VTC Academy
Think Ahead, Beyond Boundaries

PROJECT REPORT

Project Name

Semester:	Programming Fundamentals
Class:	PFXX
Group:	Group Name
Instructor:	Instructor Name
Group Members:	StudentId – Student Name 1
	StudentId – Student Name 2
	StudentId – Student Name 3

Index

I. Project Introduction

<Briefly describe the operation of the system to which the project will be applied>

...

1. Proposed System

   ...

2. The Scope of the Project to be Applied

   ...

3. System Name

   ...

4. Deployment Environment

   ...

5. Development Tools

   ...

6. Customer Requirements

   (System Features)

   ...

II. Analyze System Requirements

<Specify the requirements of the system required to meet customer requirements. This is the content of the discussion presented in more detail.>

1. Use Case

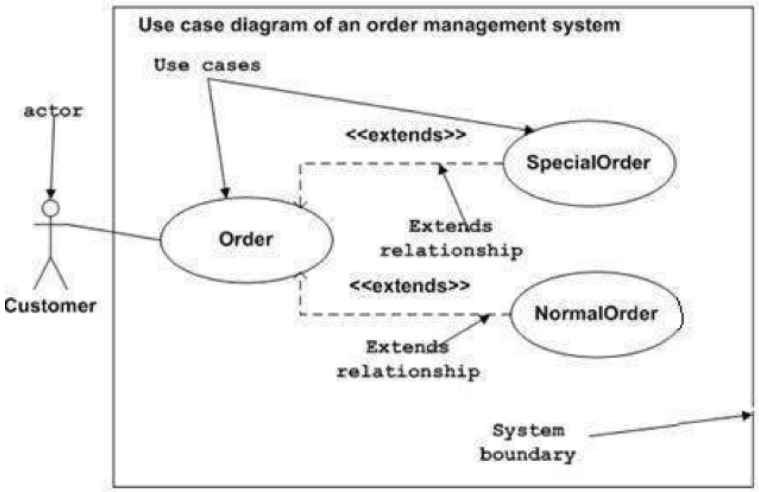


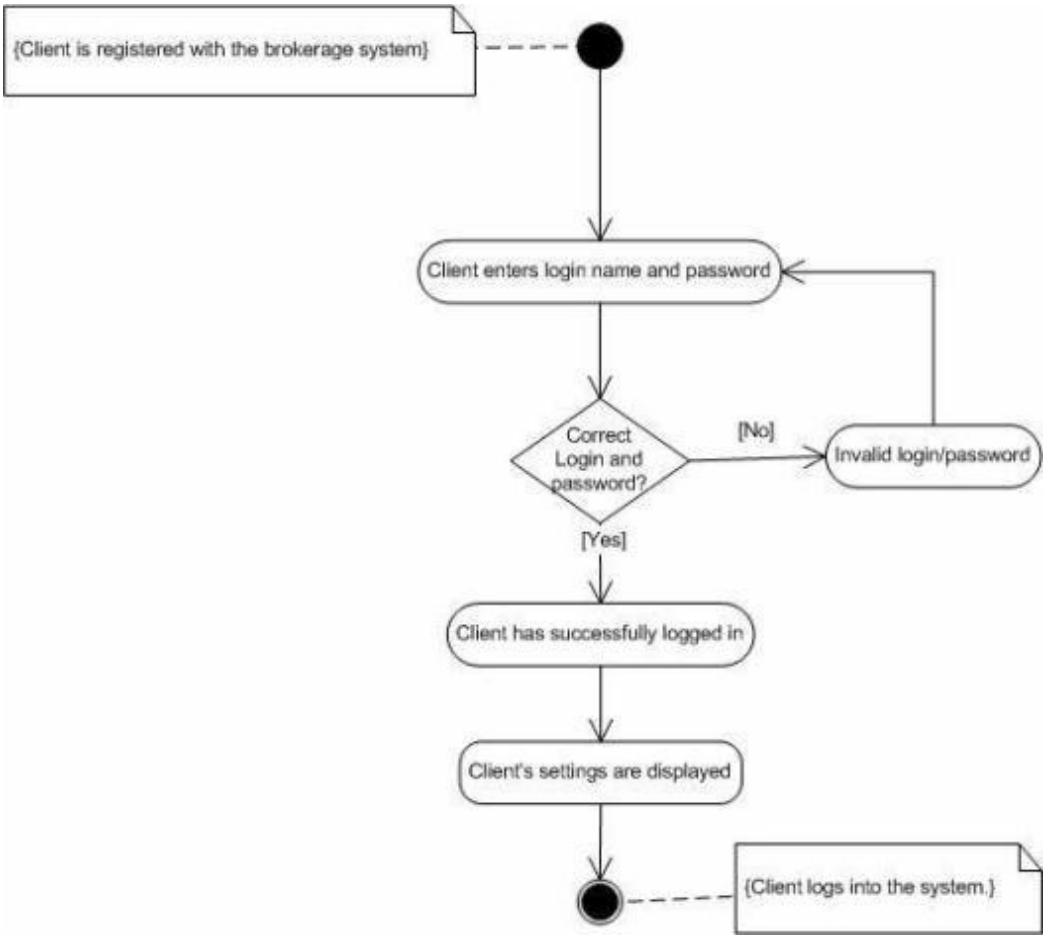
Figure: Sample Use Case diagram

Use Case Name	The Use Case's name. Typically, the name is of the following format: <action>+<object>.
Use Case ID	An identifier that is unique to each Use Case.
Description	A brief sentence that states what the user wants to be able to do and what benefit he will receive.
Actor	The type of user who interacts with the system to accomplish the task. Actors are identified by role name.
Organizational Benefits	The value the organization expects to receive from having the functionality described. Ideally, this is linked directly to a Business Objective.
Triggers	Concrete actions made by the user within the system to start the Use Case.
Preconditions	Any states that the system must be in or conditions that must be met before the Use Case is stated.
Postconditions	Any states that the system must be in or conditions that must be met after the Use Case is completed successfully. These will be met if the Main Course or any Alternate Course is followed. Some Exceptions may result in failure to meet the Postconditions.

Main Course	The most common path of interactions between the user and the system: 1. Step 1 2. Step 2
