLUSION OF WHOLE PROJECT

This report covers major "Software Engineering" activities on selected Project. This project activity lasts for duration of 3.5 month time.

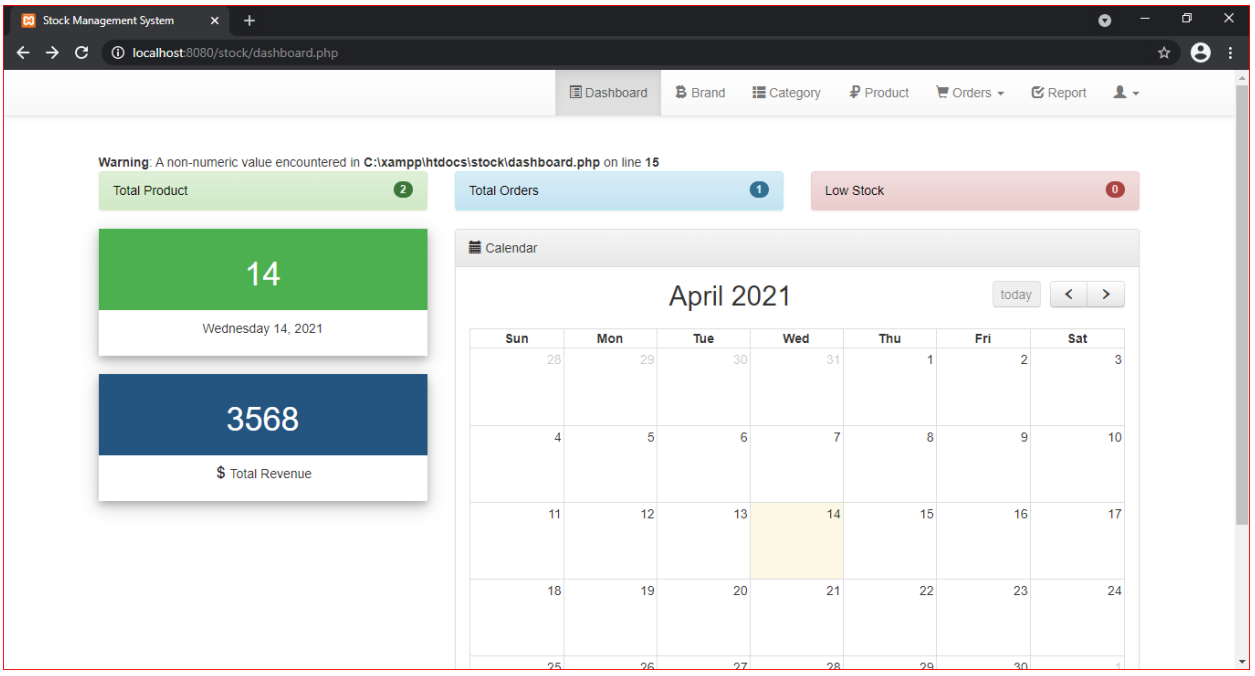
Test Cases Example & Project Images :-

Login :-

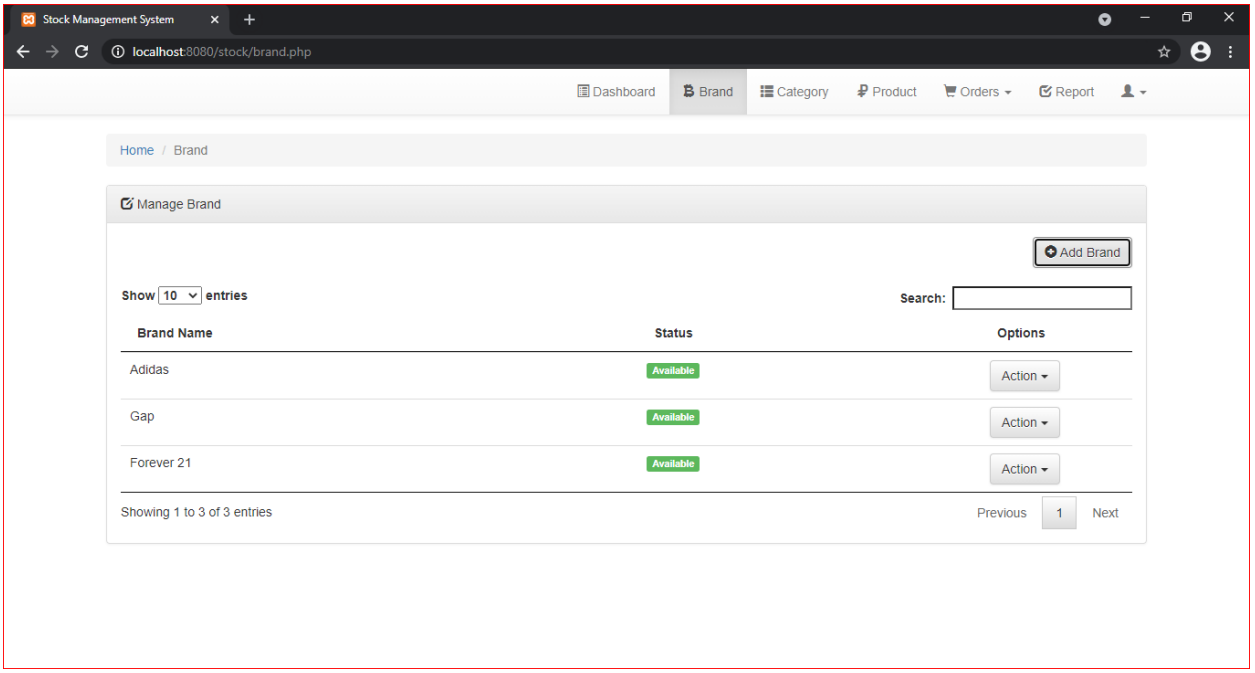




