Software Requirement Specification Document for Smart Shop

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Table 1: Document version history

Version	Date	Reason for Change
1.0	7-Aug-2022	SRS First version's specifications are defined.

GitHub: https://github.com/Sherif66/Smart-Shop

Contents

Abstract

E-commerce is fast gaining ground as an accepted and used business paradigm. More and more business houses are implementing web sites providing functionality for performing commercial transactions over the web. it is reasonable to say that the process of shopping on the web is becoming common place. sports online store is an online application where customers can purchase sport equipment .Through a web browser the customers can search for sports tool by it's brand and add through shopping cart the user can login using his account details or new customers can set up an account very quickly. They should give the details of their full name, email account , username , password..

1 Introduction

1.1 Purpose of this document

The aim of this Software Requirements Specification document is to outline the requirements of our web application to sell smart gadgets for sports enthusiasts to improve their fitness levels and keep them active and motivated during their fitness training sessions.our web application is intended to provide complete solutions for customers through a single access point using the internet. It will enable enthusiasts to setup thier sport essentials and allow customers to make their needed purchase online without having to visit the shop physically.

1.2 Scope of this document

The smart shop is designed to provide quality service to the customers and to make it possible. This provides new online store owners with a quick and simple way to set up and manage their stores. perform sales and other core business over the internet. The system requires an Internet connection and has to be designed with a database capable of maintaining inventory details. up-to-date All payments will be made in cash during the delivery or shipping of items over the internet.

1.3 Business Context

The smartphone is part of most people's daily lives. The services of the internet are growing faster than before. With the number of customers interacting with the internet increasing on a daily basis, businesses find themselves in need of a fast and reliable alternative service like online smart shop . Our system will be an addition to selling smart gadgets for sports enthusiasts to improve their fitness levels and keep them active and motivated during their fitness training sessions.[1]
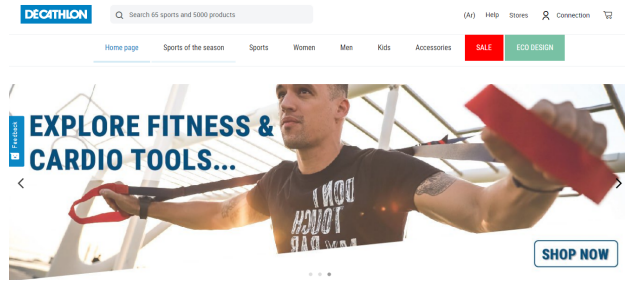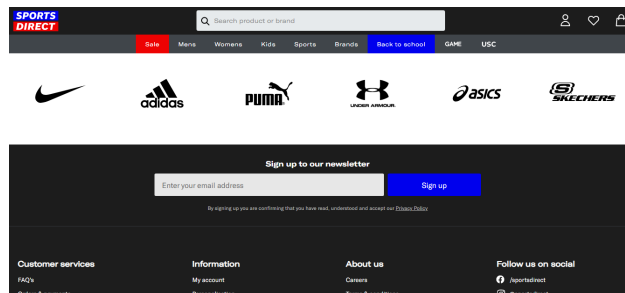
Figure 1: Home page of DECATHLON website

Figure 2: Home page of SPORT DIRECT website

2 Similar Systems

2.1 Academic

E-commerce is the utilization of digital technology to buy or sell goods via the internet. India's e-commerce is expected to raise its total income, which is now the biggest in the world, by several billion dollars by 2020. The penetration of mobile, expanding access to the internet, and the expansion of e-payments among consumers has enhanced the purchase of e-commerce goods in India. The things that dominate e-commerce shopping and are ordered using mobile phone applications include branded items like televisions, mobile phones, and computers. On the other hand, placing bids is another type of internet buying.Online Deal bidding is fun and simple. Sellers can use the website to get rid of unwanted stuff, while buyers can place bids or purchase right away. Therefore, the project's goal is to create an application that allows users to shop online by placing bids on the items they want to buy before making a purchase. Any seller that receives a sufficient bid rate may sell the item. By having the goods delivered to the customer's location, the buyer can purchase the products easily.[2]