Alternate Courses	Alternate paths through the system AC1: <condition for the alternate to be called> 1. Step 1 2. Step 2 AC2: <condition for the alternate to be called> 1. Step 1 2. Step 2
Exceptions	Exception handling by the system EX1: <condition for the exception to be called> 1. Step 1 2. Step 2 EX2: <condition for the exception to be called> 1. Step 1 2. Step 2

Name	Save item for purchase.
ID	UC_001
Description	While browsing items in the eStore, a user finds an item he is not ready to purchase yet, but he wants to save it to a list so that he can later find the item that he was previously interested in.
Actors	eStore customer.
Organizational Benefits	Increase sales by helping the customer remember products he was previously interested in.
Frequency of Use	20% of users save an item to be bought later each time they visit the site. 50% of saved items are purchased within one year of the saved date.
Triggers	The user selects an option to save an item.
Preconditions	User is viewing an item in the catalog.
Postconditions	The item selected to be saved is visible to the user when he views his saved items. The item selected to be saved is reflected as a saved item when the user views his eStore search and browse results.
Main Course	1. System prompts user to confirm saving selected item instead of purchasing it right away. 2. User confirms to save now (see EX1). 3. System determines user is not logged in and redirects user to log on (see AC1). 4. User logs on (see AC2, AC3). 5. System stores the saved item (see EX2). 6. System redirects the user to their saved items list to view the full list.
Alternate Courses	AC1 System determines user is already logged on. 1. Return to Main Course step 5. AC2 User logs off again. 1. Return user to Main Course step 3. AC3 User does not have an account already. 1. User creates an account. 2. System confirms account creation. 3. Return user to Main Course step 4.
Exceptions	EX1 User decides to purchase the item now. 1. See "Purchase item" Use Case. EX2 System fails on saving item to list. 1. System notifies user that an error has occurred. 2. Return user to Main Course step 1.

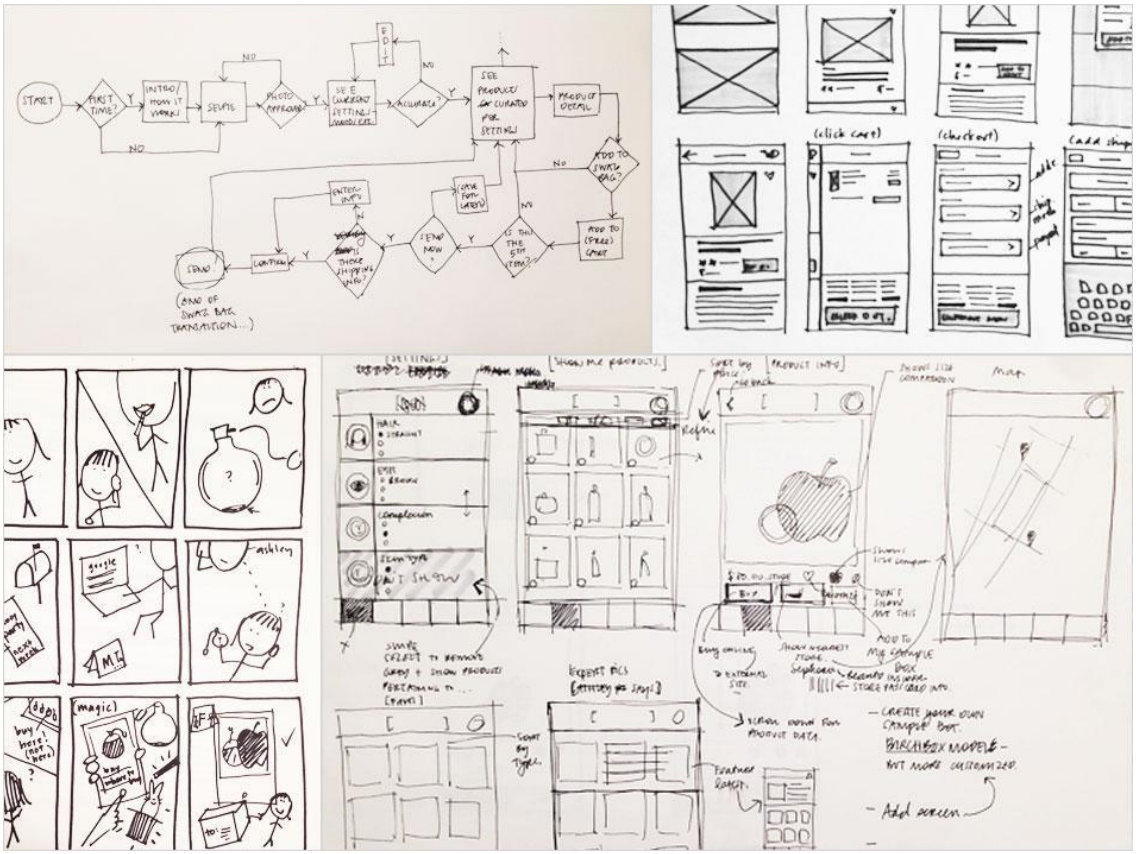
2. Activity Diagram:

