PAF-KARACHI INSTITUTE OF ECONOMICS & TECHNOLOGY

SOFTWARE REQUIREMENTS SPECIFICATION

FOR

E-COMMERCE WEBSITE

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COURSE:

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COLLEGE OF COMPUTING & INFORMATION SCIENCES

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1. INTRODUCTION

1.1 Purpose

- The E-Commerce Website (ECW) web application is supposed to provide complete solutions for customers as well as administrators through a single platform using the internet as a sole medium. It will enable customers to purchase online products without visiting the shop physically. They can choose product to add to cart and wish list. The administration module will enable a system administrator to approve and reject requests for new orders by the customer of (ECW) and maintain various lists of items in categories.
- This document is meant to discuss the features of (ECW), so as to serve as a guide to the developers on one hand and a software validation document for the prospective client on the other.

1.2 Scope

- Initial functional requirements will be:
- Secure registration and profile management facilities for users and customers. Authentication and validation are not fully implemented in ECW.
- Browsing through the E-store to see the items that are there in each category of products like Men's, Women's, Electronics and sports (Stock maintaining).
- Adequate searching mechanisms for easy and quick access to particular products and services. Machine learning will be implemented to enhance the functionality of ECW as soon as possible (Searching technique of AI will be implement as soon as possible).
- Shop owners maintain the records of the items that are popular in each category for maintenance of the website.
- Maintaining and monitoring the database of regular customers for

different needs of products which are selling more rapidly. Frequent demand product will be crawl from other online stores and give admin suggestion to add those products in its own website (Not implemented)

Initial nonfunctional requirements will be:

- We assure security for confidential data (user's details). Sessional security is maintained but not the database security.
- We are available 24/7 to facilitate our web and customers.
- We have Better component design to get better performance at peak time; we are ready to handle server traffic.
- We have Advertisement space to effectively catch the customer's attention and as a source of revenue. ECW also allow customers filter searching.
- In addition to the above mentioned points, the following are planned to be delivered if seemed necessary:
- Dynamic price model by which prices can be changed based on demand and supply
- This list is by no means, a final one. The final list will be dictated by implementation constraints, market forces and most importantly, by end user demands.

1.3 Audience Definitions, Acronyms and Abbreviations

1.3.1 Audience Definitions

The intended readers of this document are the developers of the site, testers, website owners, managers and coordinators.

1.3.2 Acronyms and Abbreviations

Acronym	Meaning
ECW	E-Commerce Website
C#	C#.Net MVC 5

SQL	SQL Server 2012
HTTP	Hypertext Transfer Protocol

1.4 References

- IEEE 830-1998 standard for writing SRS document.
- *Fundamentals of Software Engineering*

1.5 TECHNOLOGIES TO BE USED

- Programming languages:
- C#: C#.Net is a programming platform– part of the MVC 5 framework for developing and running distributed multi-tier architecture web application
- HTML, XML: Hyper Text Markup Language and Extensible markup Language are the predominant markup languages for web pages. It provides a means to describe the structure of text-based information in a document and to supplement that text with interactive forms, embedded images, and other objects.
- **Java Script:** JavaScript is an object orient programming language designed to make web development easier and more attractive. In most cases, JavaScript **is used** to create responsive, interactive elements for web pages, enhancing the user experience.
- SQL Server: SQL server is used to create Database **Tools & Development Environment**
- Microsoft Visual Studio: Microsoft Visual Studio is a toolkit which is designed for the creation of complex projects, providing fully dynamic web application.

1.6 Overview

The rest of this SRS is organized as follows:

- Section 2 gives an overall description of the software. It gives what level of proficiency is expected of the user, some general constraints while making the software and some assumptions and dependencies that are assumed.
- Section 3 gives specific requirements which the software is expected to deliver. Functional requirements are given by the use case.
- Section 4 describes the various interfaces and possible scenarios.

2. Overall Description

2.1 Product Perspective

- ECW is aimed towards the vendors who want to reach out to the maximum cross-section of customer and common people who can be potential customer. This project envisages bridging the gap between the seller, the retailer and the customer. ECW should be user-friendly, 'quick to learn' and reliable software for the above purpose. ECW are intended to be a stand-alone product and should not depend on the availability of other software. It should run on both UNIX and Windows based platform.

2.2 Product Functions

- User: Administrator
- Functions: The Administrator is the super user and has complete control over all the activities that can be performed. The application notifies the administrator of all customer order requests, and the administrator can then approve or hand over the order to the supplier. The administrator also manages the list of available product categories.

- User: Customer/Guests
- Functions: A Customer can browse through the shops and choose products to place orders according to the categories present in the website.
- On the behalf of frequently access product system will recommend products to customers (not implemented).
- To place an order, the customer is prompted to login.
- User: Employees
- Functions: Purchase department under a Purchase manager to overlook purchasing activities if warehousing needs arise.
- Functions: Sales department under a Sales manager who will look after the sale of products and services, the most important activity.
- Functions: Accounts department under an Accounts manager to look after the accounting activities of the enterprise.

Different departments (i.e.: account, sales, purchase) are not implemented separately.

2.3User Characteristics

- The user should be familiar with the E-Commerce web related terminology like Sign out/Check out/add to cart/add to wish list etc.
- The user should be familiar with the Internet.

2.4Constraints

- There is maintainability of back up so availability will get affected.
- Limited to HTTP/HTTPS.
- Real-life credit card validation and Banking system is not implemented.
- No multilingual support

2.5 Operating Environment

- The ECW is a website that shall operate in all famous browsers, for a model we are taking Microsoft Internet Explorer versions 7.0, 8.0 and 9.0 .And Google Chrome

3. Specific Requirements

3.1 Functional Requirements

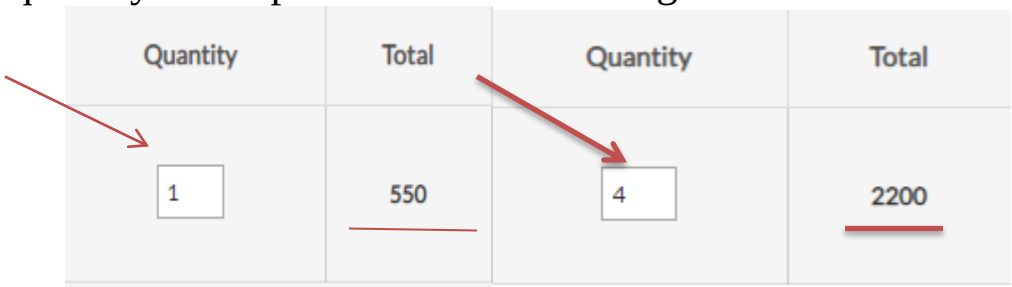
1. Administrator:

- **Database Management:** Control the database and keep track of all records of customers, orders, products and employee details.
- **Buying From Vendors:** Contact with the vendors and buy products from them to sell products under the site after testing the product's quality.[Not implemented]
- **View all details:** View the details of all employees and control the whole site.
- **Advertising the Site:** Advertisement is not included.
- **Supplier:** Admin can assign ordered products to relative supplier.
- **Search:** Admin can search in his panel.
- **Rejection of Orders:**
  Admin can reject orders in case of any disruption.
  .

2. Customers:

- **Login:** Customers must have a valid login id to enter into the site.
- **Registration:** New users can sign up by creating new ID.
- **View and edit Own Details:** Can view/edit his personal details, payment details.
- **Choosing and comparing products:** Can view all available products and can compare them and make a choice for purchasing products.

- **Checkout:** Can check out any product choosing payment method (i.e Credit Card, Cash on Delivery or through online banking system)
- **Giving Feedback to Customer Care:** Can give feedback to the 24X7 Customer Care Service center about their impression for the site and services.[Not implemented]
- **Add a Product Review:** Customer must logout of the site after purchasing products.
- **Logout:** Customer must logout of the site after purchasing products.
- **Add to Cart:** Customer can add products to their carts.
- **Add to Wish List:** Customer can add products to their wish list.
- **Search Products:** Customer can search products of their desired choice.
- **Change Quantity of Products:** Customer can change the quantity of the products while ordering.



- **Consulting with Administrator:**
  User can consult with the Administrator regarding product's quality and orders through email.

3. Visitors:

- **Visiting the Site:** Can only visit the site without registration.

4. Sales Manager:[Not implemented]

- **View customer details:**
  View the personal details of the customer.
- **Managing Sales to Customers:**

Responsible for properly allocating the selected product according to the customer's choice and delivering product to the customer.

- **View Product Stocks:**
  Administrator keeps track of each product item's stocks for selling purpose through website.
- **Contacting with Administrator:**
  Responsible for informing administrator when any product item's stock goes under the minimum level.

5. Purchase Manager: [Not implemented]

- **Consulting with Administrator:**
  Taking permission from the Administrator for the product to be purchased from vendor.
- **Product Stock Management:**
  Responsible for managing stocks of each product items.

6. Accounts Manager:[Not implemented]

- **Regulating Payments:** Keep track of all the payment transactions made by the customers and update the payment information.
- **Consulting with Banks:** Responsible for contacting the banks for the validation of the a/c number provided by the customer while purchasing and make the transaction from the given a/c.(not implemented)
- **Consulting with Administrator:** Consult with the Administrator about the payment details of the customers for the updating of the database.

7. Customer Care: [Not Implemented] only Product Reviews will receive.

- **Getting Feedback from the Customers:**
  Responsible for receiving complaints, queries and feedback from the customers.
- **Providing Solutions to Customers:**
  Provide feasible solutions to the customers on their complaints and queries.

3.2 Non-functional Requirements

3.2.1 Hosting the Website

- Website will be hosted on a specific domain which fulfills your system requirement.
- Domain names are bought through Domain Name Registrars, companies that manage the reservation of domain names and point them to your website.

3.2.2 Performance Requirements

- The system shall accommodate high number of items and users without any fault.

  Responses to view information shall take no longer than 5 seconds to appear on the screen.

3.2.3 Safety Requirements

System use shall not cause any harm to human users.

3.2.4 Security Requirements

- System will use secured database.
- Normal users can just read information but they cannot edit or modify anything except their personal and some other information.
- System will have different types of users and every user has access constraints.

3.2.5 Error handling

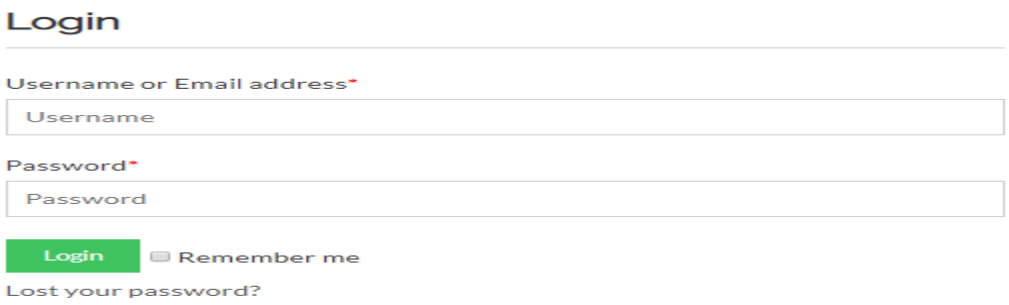
- ECW shall handle expected and non-expected errors in ways that prevent loss in information and long downtime period.