2.2 Business Applications
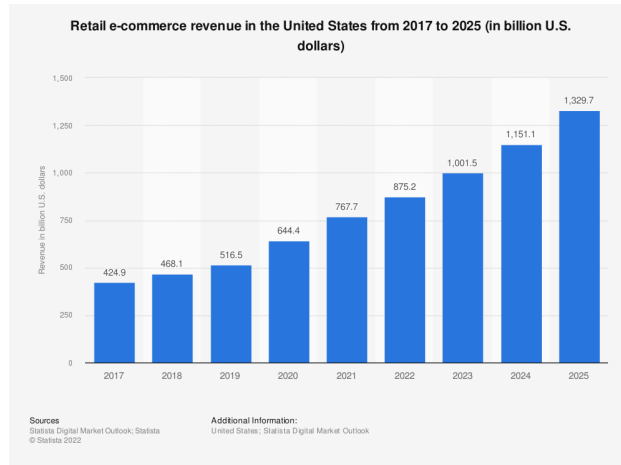
- DECATHLON

- SPORT DIRECT

Figure 3: E-commerce revenue in US

3 System Description

3.1 Problem Statement

There are numerous websites on the internet that provide a variety of goods and services that customers may find and purchase through online platforms, that includes shoes, clothing ,sunglasses and other items.Also there are other services that we provide like the online bill payment. we are examining the issue addressed in this study, which is customers' perceptions of internet shopping. However, there are various factors that prevent customers from engaging in online shopping. For example, some customers are unwilling to do so for the legitimate reason that concerned about the quality of the product available online.

3.2 System Overview

This system offers a simple way for people to purchase goods online without having to physically visit a store. It also helps coaches sell their goods. This proposed system can be used by any inexperienced users and does not require any technical skills in the field of computers or a high level of education, although it will be helpful if the user has this understanding.
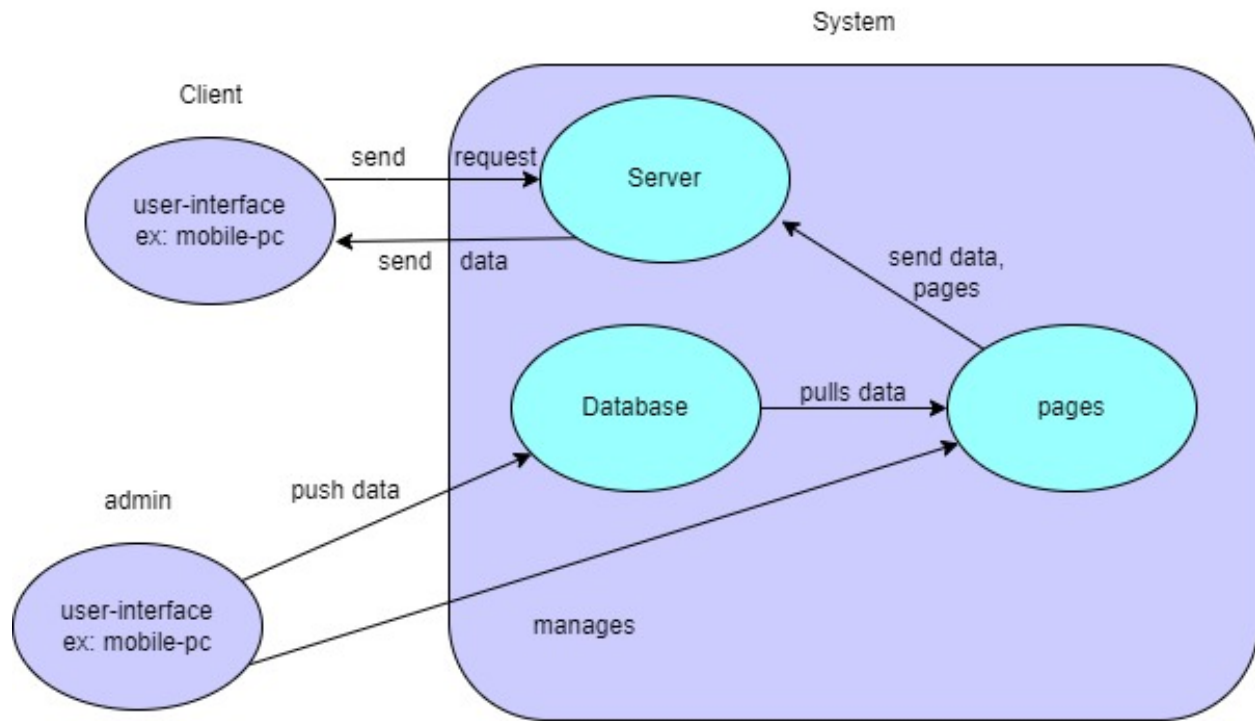
Figure 4: System Overview