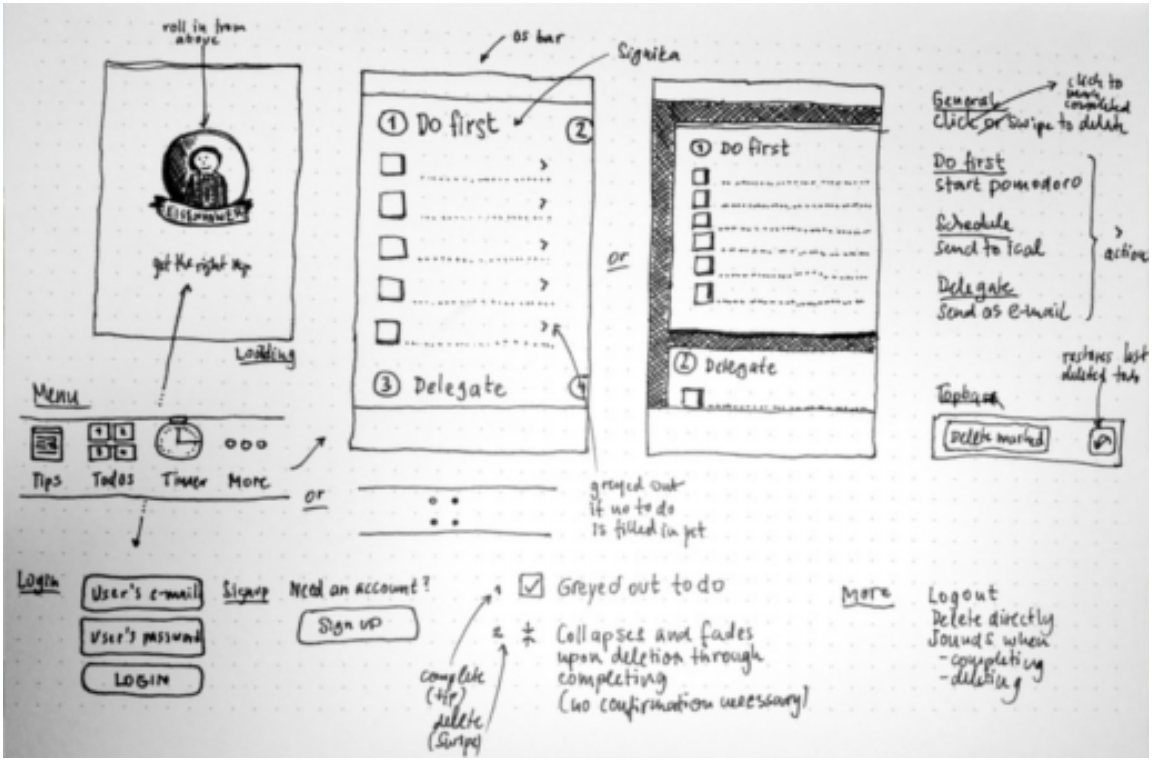


III. Design Details

1. UI Design

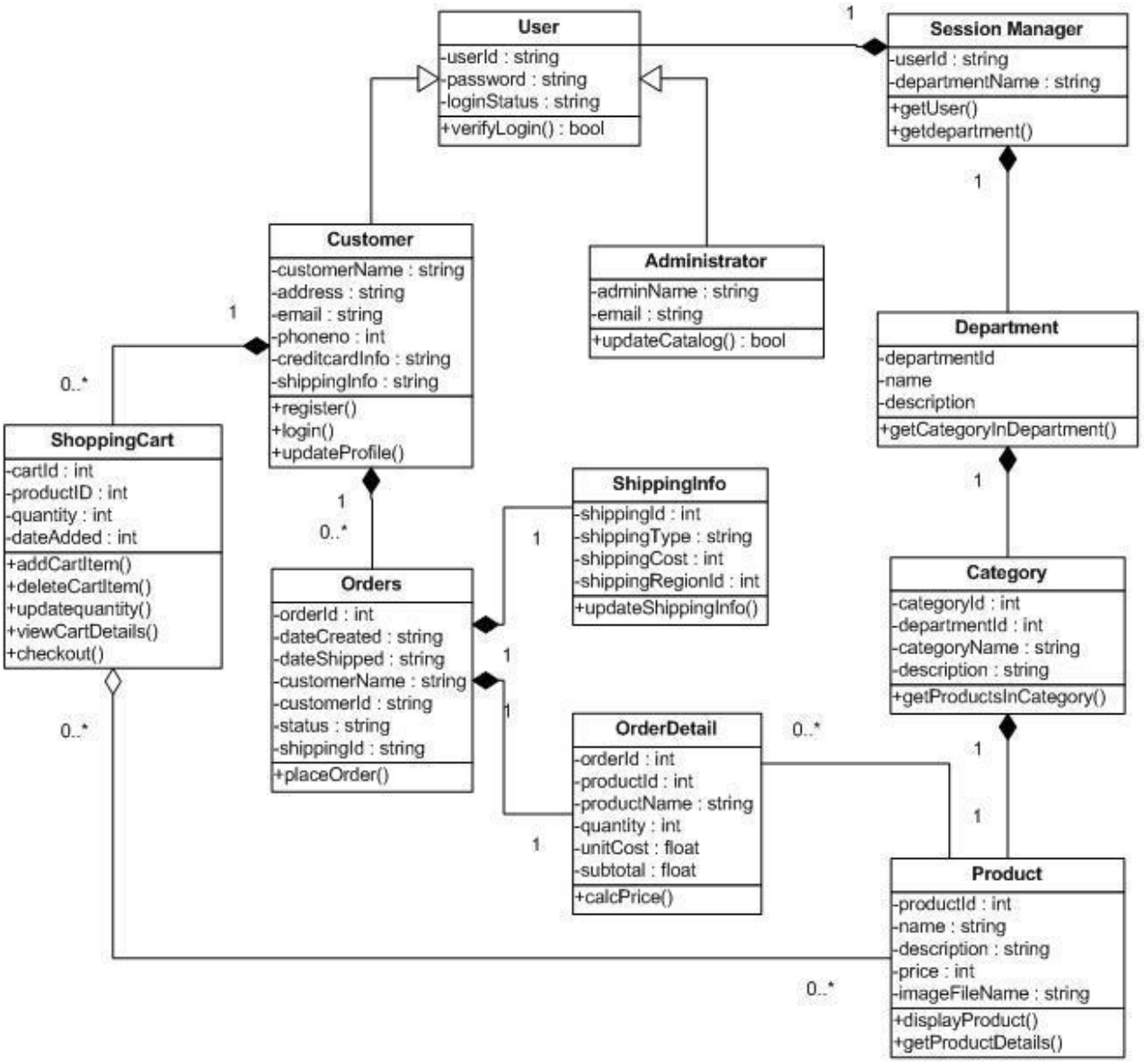
<Design the main user interface and for each features of the software>