4. Interfaces Possible Scenarios

4.1 Customer's Interface:

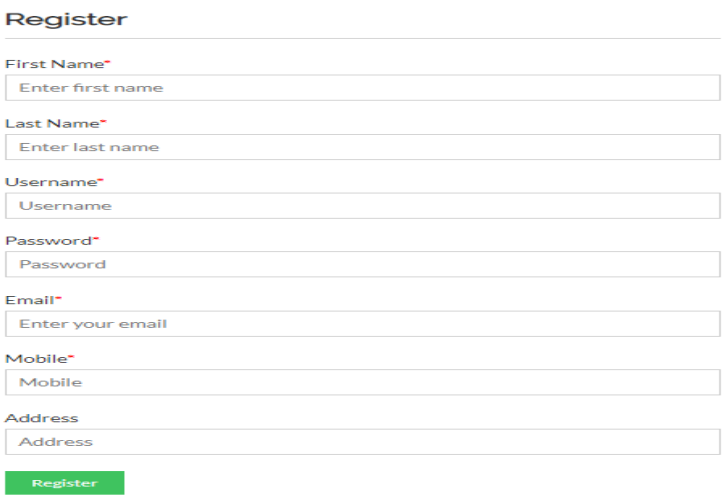
4.1.1 Login:

- This interface will consist of two compulsory fields namely, "User Name" and "Password". There will also be options for "New User's Registration" which will redirect to "Registration" If the password entered is correct the Main User Interface opens up else an error message is displayed.



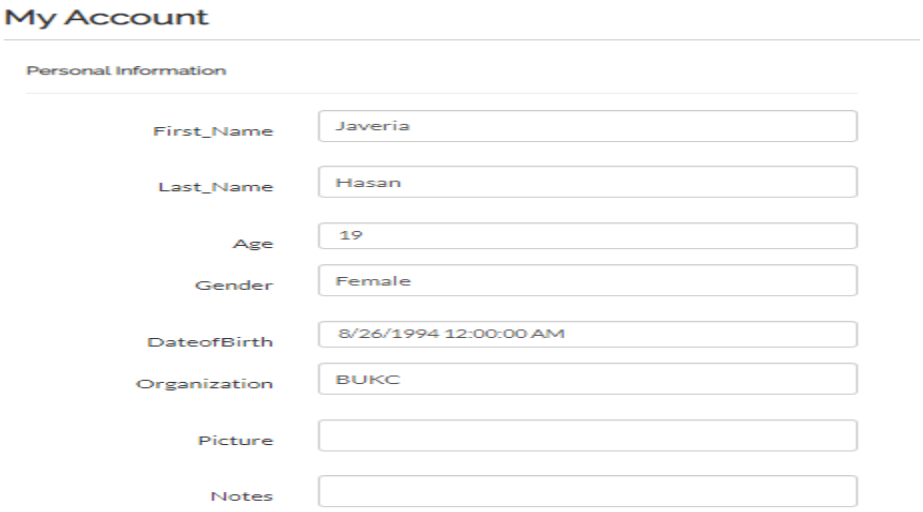
4.1.2 Registration Interface

- The user will enter his personal details like Name, User Name, Email, Password, Mobile Number, Address etc.
- Users will be warned about any mistakes on data format or any other constrains by validation notes and error messages.
- When the button "save" button is clicked, the server will check if the username or email is already taken and alert the user.[Not implemented]
- If everything is entered correctly and saved a new user will be created.



4.1.3 Personal Data Editing

- If any member wants to change his personal information he can enter his profile by clicking on Account title at the top of the main page and he will be directed to the personal details editing page.

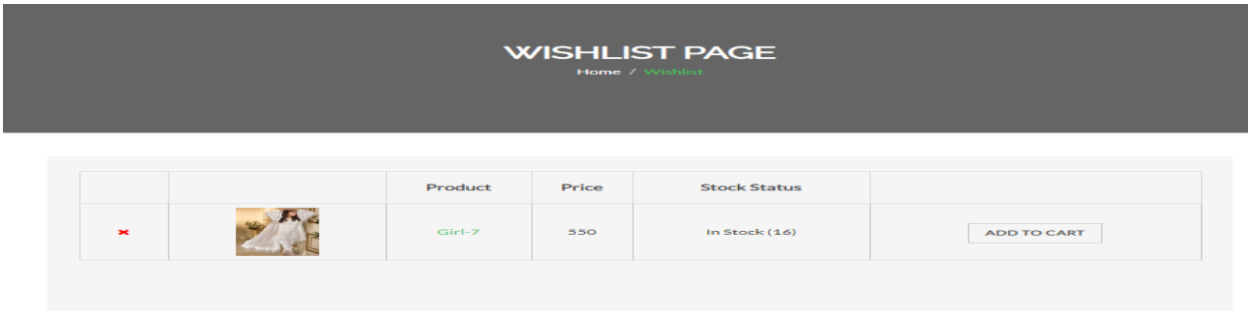


4.1.4. Search

- The customer can enter the type of item he is looking for and the specifications he is interested in them he can click on "Search". User can also use advanced search for more options.

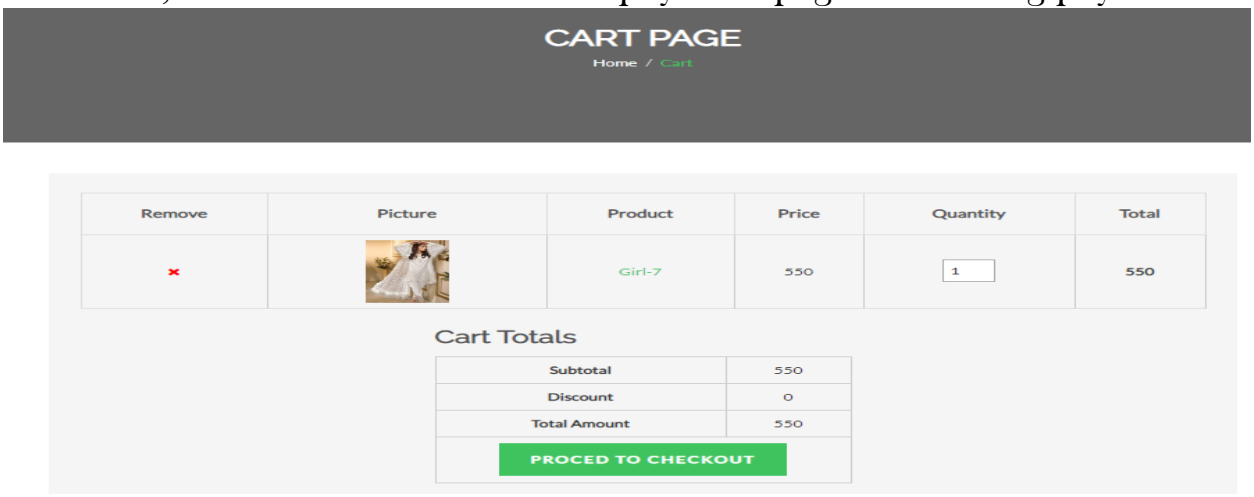
4.1.5 Add as Wish List

- The user can shortlist his/her favorite item as a wish list for future reference.



4.1.6. Shopping Cart

- This will be a space for the customer where he/she can store the items he/she wishes to buy. The user can also remove items from cart prior to checkout. Once the user decides to buy the items it cart, the user is directed to the payment page for making payment.

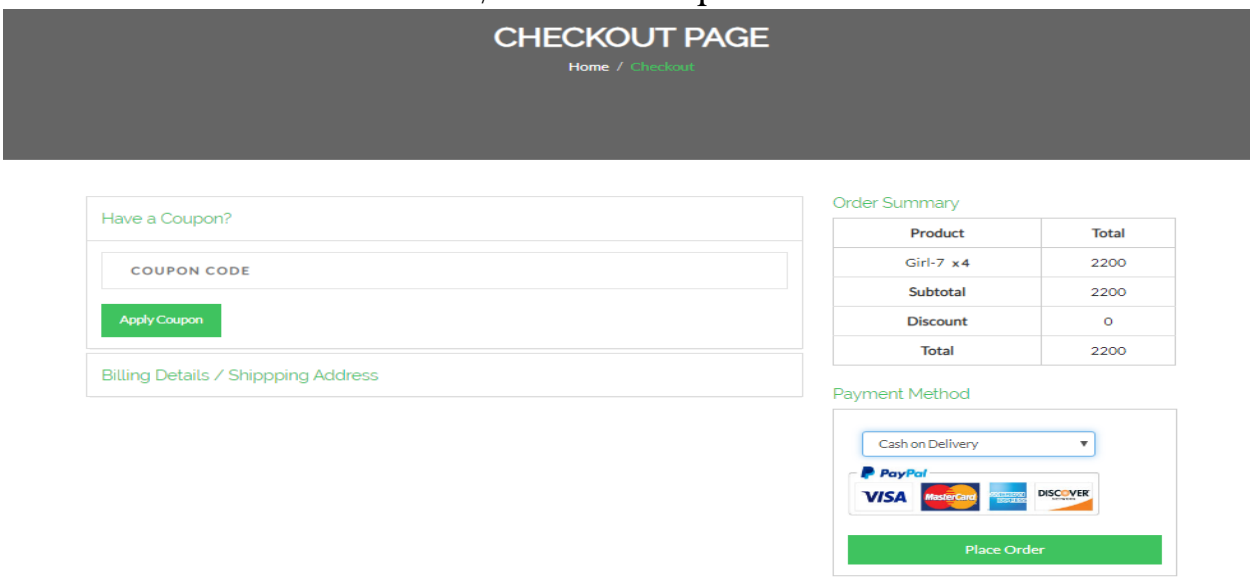


4.1.7 Payment

- The user given options with various modes of payment (online payment through credit/debit cards, via net or mobile banking or cash on delivery) out of which he chooses one. The chose mode of transaction is carried therefore by proper verification and authentication of bank details.