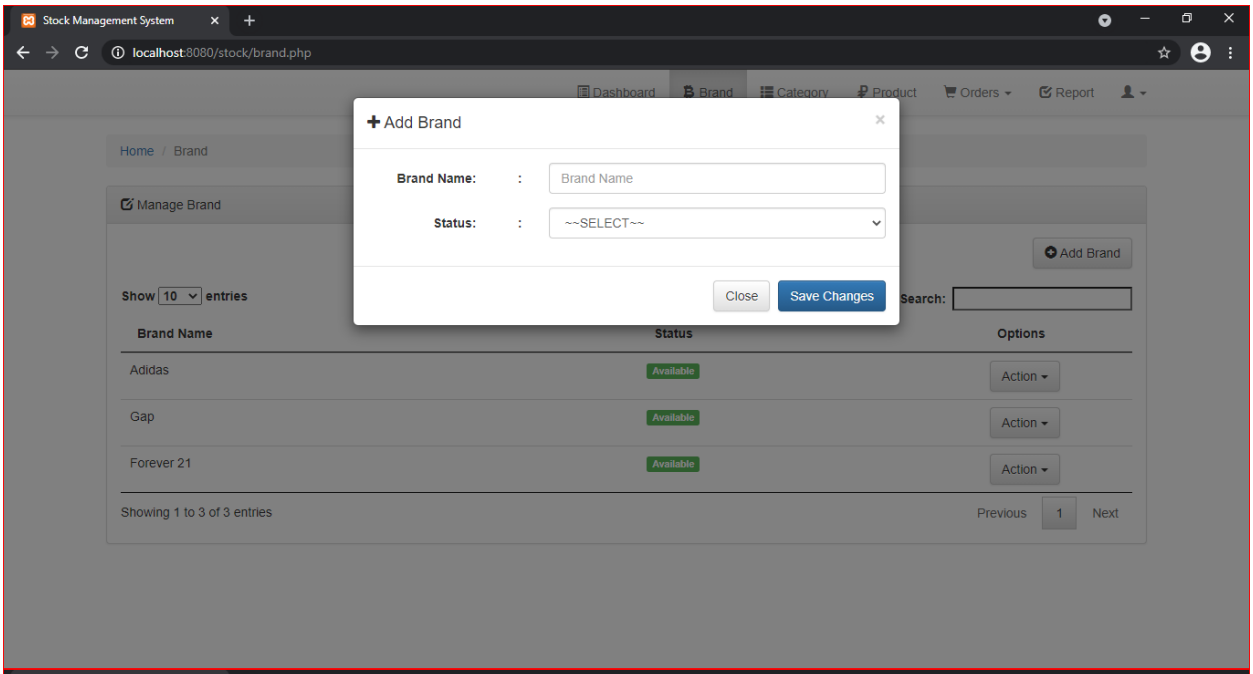
Dashboard (Module 1) :-

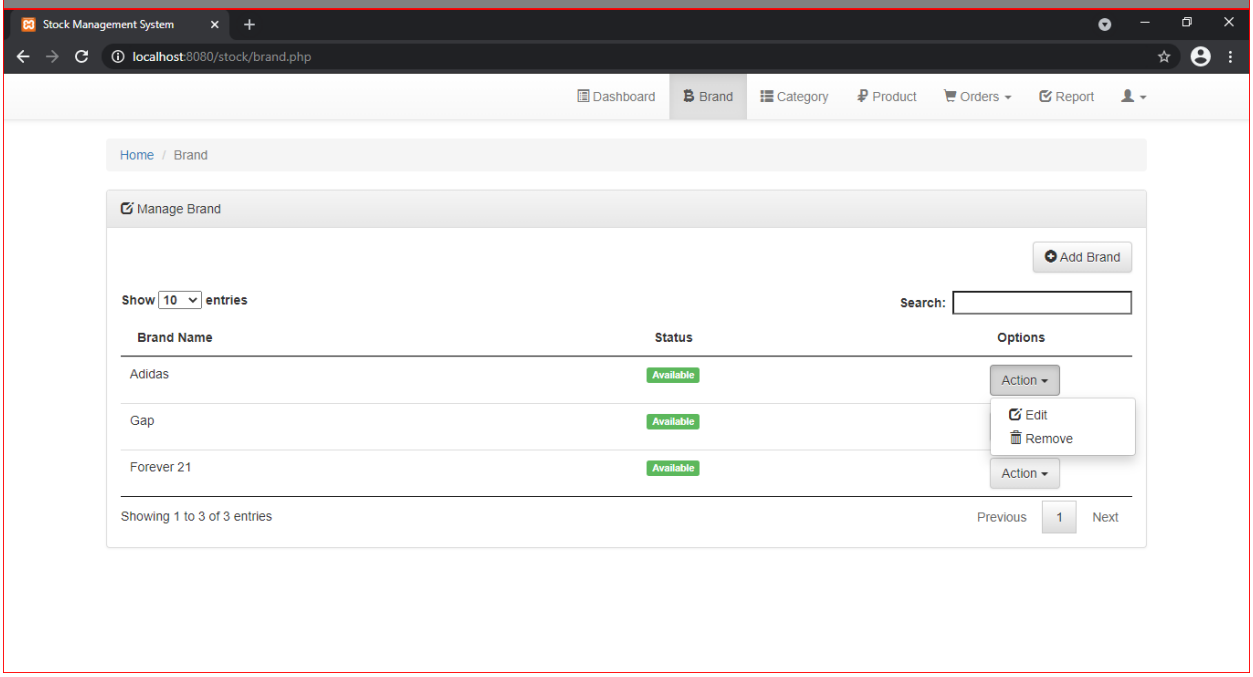


Brand (Module 2) :-



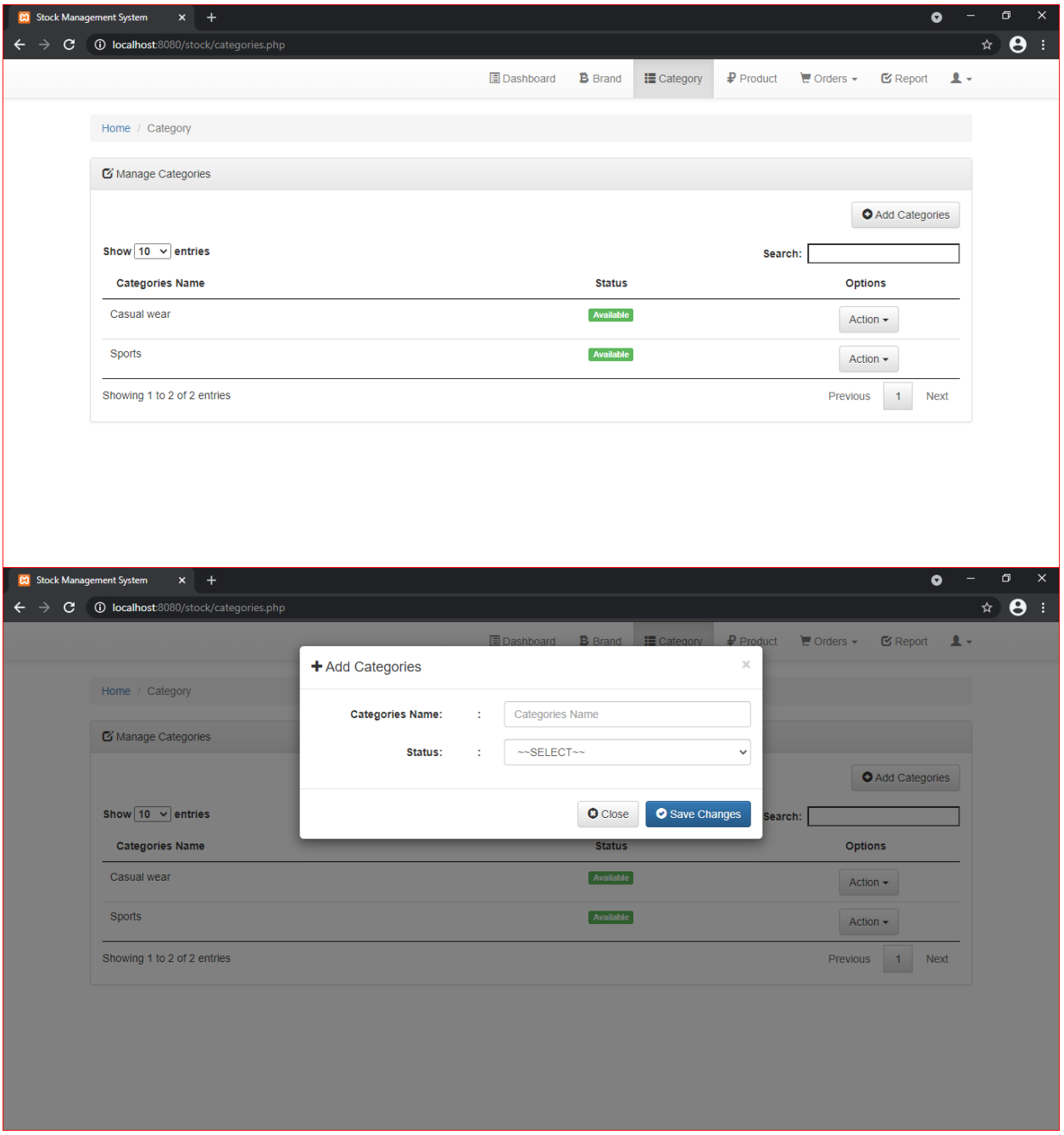
CI

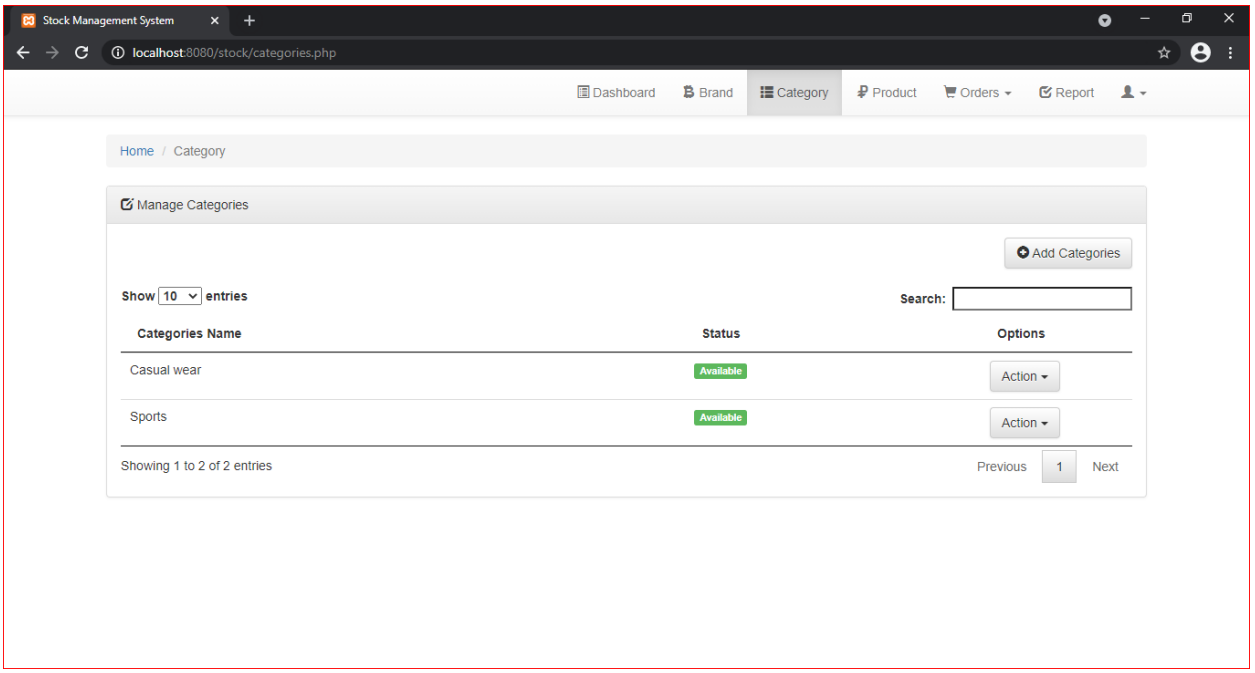

Stock Management System
localhost:8080/stock/brand.php
Dashboard
Brand
Category
Product
Orders
Report
Add Brand
Brand Name:
Brand Name
Status:
~~SELECT~~
Close
Save Changes
Home / Brand
Manage Brand
Add Brand
Show 10 entries
Search:
Brand Name
Status
Options
Adidas
Available
Action
Gap
Available
Action
Forever 21
Available
Action
Showing 1 to 3 of 3 entries
Previous
1
Next


Stock Management System
localhost:8080/stock/brand.php
Dashboard
Brand
Category
Product
Orders
Report
Home / Brand
Manage Brand
Add Brand
Show 10 entries
Search:
Brand Name
Status
Options
Adidas
Available
Action
Edit
Remove
Gap
Available
Forever 21
Available
Action
Showing 1 to 3 of 3 entries
Previous
1
Next