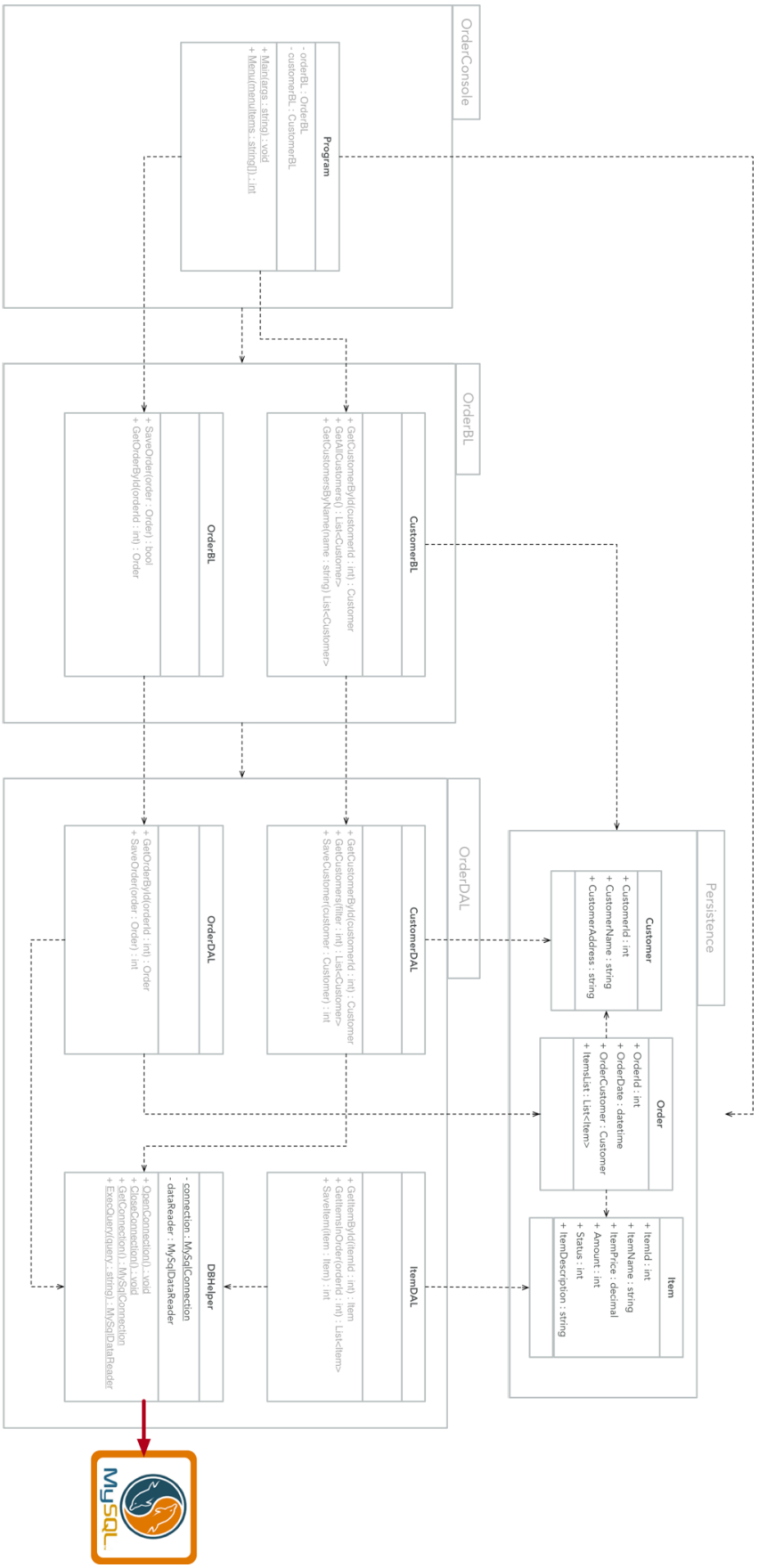



roll in from above
Loadding
Menu
Tips
Todos
Timer
More
or
OS bar
Signika
① Do first
②
③ Delegate
or
① Do first
② Delegate
greyed out if no to do is filled in yet
General
Click or swipe to delete
Do first
start pomodoro
Schedule
send to Teal
Delegate
send as e-mail
actions
restores last deleted task
Topbar
Delete marked