3.3 System Scope

The system scope on:

- Secure registration and profile management facilities.

- Browsing through online store to see the items that are there in each category of products.

- Better searching for easy quick access to particular products and services.

- Shopping cart availability for easy shopping.

3.4 System Context

3.5 Objectives

Create a friendly user interface that :

1. Enable customer to purchase any item easily.

2. Give the owner a chance to promote his goods.
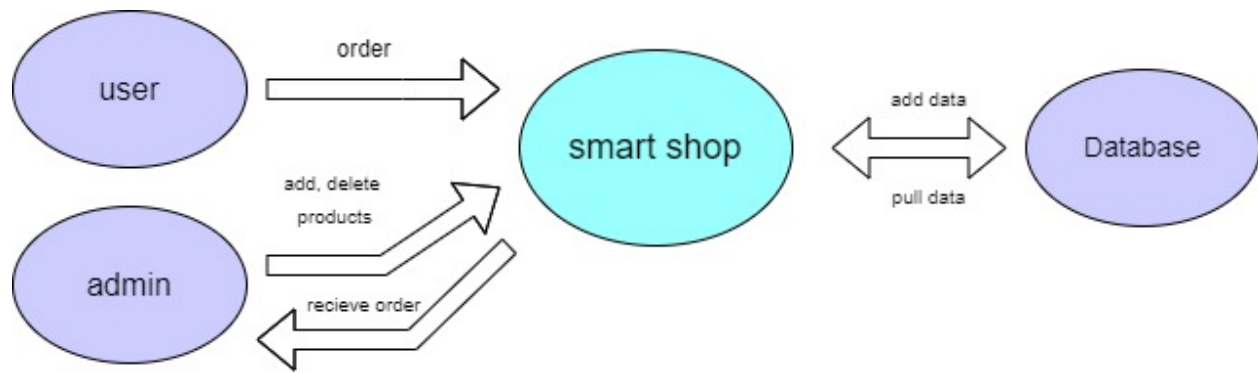
Figure 5: System Context

3.6 User Characteristics

1. User can create his own username and password

2. User should be familiar with the ordering system.

3. admin can create his own username and password

4. admin should be familiar with the operating system used.
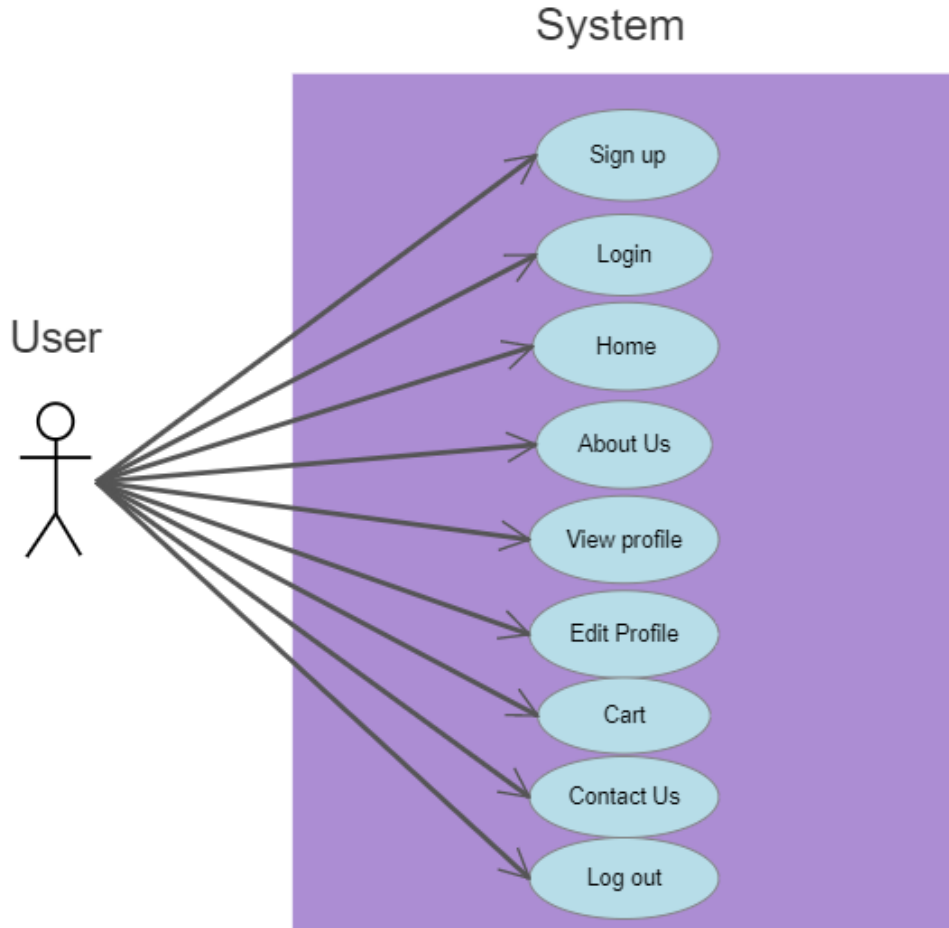
Figure 6: Use Case Diagram

4 Functional Requirements

4.1 System Functions

- **Register and Log in**

A new user's account is created in the system using this capability. A user must have an account and be signed into it in order to be able to purchase any goods. The user information is recorded in the database via this feature. This is an important feature so it has high priority. To begin the registration procedure, the customer must first click the button or link. The customer is then prompted by the system to provide their password, shipping address, email address, and first and last name. The customer fills up the fields. The customer's information is verified by the system, and a new account is made for them. After registering, a customer

hits the "log in" button to begin the login procedure. The system prompts the customer for his/her email and password and verifies the information. After verification the system displays account home page to the Customer.

4.2 Detailed Functional Specification

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Function Description	
Name	login
Code	log01
Priority	High
Critical	This feature enables the user to login to the website to be able to use all its features.
Description	If customer wants to buy the product then he/she must be registered, unregistered user can't go to the shopping cart.
Input	username and password
Output	Boolean (true for success, false otherwise)
Pre-condition	User must register his/her data..
Post-condition	Redirect to user (account) page and displays it's content
Dependency	Customer logins to the system by entering valid user id and password for the shopping
Risk	No Risk

Function Description	
Name	Add and view cart
Code	CR01
Priority	High
Critical	This feature enables for a user to browse through different products in the home page and add any product to the cart.
Description	This feature enables for a user to browse through different products in the home page and add any product to the cart. On 'View Cart' the user must be able to see all the items in his/her cart
Input	pressing "add to cart" button
Output	Boolean (true for success, false otherwise)
Pre-condition	User must be logged in and added at least one product to the cart.
Post-condition	redirect pages and view the updates.
Dependency	Dependencies with other requirements Describes interactions with other requirements.
Risk	No Risk