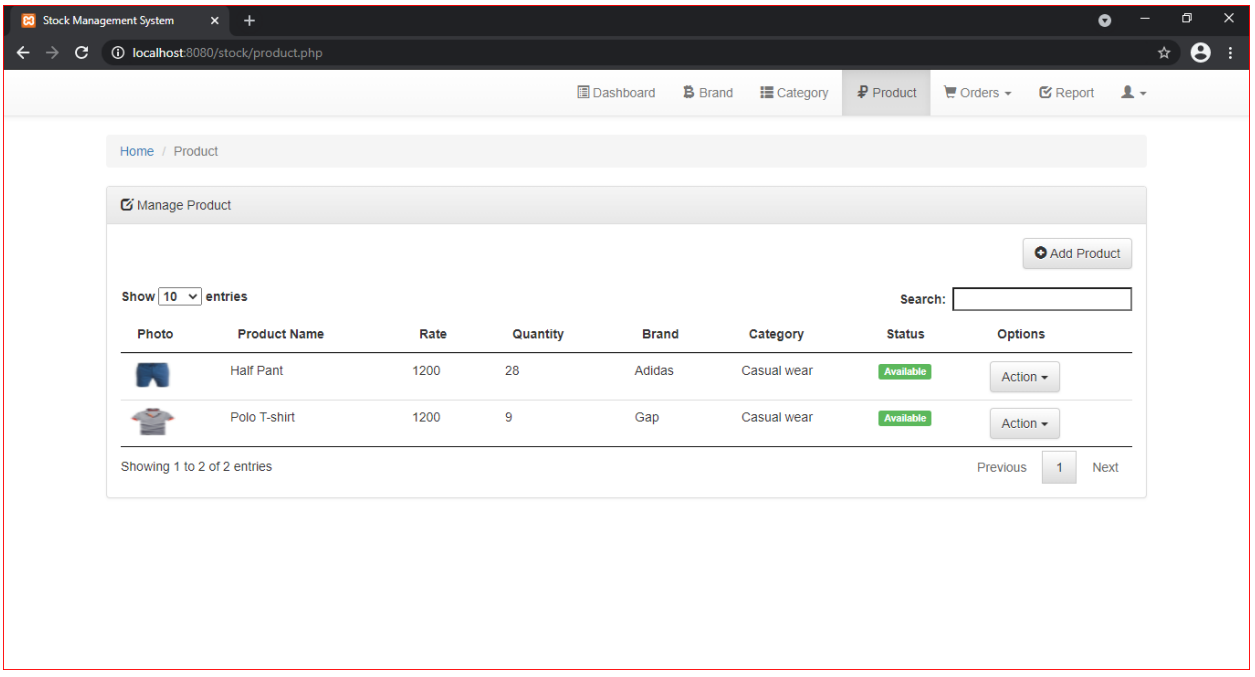
CII

Category (Module 3) :-

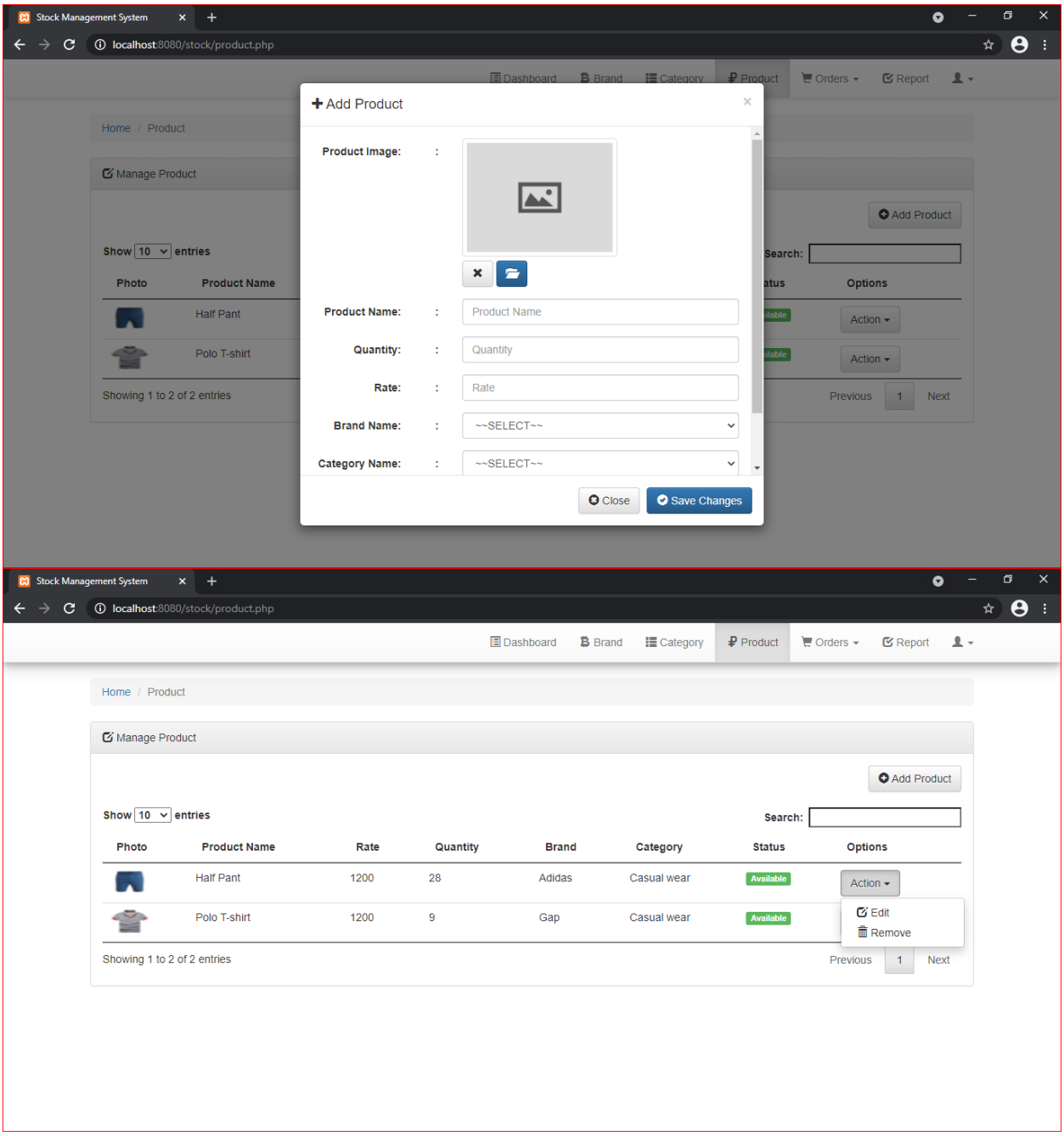




Products (Module 4) :-

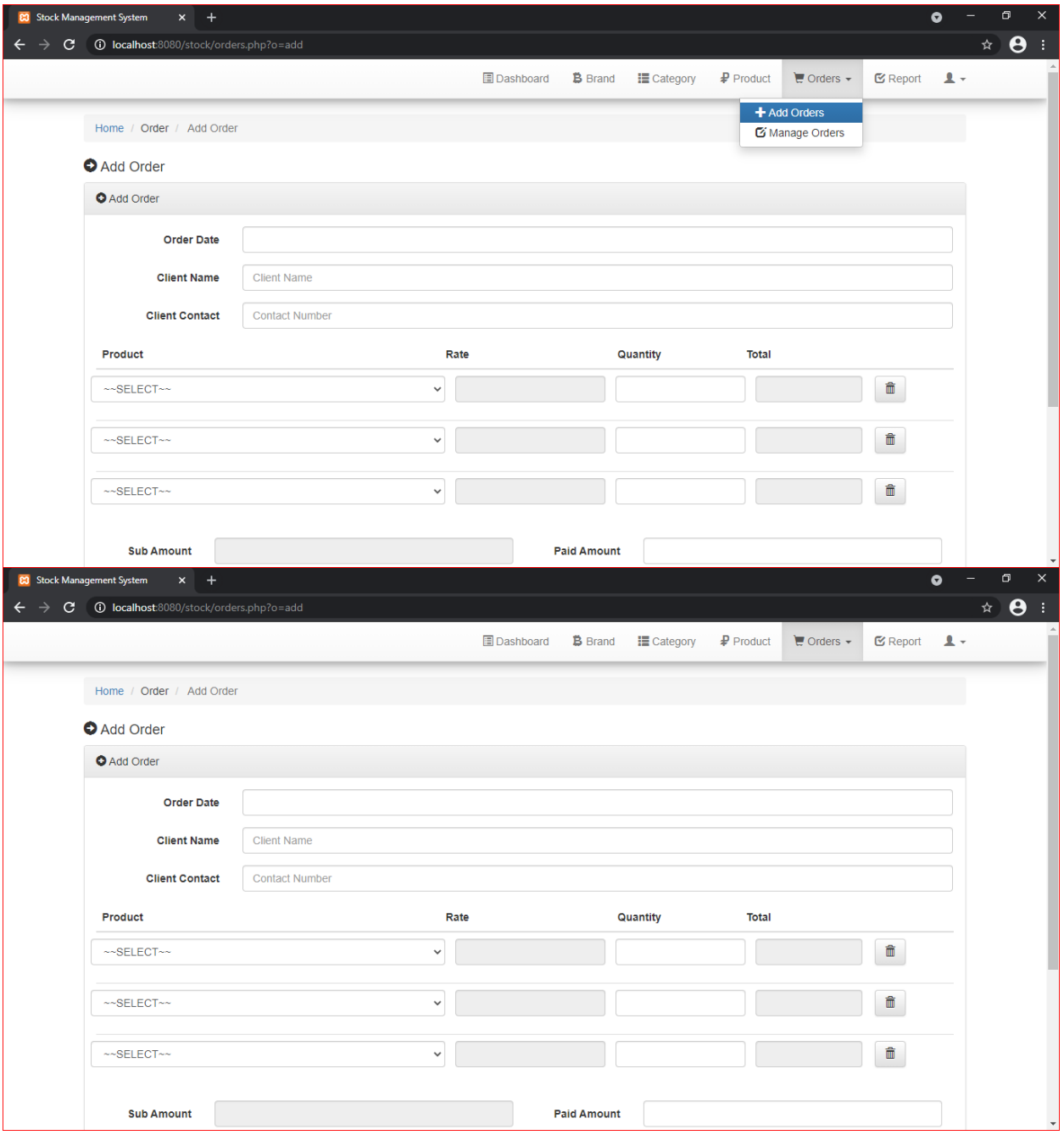


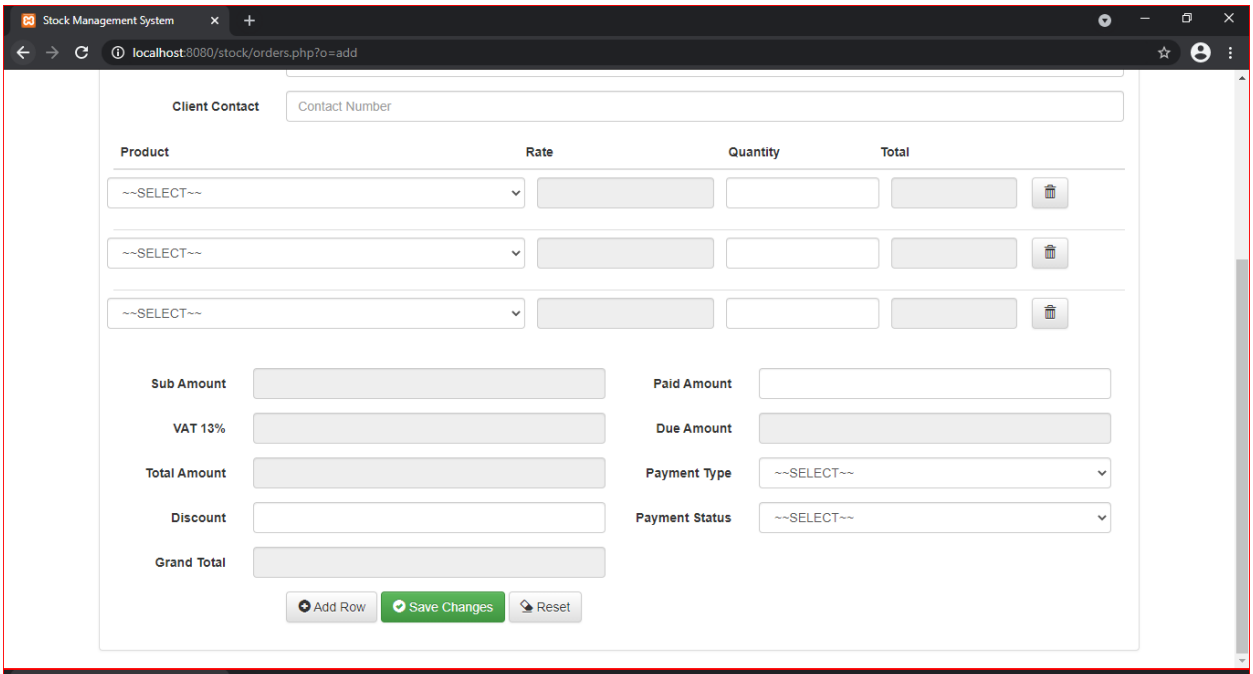
CIV

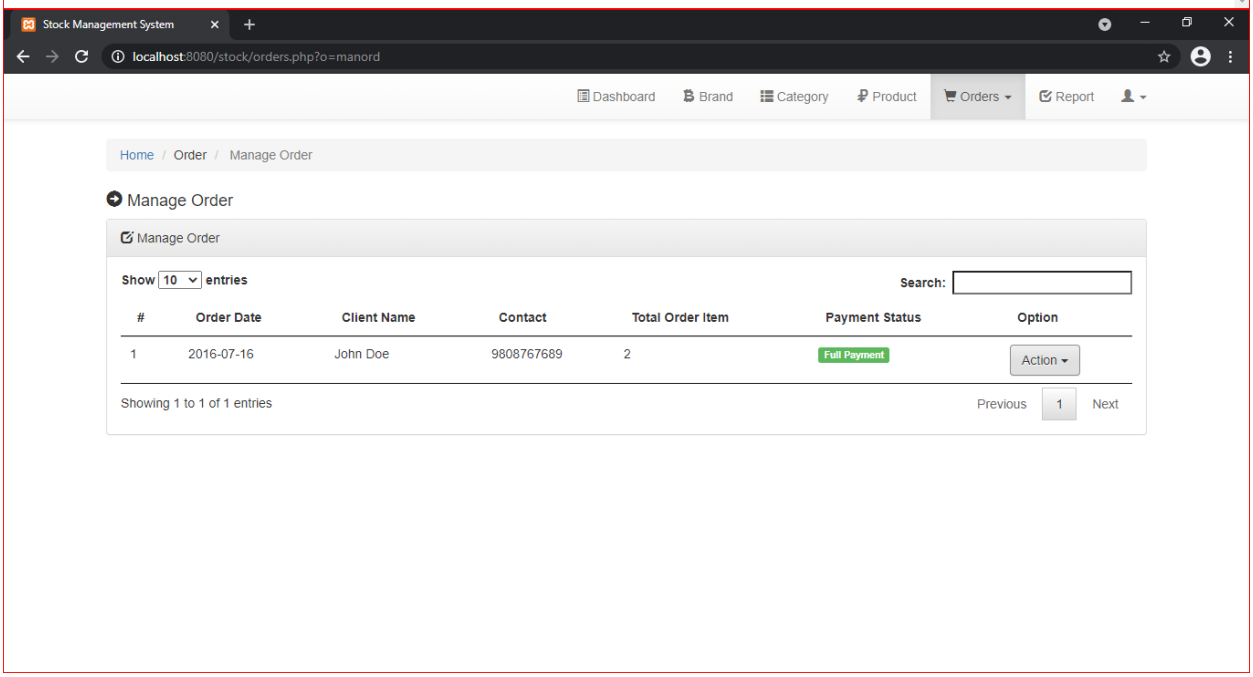

Stock Management System
localhost:8080/stock/product.php
Dashboard
Brand
Category
Product
Orders
Report
Add Product
Product Image:
Product Name:
Quantity:
Rate:
Brand Name:
Category Name:
~~SELECT~~
Close
Save Changes
Home / Product
Manage Product
Add Product
Show 10 entries
Search:
Photo
Product Name
Rate
Quantity
Brand
Category
Status
Options
Half Pant
1200
28
Adidas
Casual wear
Available
Action
Polo T-shirt
1200
9
Gap
Casual wear
Available
Edit
Remove
Showing 1 to 2 of 2 entries
Previous
1
Next