Login
User's e-mail
User's password
LOGIN
Signup
Need an account?
Sign up
complete (tip)
delete (swipe)
Greyed out to do
Collapses and fades upon deletion through completing (no confirmation necessary)
More
Logout
Delete directly
Sounds when
- completing
- deleting

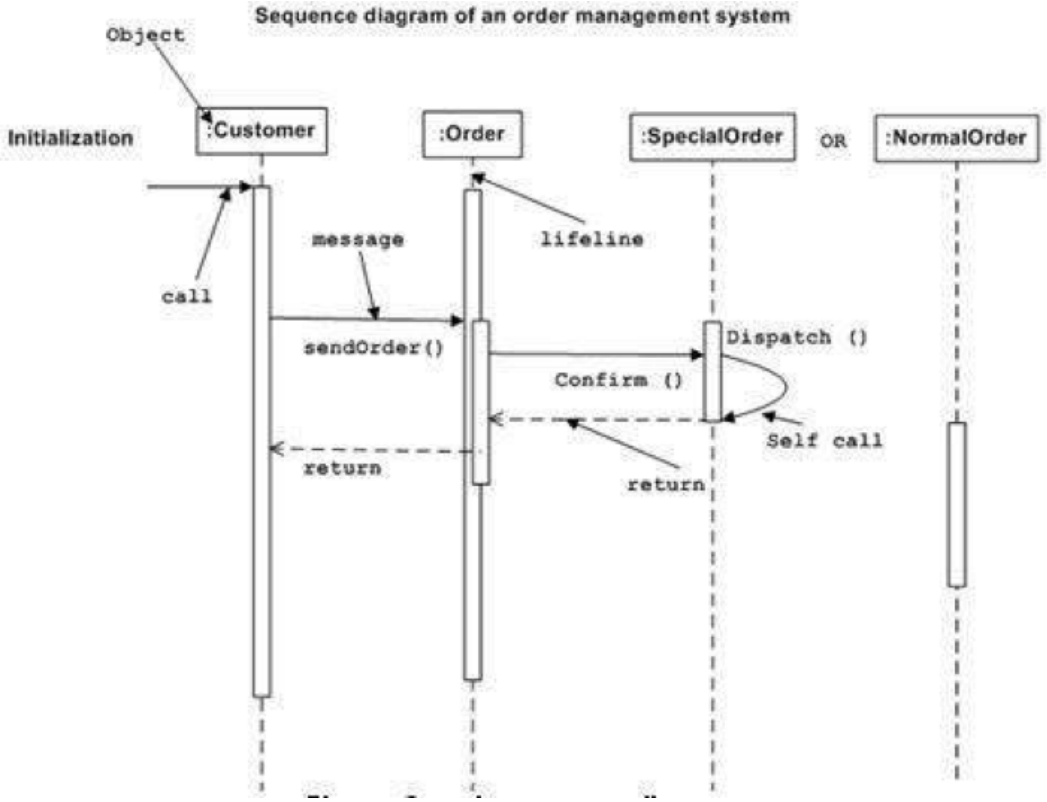
2. Code Design (Class Diagram)

(Class Diagram):