Function Description	
Name	Register
Code	S01
Priority	High
Critical	This feature enables the user to use the website like purchasing a product or reserving a private session.
Description	If customer wants to buy the product then he/she must be registered, unregistered user can't go to the shopping cart.
Input	pressing "Register to register" button
Output	Boolean (true for success, false otherwise)
Pre-condition	User must register his/her data.
Post-condition	Redirect to user (account) page and displays it's content
Dependency	Dependencies with other requirements Describes interactions with other requirements.
Risk	No Risk

5 Design Constraints

5.1 Standards Compliance

- The design constraints are that the browser at each place may not follow a similar screen. resolutions, browsers, etc. This can lead to the website not having the impact it is planned to have.

- The ability to check the genuineness of the buyer,which is not always possible. There can be security risks involved.

- Real-life credit card verification and banking systems are not implemented.

5.2 Hardware Limitations

There are no hardware limitations yet.

6 Non-functional Requirements

6.1 Security

- The attacks that pose a threat to the security of ECommerce .
- Encrypt Passwords

6.2 Accessibility

- Forms must be properly created with each field having a clear label and clear validation signals.

- Perceivable: Take actions to make the content of the online store perceivable, such as offering alternative text for non-text items.

- Operable: This indicates that all users can utilise the website efficiently. For instance, a person should be able to utilise the keyboard alone to navigate your website (without a mouse).

- Understandable: In accordance with this tenet, the user should have no trouble understanding the content and user interface. Therefore, a user should be able to understand the content and use the user interface whenever they connect with the website.

- Robust: implementing websites with valid code markup. As a result, websites should be simple and straightforward for assistive technologies to understand.

6.3 Availability

- The uptime of the system is guaranteed for users.

- During business hours, users can access the system 97% of the time without any issues (Sunday to Thursday)

- On Friday and Saturday, users can access the system 80% of the time without experiencing any problems because regular system maintenance should be scheduled during the weekend.

- System maintenance appointments shouldn't last longer than three hours.

6.4 Performance

- Total number of transactions: This represents all of the transactions. For further insights, combine this KPI with average order size or overall website traffic.

- Average Margin: Your average profit margin, also known as average margin, is a percentage that shows your profit margin over time.

- Gross profit: To determine this KPI, deduct the entire cost of all sold goods from the total amount of sales.

- Sales: Online stores that sell products can track overall sales by the hour, day, week, month, quarter, or year. Average order size, also known as average market basket, reveals how much an average customer spends on a single order.

- must pass the Page Speed Insights tests with a performance score of at least 80.

- The loading time for every web page should be 3 seconds or less. shouldn't have to wait more than a second for the home page to load.

6.5 Usability

- Customers having prior online buying expertise from other web applications must be able to finish the order checkout in under a minute on their first try.

- All users, even those with no prior online buying experience, ought to be able to sign up and log in to the system in under two minutes.

- 90 % of customers having tried the web application at least once must find the system pleasant and helpful. 60 p% must recommend it to friends if asked.

- Navigation: will be simple and Don't confuse the customer

- Page Font Visibility: Grab visitor's attention

- Add to Cart Button: Final action just a click away

7 Data Design

7.1 Data Description

Our database is designed to store all the information about the users, products that our store provides and the orders that were made by the users. This was achieved by creating a separate table with a primary key and attributes for each entity in the database then connecting all the tables together by forming the suitable relationships between them as the following diagram illustrates.
Our dataset consists of products images in JPEG or png format. using mysqyl data base we will store products data, costumers data .

7.2 Database design description

- Username will be individual customer id and each set their own password .

- Customer can only view the item details and order items that they choose to buy.