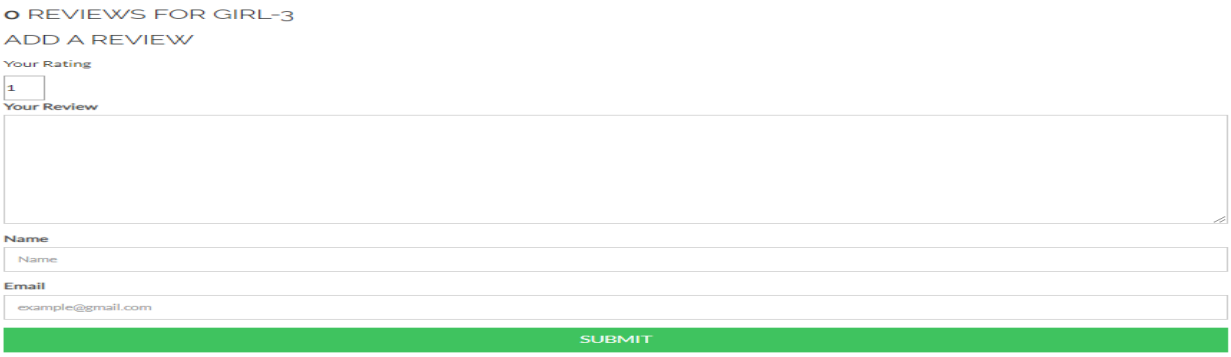
4.1.8 Checkout

- The user can order his/her desired products.



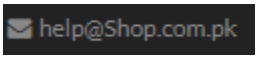
4.1.9 Add a Product Review

- The user can add his/her review about their desired products.



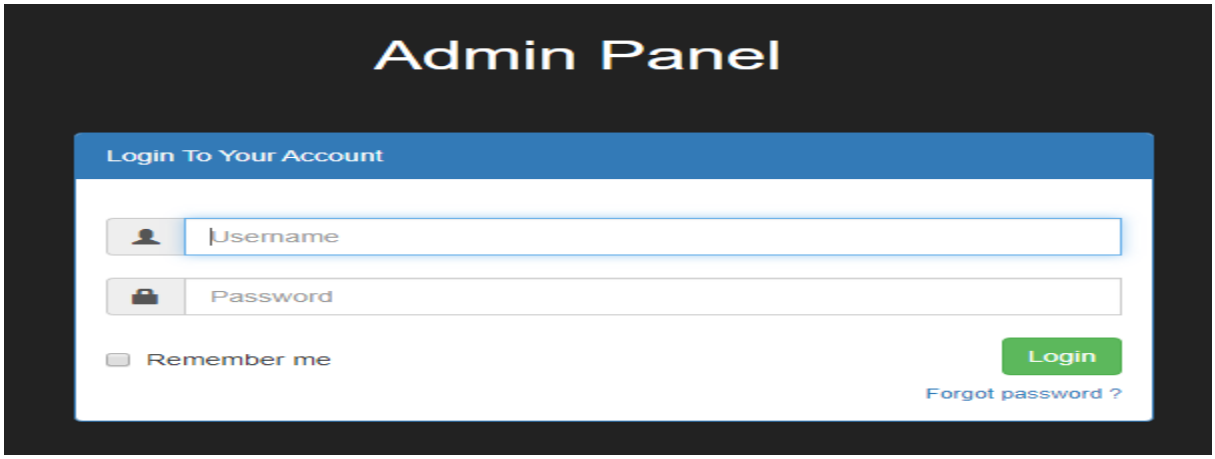
4.1.10 Support

- The user can contact with the customer care via phone call or via messages. User can ask for assistance or can give feedback on a particular aspect. Customer can contact only through email.



4.2 Interfaces for Admin

- The Admin will have a different login id using which he can access his account that contains a control panel that allows him to maintain shop etc. The administrator will have a different login id using which he can access his account that contains a control panel that allows him to contact each and every aspect of the system.

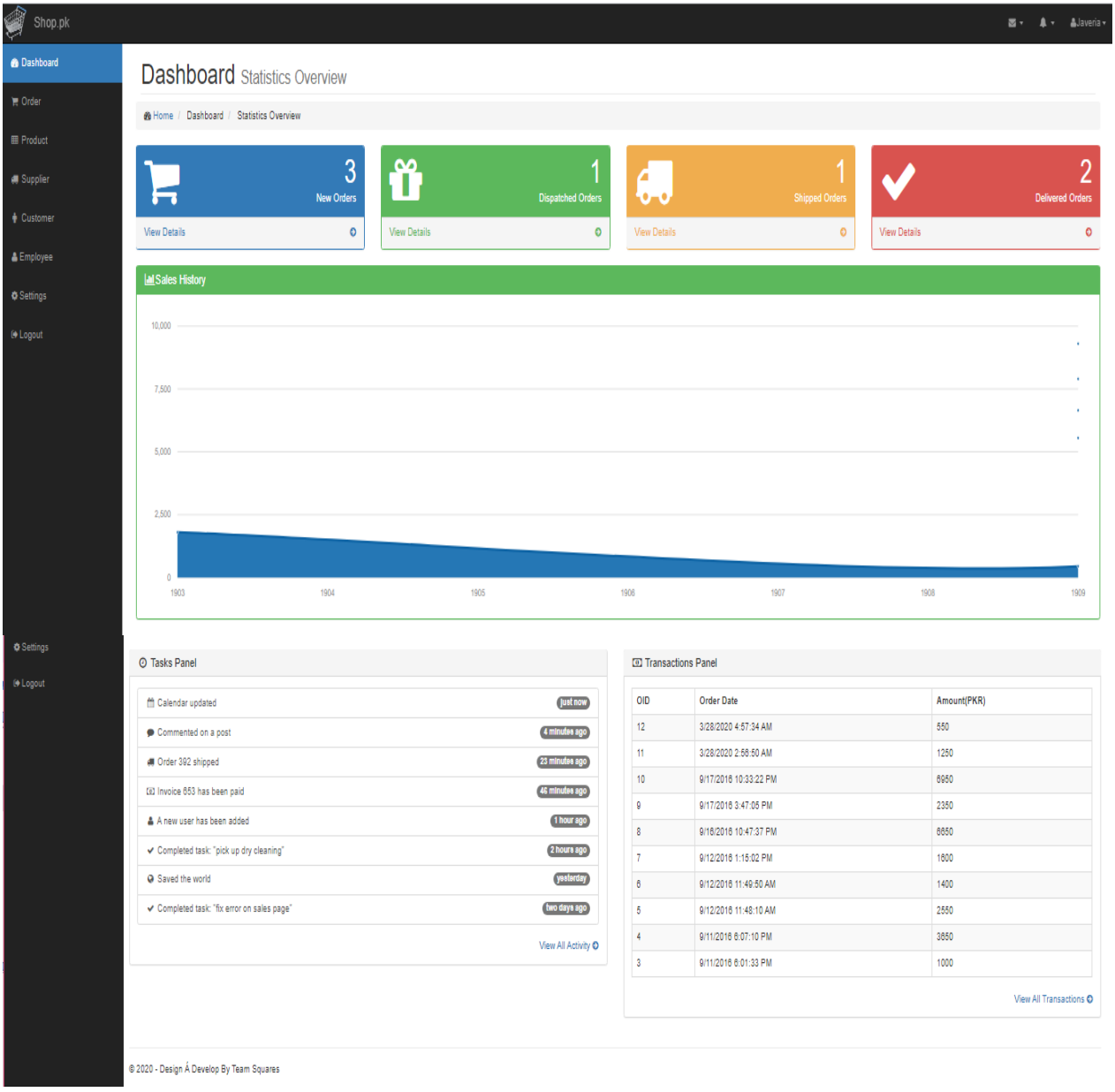


- [Different interfaces for admin is not implemented]

This control panel will allow the shop owner to do the following things:

- Add/Remove/Update products, suppliers, categories and vendor.
- Edit his own profile.
- Add/Remove items. The corresponding changes will be done in the database by the Admin.
- Check Orders.
- Generate a sales report.
- Change the theme of website.
- Discontinue the shop.
- Access and view the customer database.
- Access and view the database of vendors go through their requests for shop creation and reply them back with acceptance /dismissal of their request.
- Access and view the employee database and manage them.

- Make the catalog (that is visible to the customers), taking the design of corresponding shop owners in consideration.
- Grant/ Reject purchase permit to purchase manager.
- Manage employee salary.
- Contact employees.
- Can add category to the web.



4.3 Interfaces for Sales Manager [Not Implemented]

- The sales manager will have a different login id using which he can access his account that contains a control panel that allows him to contact the administrator and manage sales.

This control panel will allow the sales manager to do the following things:

- Maintain the product database so that the same or different kinds of products are properly maintained with their unique id, so that when a customer orders a product, the same product gets allocated without causing any inconsistency to the database.
- Generate current order shipping status and upload it time to time and provide an expected delivery date. In case a user cancels a particular order, the same is taken care of by the sales manager and proper order status is changed and reflected back.
- Promote sales by associating products with offers and discounts.
- Contact the admin.

4.4 Interfaces for Accounts Manager [Not Implemented]

- The Accounts manager will have a different login id using which he can access his account that contains a control panel that allows him to contact the administrator and manage various transactions and accounts.

This control panel will allow the Accounts manager to do the following things:

- Keep track of payment transactions differentiated by their unique id and associated with corresponding user and update payment information.
- Contact he bank for account validation.(not implemented)
- Contact Administrator.

4.5 Interfaces for Purchase Manager [Not Implemented]

- The Purchase manager will have a different login id using which he can access his account that contains a control panel that allows him to contact the administrator and manage various purchases for the warehouse.

This control panel will allow the Purchase manager to do the following things:

- Whenever the stocks in warehouse goes under a critical value, the system alerts the purchase manager about it and he contacts the administrator seeking permission to make a purchase from a particular vendor.
- Contact a vendor for making a purchase.

4.6 Interfaces for Customer Care Not Implemented]

- A customer care employee will have a different login id using which he can access his account that contains a control panel that allows him to contact the administrator and manage various queries and feedbacks from the customer.