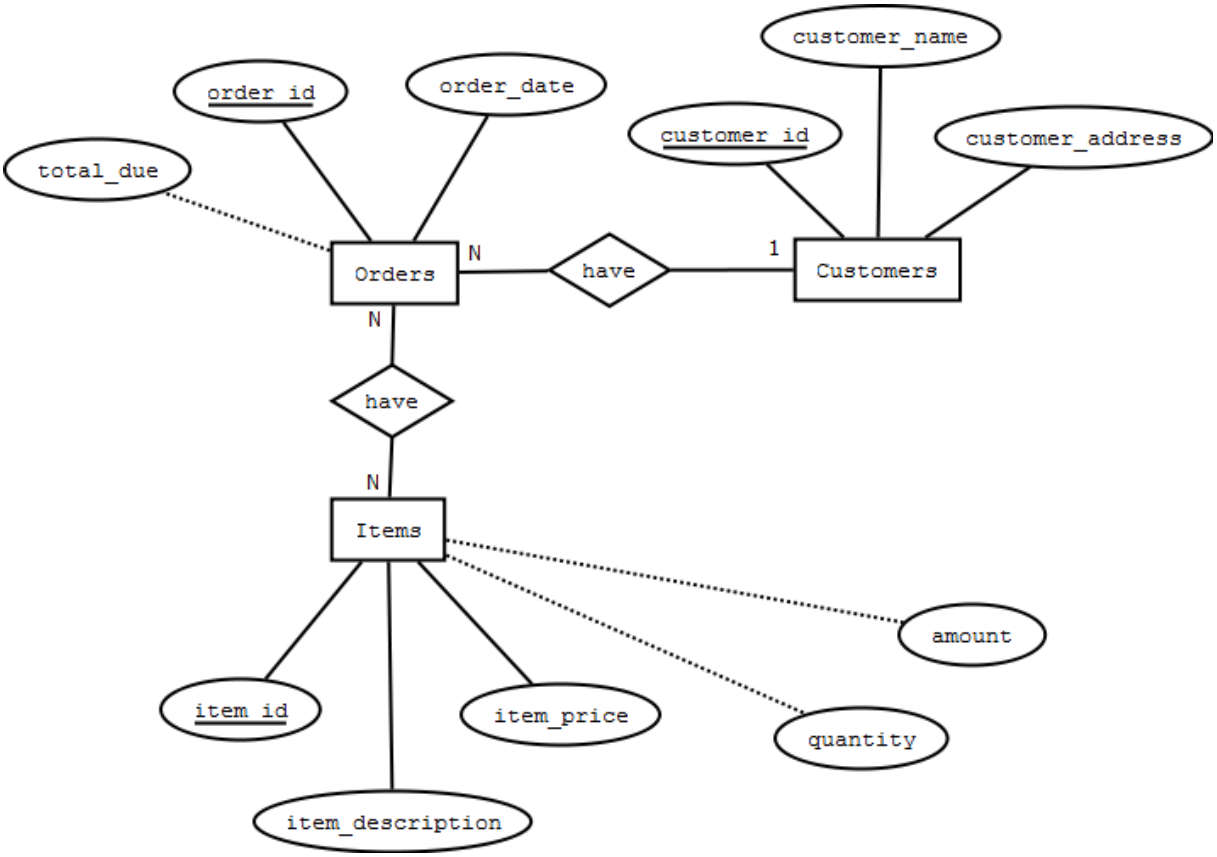

OrderConsole
Program
- orderBL : OrderBL
- customerBL : CustomerBL
+ Main(args : string) : void
+ Menu(menuItems : string[]) : int
OrderBL
OrderBL
+ SaveOrder(order : Order) : bool
+ GetOrderById(orderId : int) : Order
CustomerBL
+ GetCustomerById(customerId : int) : Customer
+ GetAllCustomers() : List<Customer>
+ GetCustomersByName(name : string) List<Customer>
OrderDAL
OrderDAL
+ GetOrderById(orderId : int) : Order
+ SaveOrder(order : Order) : int
CustomerDAL
+ GetCustomerById(customerId : int) : Customer
+ GetCustomers(filter : int) : List<Customer>
+ SaveCustomer(customer : Customer) : int
ItemDAL
+ GetItemById(itemId : int) : Item
+ GetItemsInOrder(orderId : int) : List<Item>
+ SaveItem(item : Item) : int
DBHelper
- connection : MySqlConnection
- dataReader : MySqlDataReader
+ OpenConnection() : void
+ CloseConnection() : void
+ GetConnection() : MySqlConnection
+ ExecQuery(query : string) : MySqlDataReader
Persistence
Customer
+ CustomerId : int
+ CustomerName : string
+ CustomerAddress : string
Order
+ OrderId : int
+ OrderDate : datetime
+ OrderCustomer : Customer
+ ItemsList : List<Item>
Item
+ ItemId : int
+ ItemName : string
+ ItemPrice : decimal
+ Amount : int
+ Status : int
+ ItemDescription : string
MySQL