8   Preliminary Object-Oriented Domain Analysis

Object-oriented system approach is one of the systems approach technique in which the approach sees the overall system problems through the objects associated with the system. Therefore the authors chose this object- oriented system approach method because it will simultaneously focus on researching the collection of objects and the system is built will also describe the objects in general.
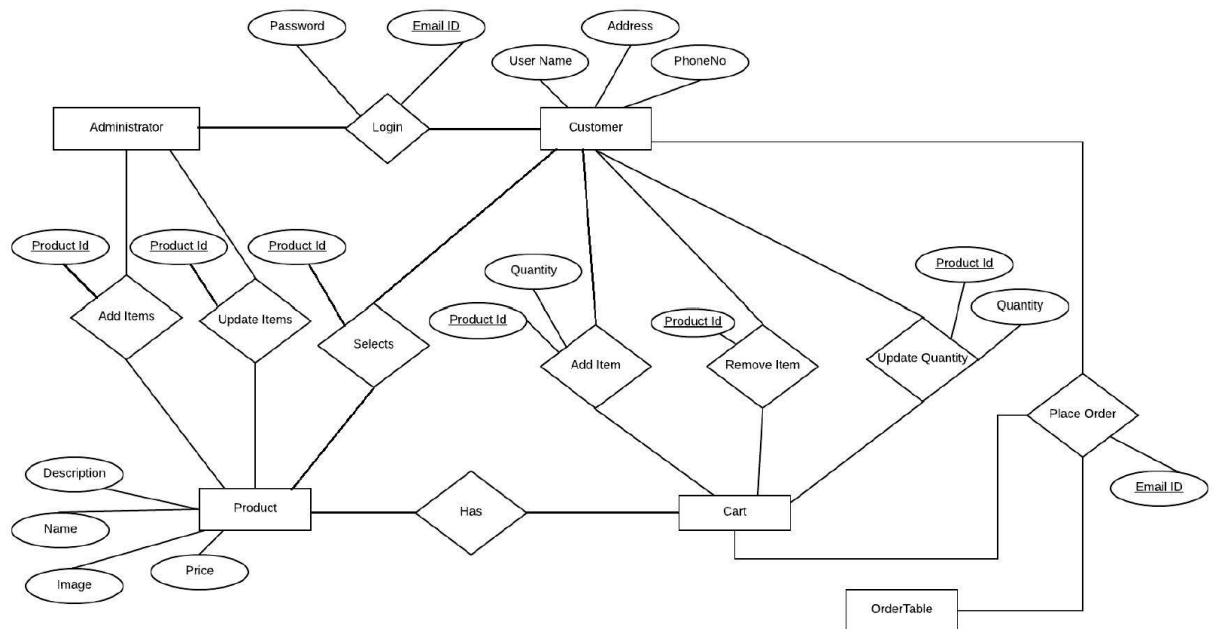
8.1   Inheritance Relations

Figure 7: Inheritance Relations

8.2 class descriptions

order details

- orderId : int
- productId : int
- productQuantity : int
- costofQuantity : int
- totalCost : int

+ editOrder()
+ addQuantity()
+ deleteQuantity()

order

- orderId : int
- orderName : string
- orderQuantity : int

+ addOffer()
+ addToCart()
+ deleteFromCart()
+ EditQuantity()

user

-userId : int
-userName : string
-Telephone : int
-Adress : srtring

+ register()
+ login()
+ addOrder()
+ deleterOrder()
+ contactUs()

review

- userId : int()
- productId : int()
- status : stirng()

+ addReview()
+ deleteReview()
+ editStatus()

offer

- orderId :int
- discountPercentage : int

+ addOffer()
+ deleteOffer()
+ editOffer()

cart

- userId : int
- productId : int
- quantity() : int
- data() : int

+ addProduct()
+ deleteProduct()
+ EmptyCart()