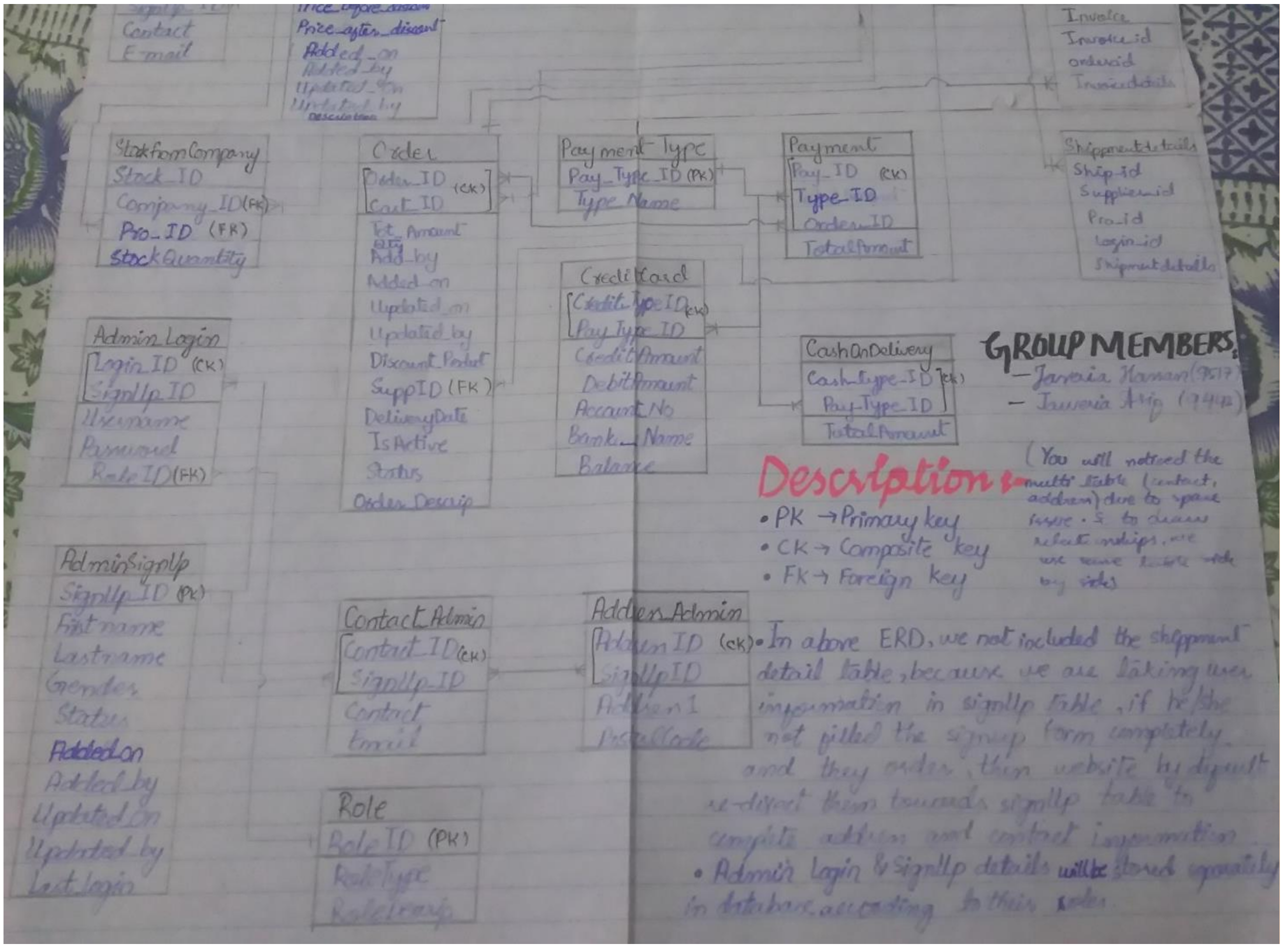
This control panel will allow a customer care employee to do the following things:

- Read feedbacks from a particular customer and let the administrator know about it.
- Provide solutions to the queries posted by the customer.
- Contact administrator.

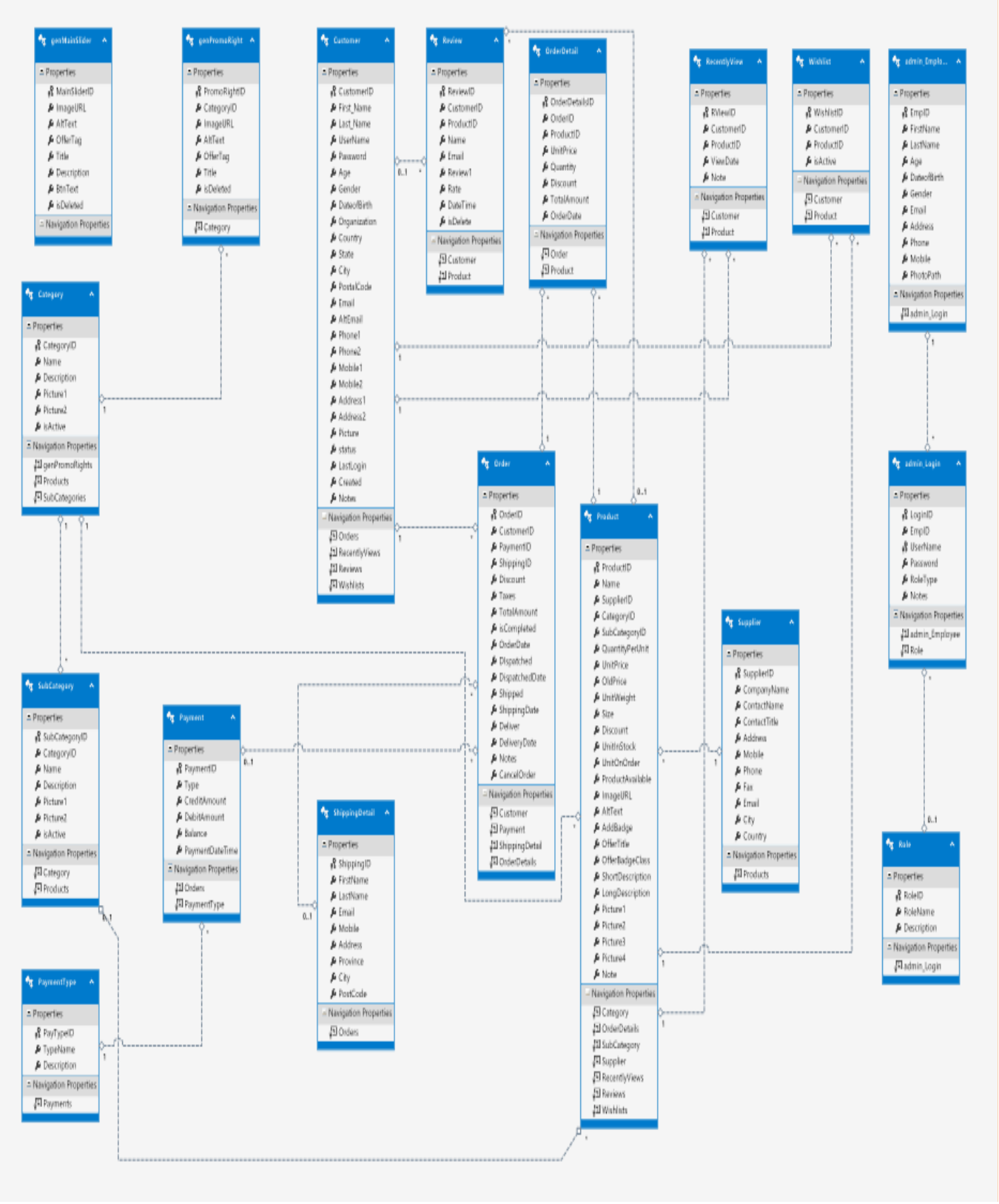
ANALYSIS & DESIGN SPECIFICATION:

1. GENERAL ERD DIAGRAM:

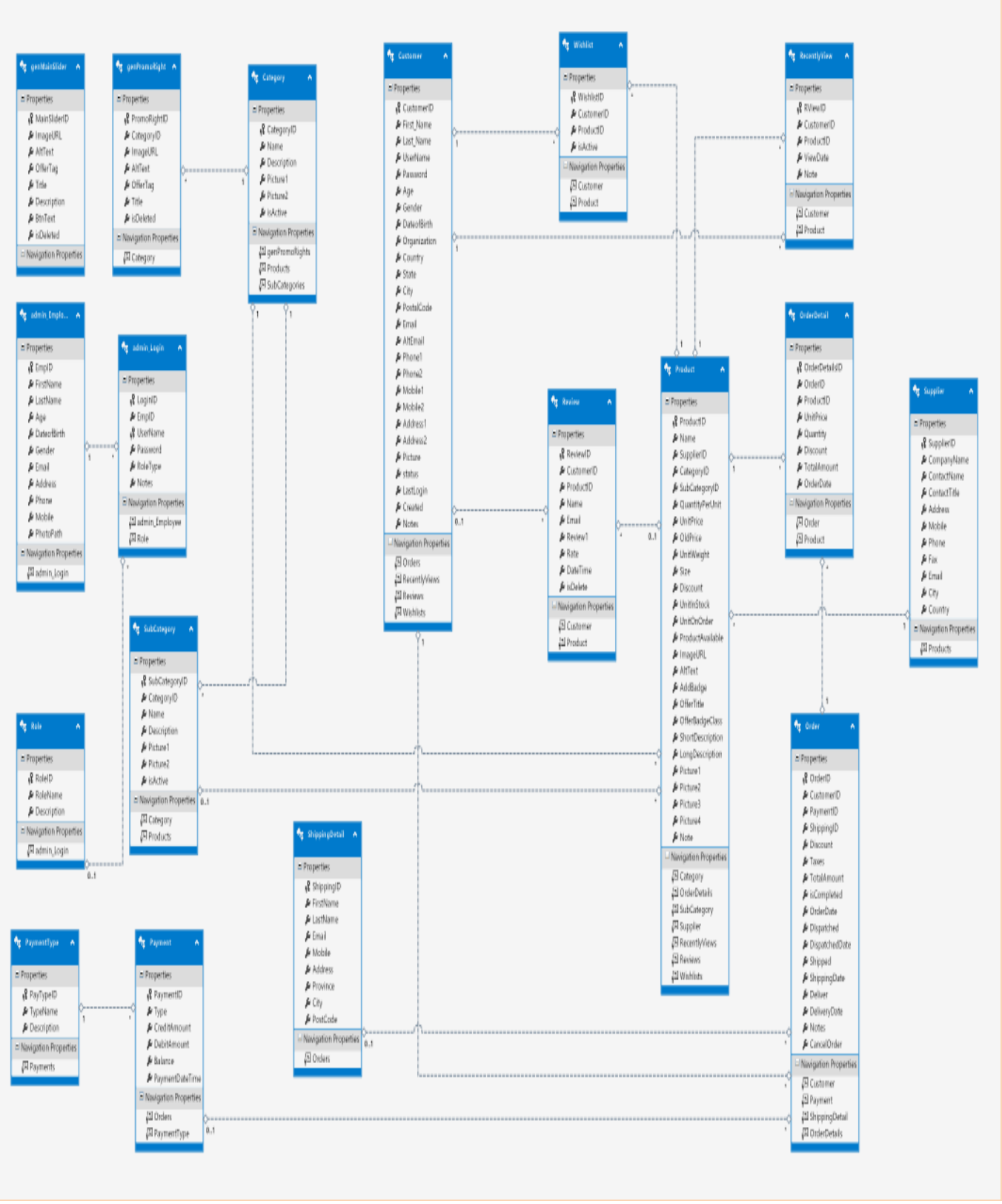
An **entity relationship diagram** (ERD) shows the **relationships** of **entity** sets stored in a database. ... By defining the **entities**, their attributes, and showing the **relationships** between them, an **ER diagram** illustrates the logical structure of databases. **ER diagrams** are used to sketch out the design of a database.