3. Sequence Diagram

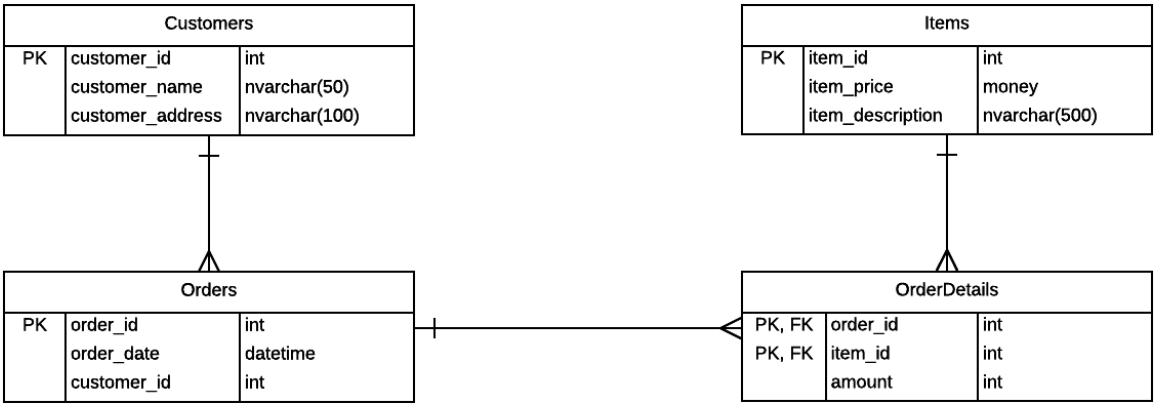


4. Database Design

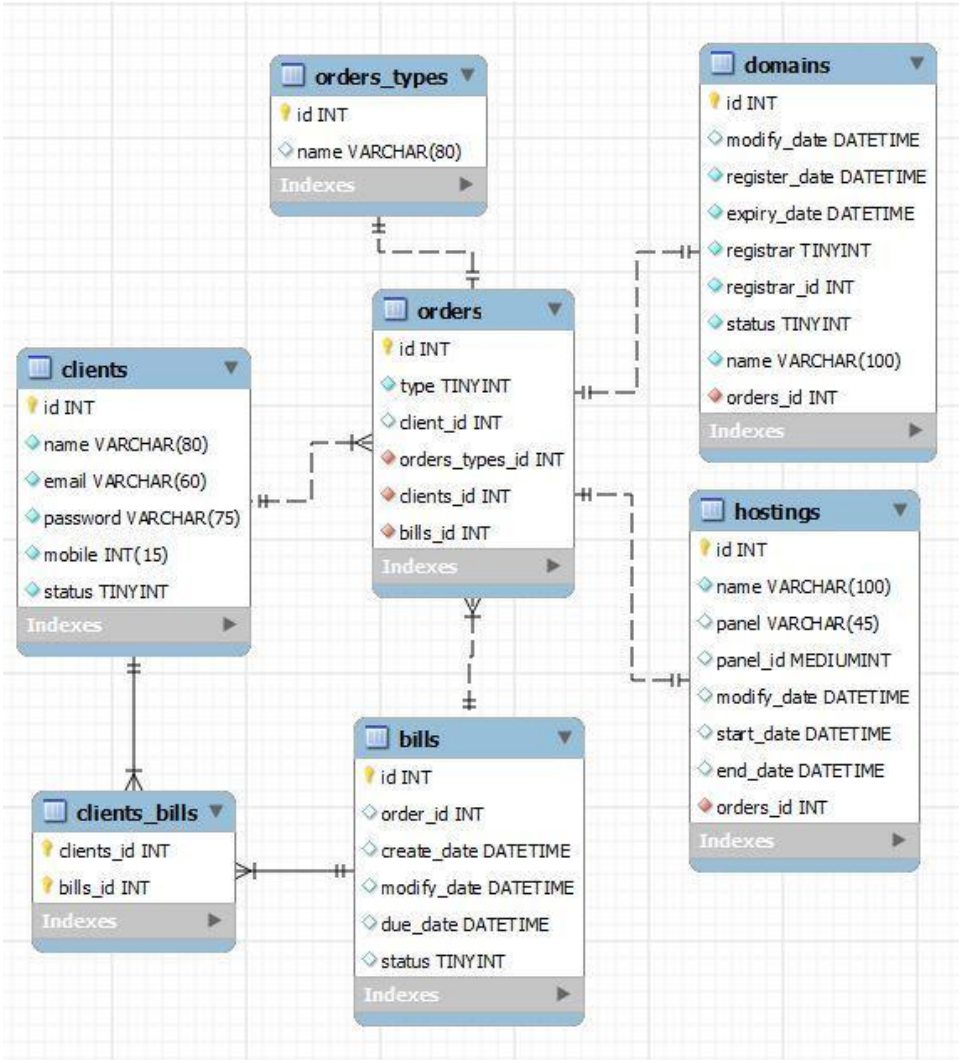
a. Entity Relationship Diagram



Or



b. Database Design Details



Users			
Column Name	Data Type	Constraints	Description
UserID	int	Primary Key, Autoincrement	
UserName	varchar(50)	NOT NULL	
UserPassword	varchar(50)	NOT NULL	
FullName	nvarchar(50)	NOT NULL	
Email	varchar(100)	NOT NULL	User Email
IsAccountLocked	tinyint	DEFAULT 0	
IsAdministrator	tinyint	DEFAULT 0	
DateCreated	Date	DEFAULT	Current Date