products

- productId
- productName
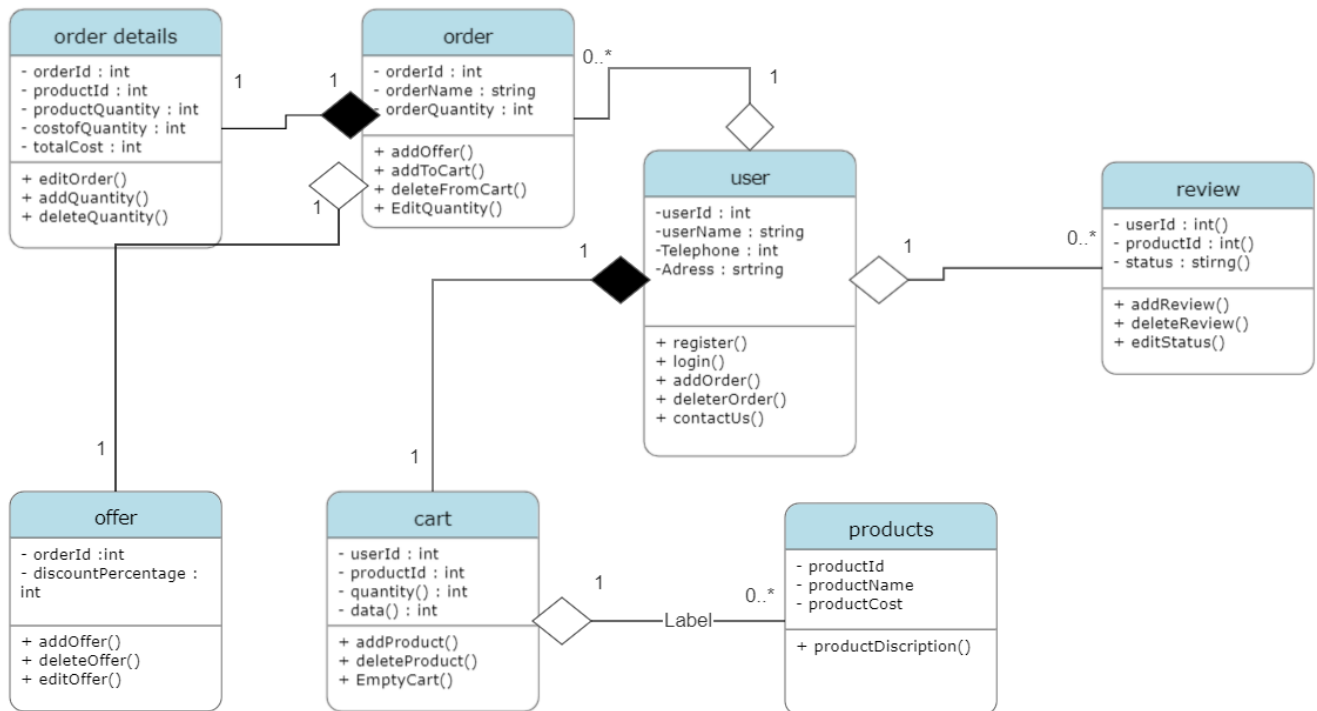- productCost

+ productDiscription()

Figure 8: Class Diagram

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9 Operational Scenarios

- first scenario: user will visit the website and sign up with his personal information using his/her valid name, email, password, telephone and address in case of purchasing products to deliver them to his mentioned address then the customer will be directed to the homepage that introduces some information about the e-commerce, meanwhile customer could add select the products and purchase them to the cart and confirm the order.

- second scenario: user will login using username and password then he/she directed automatically to the homepage will find some info about our e-commerce including our email and telephone to order his desired products as some customers feel more comfortable to contact and reach the seller by this way.

- third scenario: user could visit the site after receiving his/her purchased order to give feedback starting from the delivery man was friendly and ending with the quality of the ordered items and if delivered in the time estimated.

10   Project Plan

Main sections	Date
Project overview	3 August 2022
Requirement Gathering	3 August 2022
SRS Documentation	4 August 2022
Functional requirements	
Non-functional requirements	
Home Page	5 August 2022
Add to cart	6 August 2022
About Us , Contact Us	7 August 2022
Profile , Edit	8 August 2022

Figure 9: Project Plan Diagram

11 Appendices

11.1 Definitions, Acronyms, Abbreviations

12 References

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