Contact
E-mail
Price_after_discount
Added_on
Added_by
Updated_on
Updated_by
Invoice
Invoice id
StockfromCompany
Stock_ID
Company_ID(FK)
Pro_ID (FK)
Stock Quantity
Order
Order_ID (CK)
Cart_ID
Added_on
Updated_on
Updated_by
SuppID (FK)
DeliveryDate
IsActive
Status
Order_Descrip
Payment_Type
Pay_Type_ID (PK)
Type_Name
Payment
Pay_ID (CK)
Type_ID
Order_ID
TotalAmount
Shipment details
Ship_id
Pro_id
Login_id
Admin Login
Login_ID (CK)
SignUp_ID
Username
Password
Role ID (FK)
CreditCard
Credit_Type_ID (CK)
Pay_Type_ID
CreditAmount
DebitAmount
Account_No
Bank_Name
Balance
CashOnDelivery
Cash_type_ID (CK)
Pay_Type_ID
TotalAmount
GROUP MEMBERS
Description
• PK → Primary key
• CK → Composite key
• FK → Foreign key
AdminSignUp
SignUp_ID (PK)
First name
Lastname
Gender
Status
AddedOn
Added_by
Updated_On
Updated_by
Last login
Contact Admin
Contact_ID (CK)
SignUp_ID
Contact
Email
Address Admin
Address ID (CK)
SignUpID
Address1
PostalCode
Role
Role ID (PK)
RoleType
• In above ERD, we not included the shippment detail table, because we are taking user information in signUp table, if he/she not filled the signup form completely and they order, then website by default re-direct them towards signUp table to complete address and contact information.
• Admin login & SignUp details will be stored separately in database according to their roles.

PROJECT ERD DIAGRAM (ADMIN_SIDE):



PROJECT ERD DIAGRAM (CLIENT_SIDE):



2. USE-CASE SPECIFICATION/FLOW OF EVENTS DOCUMENTS:

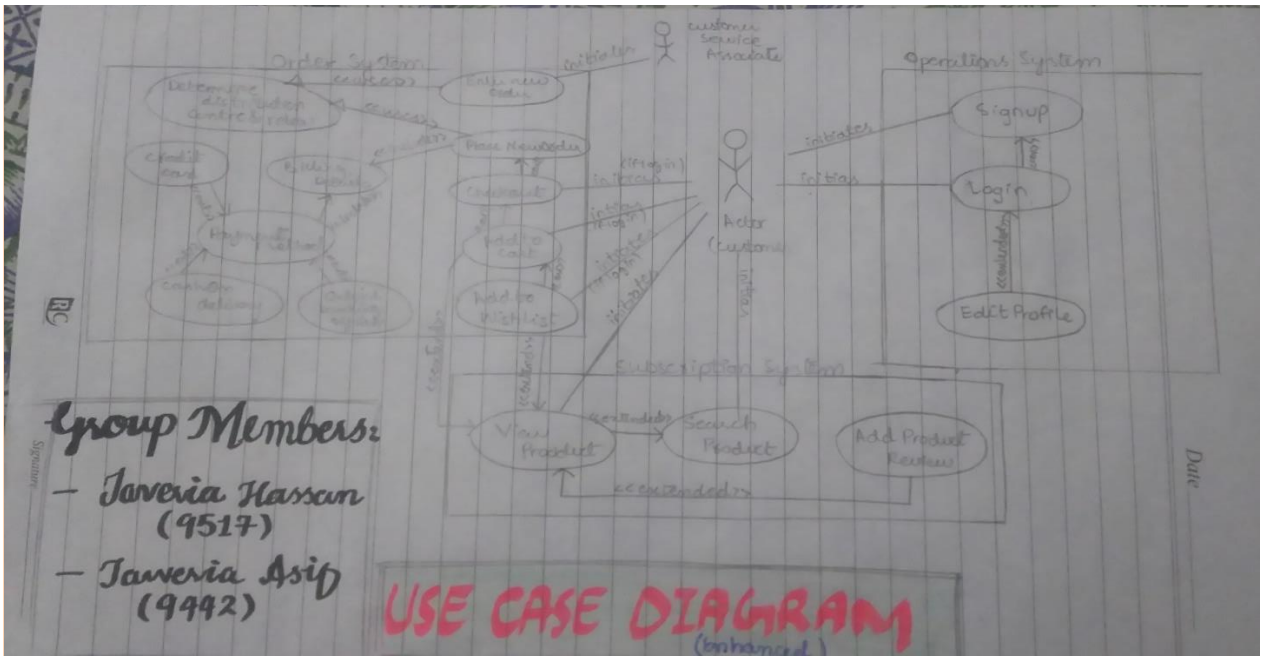
From the functional and non-functional requirement list we prepare the use case diagrams followed by the description in the flow-of-event documents. Having identified use cases and actors from the requirement list, a use case diagram can be constructed. A use case diagram is meant to show relationships between use cases and actors. The relationships may include extend, include and association. Association provides a communication path among use case components. The extend is extension points where behavior may be customized and it indicates that a use case is providing a customization of another use case. The 'include' means a must relationship.

A use case diagram only shows relationships between use cases and actors. The textual information of a use case provides details about the flow of events that occur when carrying out its task. This information can be depicted graphically with an activity model later on.

3. USE-CAS DIAGRAM:

Each use case (denoted by an ellipse) represents a complete unit of functionality that is required by an actor. An actor (denoted by a stick man) is any entity that interacts with our system; typically a human, but could also be an external software system. Since actors are external to the system, use cases document outwardly visible and testable system behavior.

Some use cases may not interact directly with actors instead, they support other use cases. In particular, if several use cases each share a common Task, it makes sense to encapsulate the common task in its own separate use case. For example in our project, is Authenticate User use case diagram, we show customer interactions with our system, login to and log-off from the system. A use case diagram is a visual representation of actors and use cases. The use case diagram must obey the standard rules such as naming convention and uncluttered relationship.



USE CASE NARRATION

E_COMMERCE SHOP

Author: Javeria Hassan
Jaweria Asif

Date: 16-April-2020
Version: 02

Use Case Name:	**Place New Order**	**Use Case Type:** ○ ***Business Requirement*** ○ ***System Analysis***
Use Case ID:	01	
Priority:	High	
Source:		
Primary Business Actor:	○ ***Customer*** (Alias, Login) Registered User ○ ***Customer*** (Alias, Place Order) Registered User	
Primary System Actor:	○ ***Customer*** (Alias, Login) Check User Authentication ○ ***Customer*** (Alias, Place Order) Check User Authentication	
Other Participated Actors:	○ ***Suppliers*** (Supply customer order) (External server) ○ ***Ware House*** (Alias, Distributor)(External Server) ○ ***Vendors*** (We buy products from Vendors) (External server) ○ ***Accounts*** (External server)	
Other Interested Stockholders:	○ Marketing------ Interested in sales activity in order to plan new promotions. ○ Management--------- Interested in order activity in order to evaluate company performance and customer satisfaction. ○ Procurement ------- Interested in sales activity in order to replenish inventory.	
Description:	This use case describes the event of a customer submitting a new order to E-commerce Shop products via the World Wide Web. The customer selects the items he or she wishes to purchase, but he or she has to log in first. If he or she is not a register user then they have to sign up first. System will verify their account, and then they can add products in	

	their cart or in a wish list, Once the customer has selected products and they proceed to checkout, they filled their shipment details and select payment method, then the customer products selection as well as their payment method will be verified. Once the products are verified as being in stock and if a customer selects an online payment method, then payment should be received first otherwise a packing order is sent to ware house for it to prepare the shipment. For any product not in stock, a back order is created. On completion, the customer will receive an order confirmation.	
Precondition:	The customer submitting an order must be a registered user. The customer has to log in first, if he or she wants to place an order.	
Trigger:	This use case is initiated when a customer selects the option to enter a new order.	
Typical Course of Events:	**Actor Action**	**System Response**
	Step 1: The customer requests the option to enter a new order.	**Step 2:** System checks whether a customer is log in or not. If log in then the system show him/her the cart products, if any product is not available in cart then the system shows him/her the catalogue of products, otherwise he/she will redirect towards the sign up page.
	Step 3: The customer browses the available products and selects the ones he or she wishes to purchase, along with quantity.	**Step 4:** Once the customer has completed the selections and proceed to check out, the system retrieves from file and presents the customers demographic information (shipping and billing address).
	Step 5: The customer verifies demographic information (Shipping and billing details). If no changes are necessary, the customer responds accordingly (to continue).	**Step 6:** For each product ordered, the system verifies the product availability and determines an expected ship date, determines the cost of the total order. If an item is not immediately available, it indicates the product is back ordered or that it has not been released for shipping (for pre-orders). If an item is no longer available, that is indicated also. The system then displays a summary of the order to the customer for verification.
	Step 7: The customer verifies the order. If no changes are necessary, the customer responds accordingly (to continue).	**Step 8:** The System checks the status of the customer's account. If satisfactory, the system prompts the customer to select the desired payment option (cash on delivery, credit card or pay immediately through online banking system).
	Step 9: The customer responds by selecting the desired payment option.	**Step 10:** The system displays a summary of the order, including the desired payment option, to the customer for verification.
	Step 11: The customer verifies the order, if no changes are necessary, the customer responds accordingly (to continue).	**Step 12:** The System records the order information (including back orders, if necessary)
		Step 13: Once the order is received, the system determines the Appropriate distribution center and release order to be filled.
		Step 14: Once the order is proceed, the system generates order confirmation and displays it to the customer as well as sending

		it to the customer via email.
Conclusion	This use case concludes when a customer receive a notification of order confirmation.	
Post Condition	The order has been recorded, and if the ordered products are available, released to the distribution center. For any product not available a back order has been created.	
Business Rules	○ Customer must have a valid e-mail address to submit online orders. ○ Customer is billed for products only when they are shipped.	
Implementations, Constraints and Specifications	○ Use case must be available to the customer 24/7. ○ Frequency- It is estimated that this use case will be executed 3,500 times per day. It should support up to 50 concurrent customers.	
Assumptions	○ Product can be transferred among distribution centers to fill orders. ○ Procurement will be notified of back orders by a daily report (separate use case).	
Open Issues	None.	