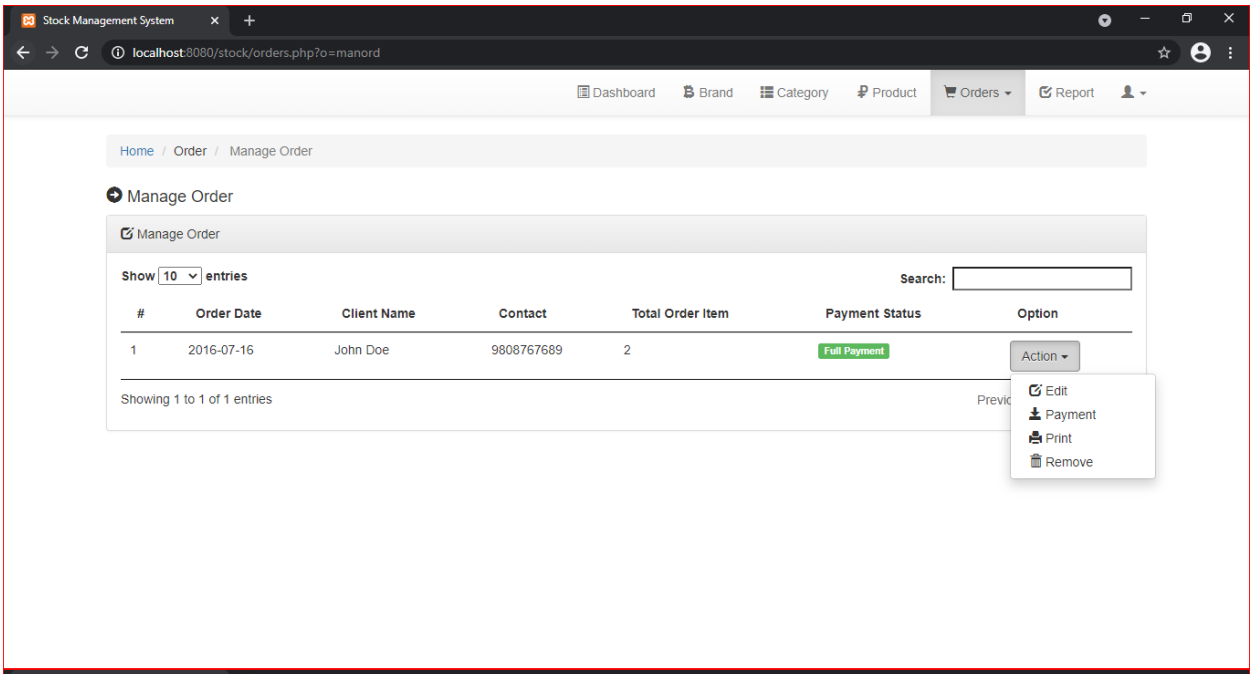
CV

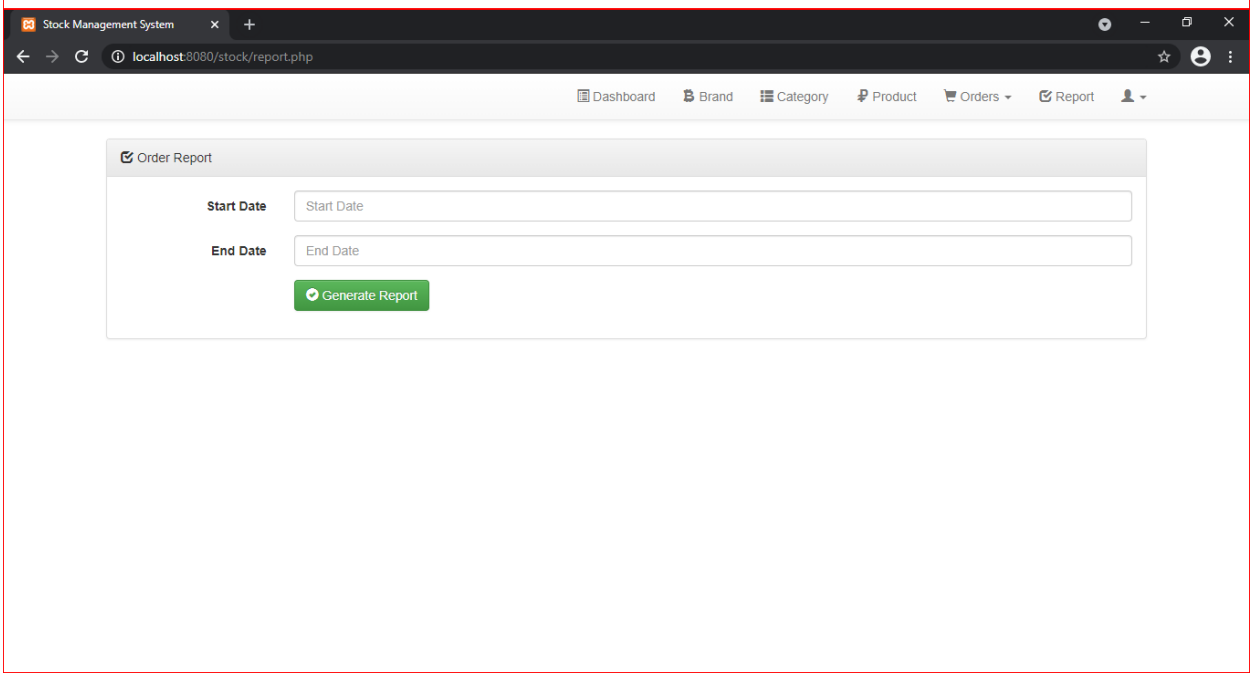
Order (Module 5) :-




Stock Management System
localhost:8080/stock/orders.php?o=add
Client Contact
Contact Number
Product
Rate
Quantity
Total
~~SELECT~~
~~SELECT~~
~~SELECT~~
Sub Amount
VAT 13%
Total Amount
Discount
Grand Total
Paid Amount
Due Amount
Payment Type
~~SELECT~~
Payment Status
~~SELECT~~
Add Row
Save Changes
Reset


Stock Management System
localhost:8080/stock/orders.php?o=manord
Dashboard
Brand
Category
Product
Orders
Report
Home / Order / Manage Order
Manage Order
Manage Order
Show 10 entries
Search:
Order Date Client Name Contact Total Order Item Payment Status Option
1 2016-07-16 John Doe 9808767689 2 Full Payment Action
Showing 1 to 1 of 1 entries
Previous 1 Next





CONCLUSION OF WHOLE PROJECT

This report covers major "Software Engineering" activities on selected Project. This project activity lasts for duration of 3.5 month time.