IV. Test

Test Case Number	
Test Case Name	
Test Case Description	
Preconditions	
Test Case Input	
Test Case Expected Output	
Test Case Steps	
Default Value Preserving	

Test Case Number	2.4.1
Test Case Name	*Numeric value range*
Test Case Description	This test case checks maximum and minimum field values for numeric fields.
Preconditions	User logged in.
Test Case Input	Enter a numeric value not greater than the maximum limit.
Test Case Expected Output	System can handle the value without any problem.
Test Case Steps:	
Maximum Numeric value	
	1: Input: Enter a large numeric value not greater than maximum limit Output: System can handle the value (Variable type is defined properly).

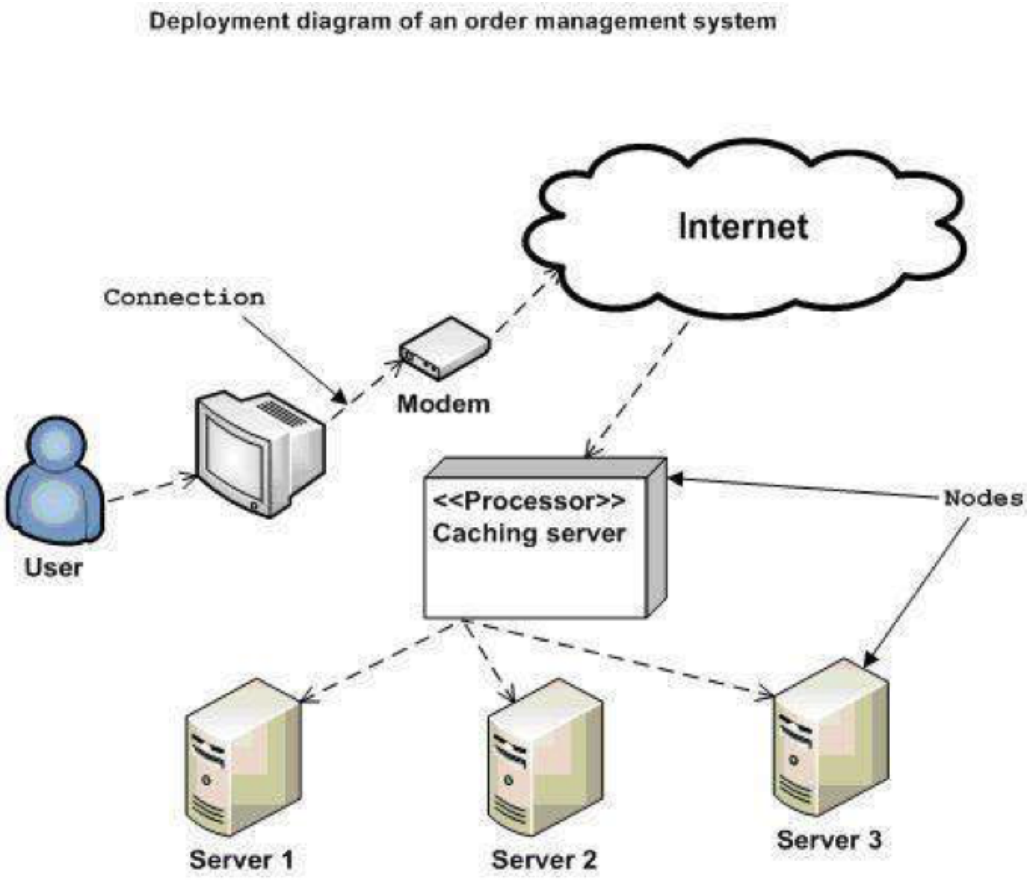
V. Task Assignment (To Each Group Member)

Group Name	Project Name					
No	Task name	Description	Start Date	End Date	Member	Self-Assessment
1						
2						
3						
4						
5						

VI. Installation Instructions

<Consistently list conventions when installing software (Detailed instructions with pictures and notes)>

1. Deployment Diagram



Source: Tutorials Point. *UML - Deployment Diagrams* [online], viewed June 15 2022, from: <https://www.tutorialspoint.com/uml/uml_deployment_diagram.htm>

2. Installation Steps

- Install Database
- Install Server
- Install Application

Appendix

Terms and abbreviations <if available>

<List terms and abbreviations here>

References <if available>

<List of references here>

Some other issues <if available>

<Results, limitations, experiences, techniques, and other considerations when implementing a project>

Document Format

Report Cover:

The cover must be printed in blue and formatted as shown in the first page of this document.

Paper Size:

The report must be presented on A4 paper (210 mm x 297 mm).

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Left: Logo of VTC Academy

Right: Project Name

Font: Helvetica Neue (Light/Medium) or Arial

Font size: 12pt

Bottom Header

Left: Class_Name–Project_Name

Right: Page_Number

Font: Helvetica Neue (Light) or Arial

Font size: 12pt

Report Content:

Font: Helvetica Neue (Light) or Arial

Font size: 12pt

Minimum 50 pages

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