CLASS DIAGRAM:

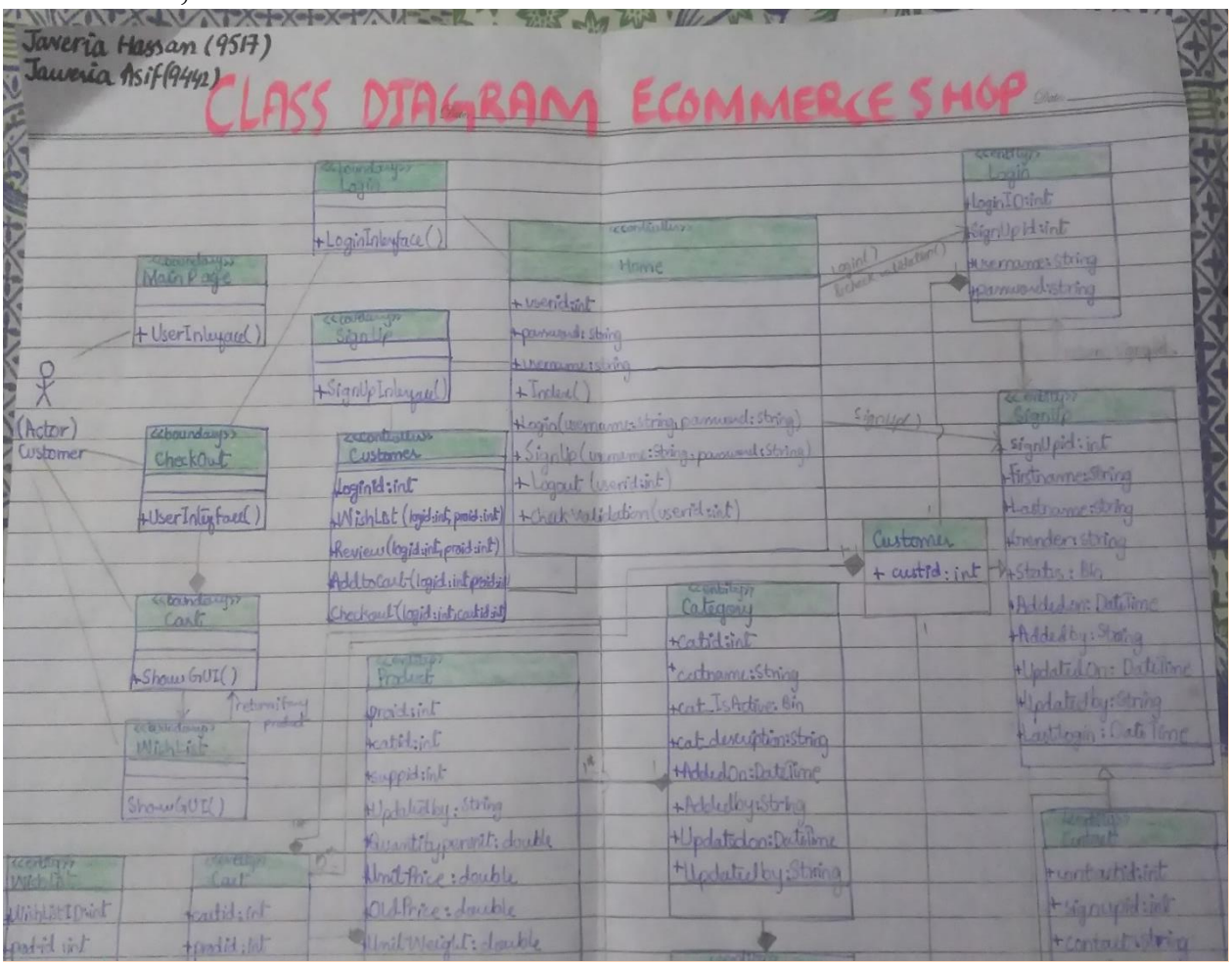
A class is the description for a set of objects with the same attributes and operations. It serves as a template for object creation. Each object created From the template contains the attribute values that conform to attribute types defined in the class. The step in finding the classes involve analyzing the narrative text of use cases, identifying a first-guess set of objects that will participate in those use cases and classifying these objects based on the following stereotypes:

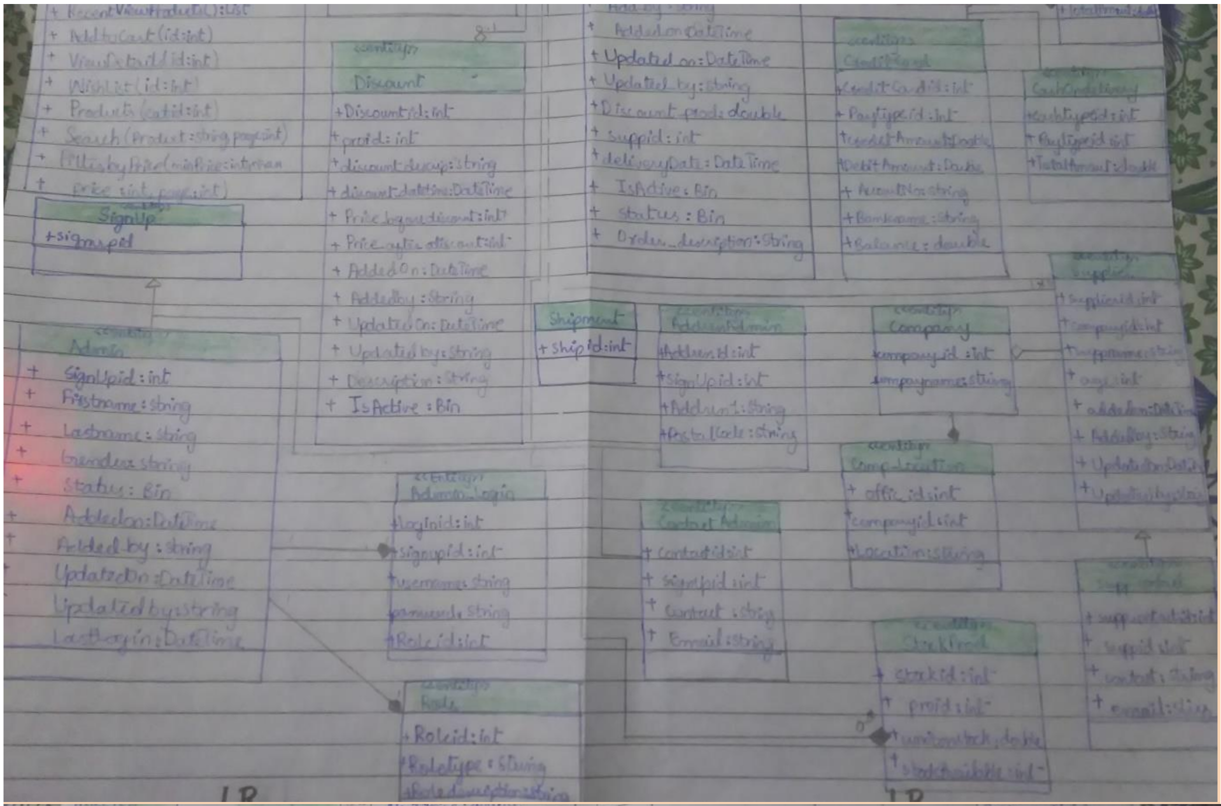
- ✓ **Boundary** or Interface objects are what actors use in communicating with the system.
- ✓ **Entity** objects are usually objects from the domain model.
- ✓ **Control** objects (which we usually call controllers because they often aren't real objects), which serve as the "glue" between boundary objects and entity objects.
- ➢ **Boundary objects** are the objects with which the actors (for instance, the users) will be interacting in the new system. These frequently include windows, screens, dialogs and menus.
- ➢ **Entity objects** often map to the database tables and files that contain the information that needs to "outlive" use case execution. Other than persistent, some of your entity objects are transient objects, such as search results, that "die" when the use case ends.
- ➢ **Control objects** (controllers) embody much of the application logic and serve as the connecting element between the users and the

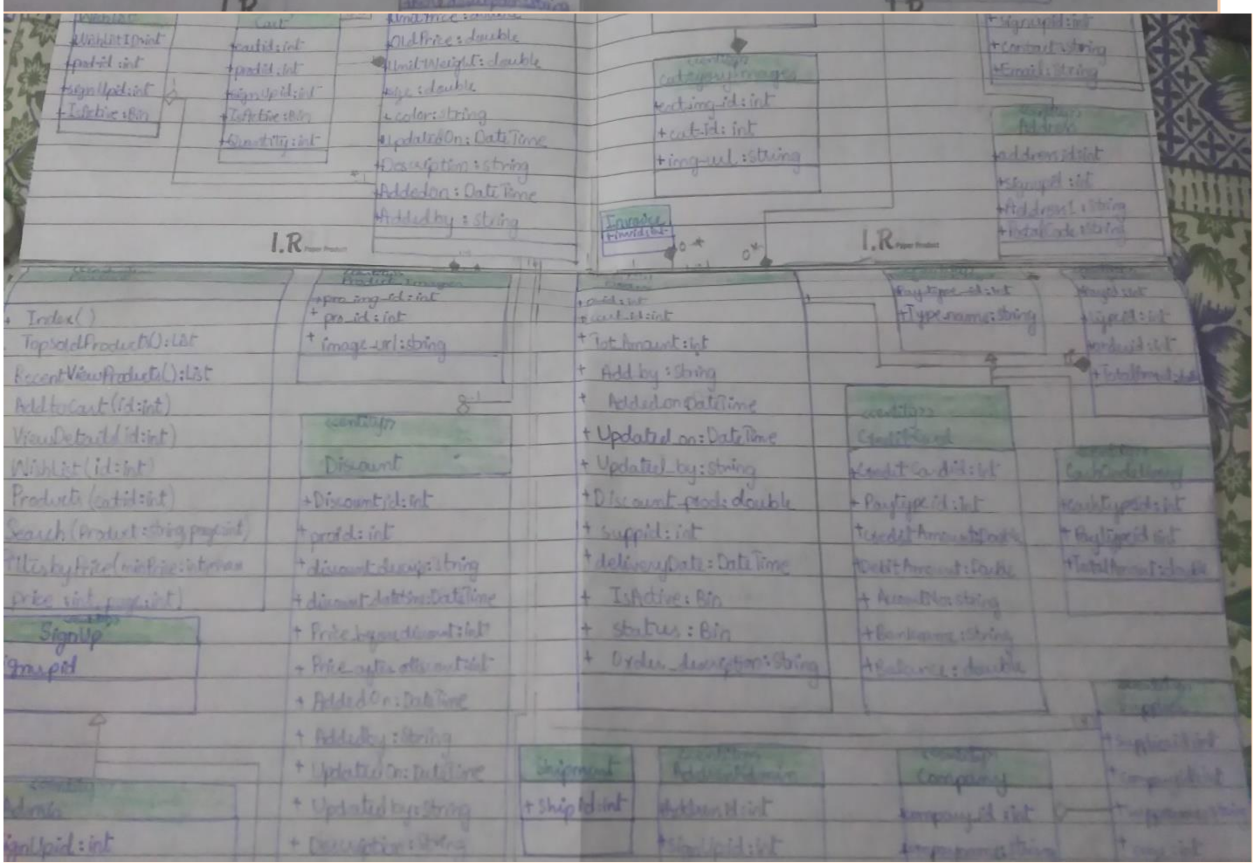
stored data. This is where you capture frequently changing business rules and policies, and localize changes to these objects without disrupting your user interface or your database schema down the line. Examples of control classes include transaction managers, resource coordinators and error handlers.

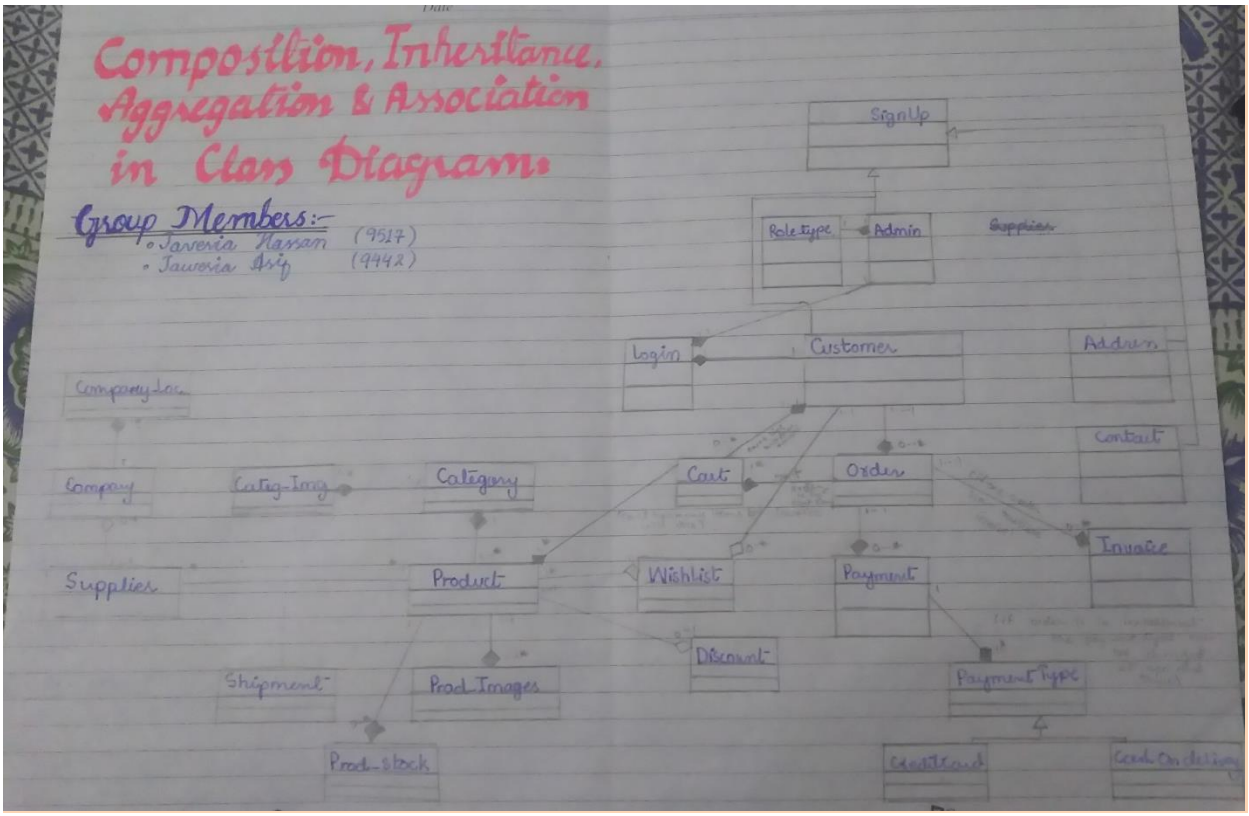
We do this by walking through the use case text, one sentence at a time, and drawing the actors, the appropriate boundary, entity objects and controllers, and the connections among the various elements of the diagram. However, four basic rules must be obeyed for this process:

1. Actors can only talk to boundary objects.
2. Boundary objects can only talk to controllers and actors.
3. Entity objects can only talk to controllers.
4. Controllers can talk to boundary objects and entity objects, and to other controllers, but not to actors.



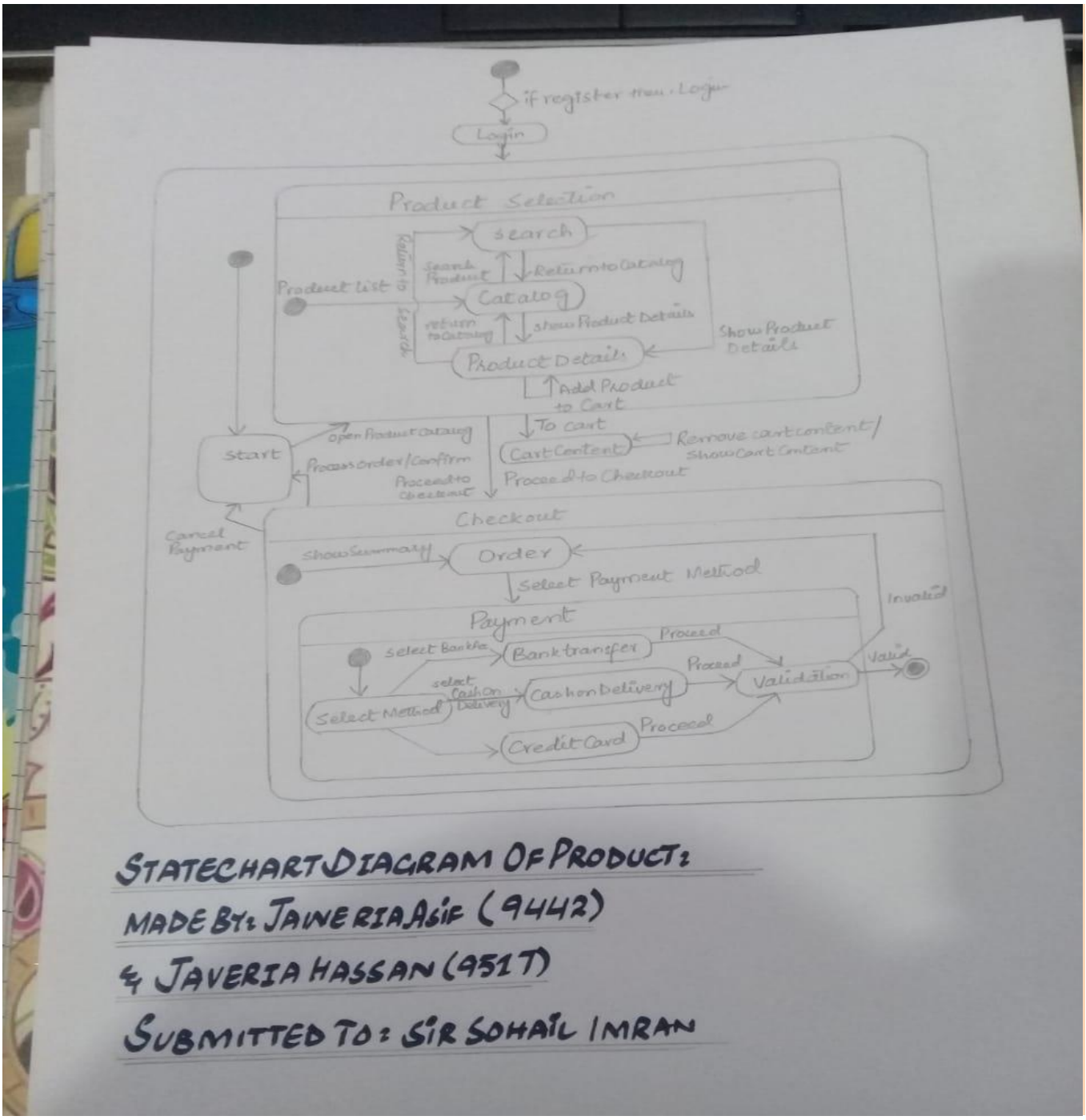

SignUp
Discount
Shipment
Company


I.R
Discount
SignUp


Composition, Inheritance, Aggregation & Association in Class Diagram.
Group Members:-
• Javeria Hassan (9517)
• Jaweria Asif (9442)
SignUp
RoleType
Admin
Supplier
Login
Customer
Addres
Company Lo...
Company
Categ-Img
Category
Cart
Order
Contact
Supplier
Product
Wishlist
Payment
Invoice
Discount
Shipment
Prod_Images
Payment Type
Prod_Stock

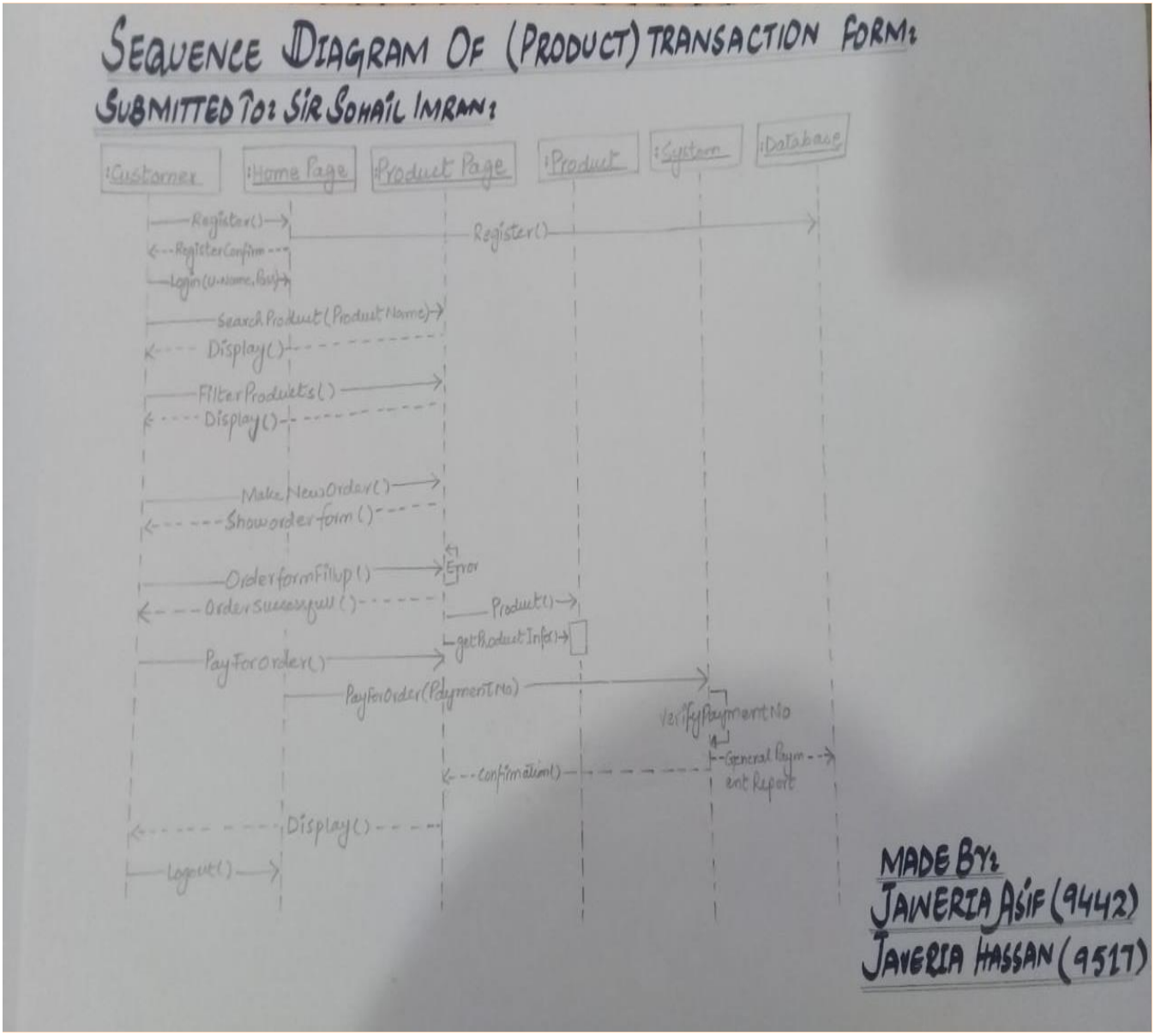
STATECHART DIAGRAM:

State chart diagram is one of the five UML diagrams used to model the dynamic nature of a system. They define different states of an object during its lifetime and these states are changed by events. State chart diagrams are useful to model the reactive systems.



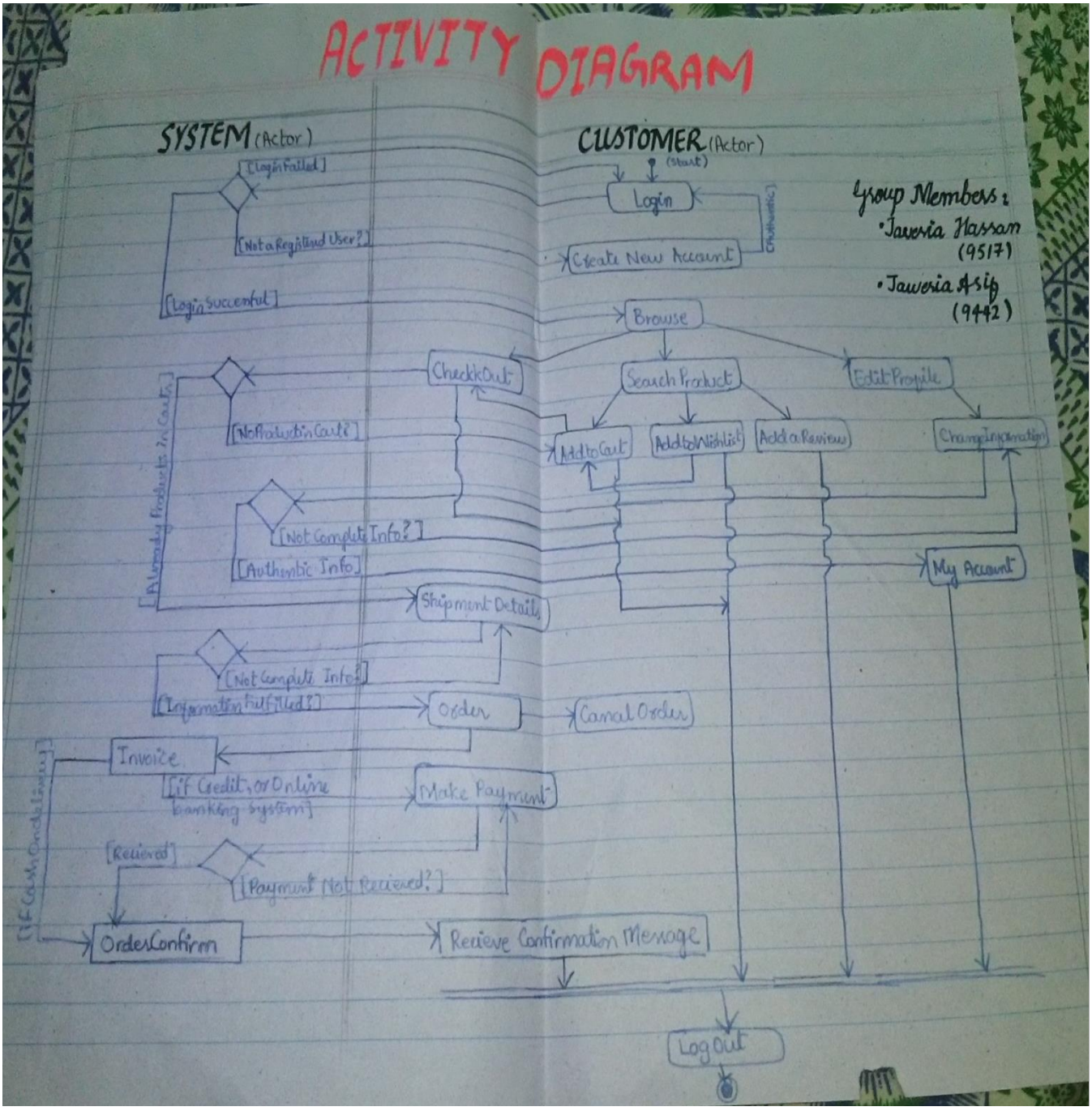
SEQUENCE DIAGRAM:

A **sequence diagram** simply depicts interaction between objects in a **sequential** order i.e. the order in which these interactions take place. We can also use the terms event **diagrams** or event scenarios to refer to a **sequence diagram**.



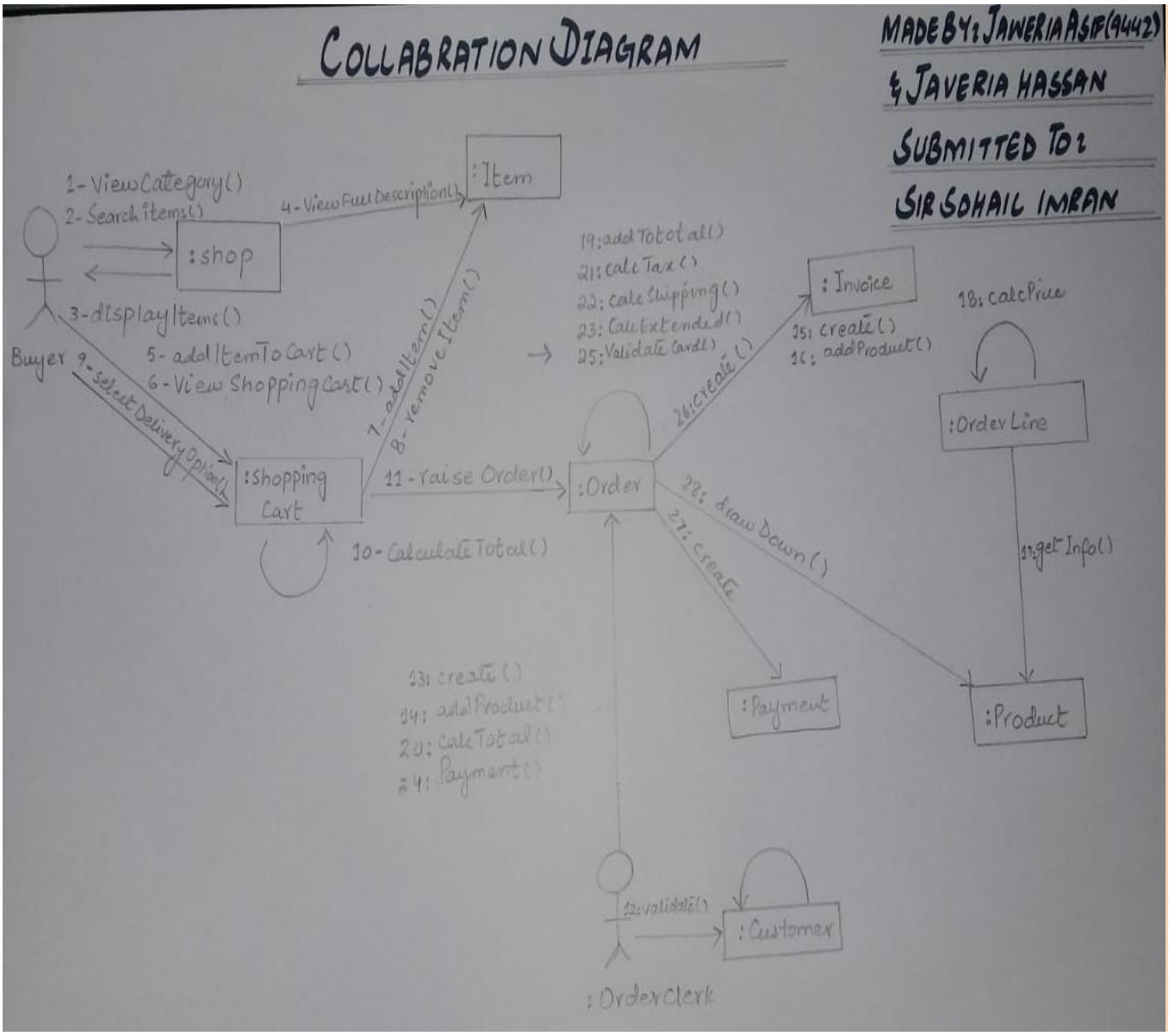
ACTIVITY DIAGRAM:

Activity diagram is another important behavioral diagram in UML diagram to describe dynamic aspects of the system. Activity diagram is essentially an advanced version of flow chart that modeling the flow from one activity to another activity.



COLLABRATION DIAGRAM:

Collaboration Diagram represents the interaction of the objects to perform the behavior of a particular use case or a part of use case. The designers use the Sequence **diagram** and **Collaboration Diagrams** to define and clarify the roles of the objects that perform a particular flow of events of a use case.



CONCLUSION:

As mentioned in the scope and objective of this project, we successfully completed the analysis and design stages of the ECW development satisfying the minimum requirements. However we are aware that our design has many shortcomings. We found that those stages need more reviews, feedbacks and comments because many tasks need to be repeated iteratively in order to get a very clean and optimized design.

REFERENCE:

- SRS template is by IEE format.
- Use case narration template referenced by OOAD by Benet (3rd Edition).
- Project hosting domain http://squareshop.somee.com/