INSTITUTE FOR ADVANCED COMPUTING ANDSOFTWARE DEVELOPMENT (IACSD), AKURDI, PUNE

Documentation On

OutFits

(Online Clothing Store)

PG-DAC September 2023

Submitted By:

Group No: G- 44

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ABSTRACT

OutFits (Online Clothing Store) is a project to provide necessary functionalities to the customers to enjoy online shopping from home place. This project is basically divided into 3 modules and can be titled as front end, backend and database. Also, Spring Security is used to provide authentication and authorization with an objective to improve data security.

This web project has applied standard ‘SOLID Principles’ by maintaining Separation Of Concern and Interface Segregation concepts. To attract more women customers, the proposed application also provides attractive Graphical User Interface (GUI) implemented by ReactJS Libraries. As the project involves structured data and fixed schemas, MySQL is used as the database, which is quite preferred for its efficient queries & access.

ACKNOWLEDGEMENT

I take this occasion to thank God, almighty for blessing us with his grace and taking our endeavor to a successful culmination. I extend my sincere and heartfelt thanks to our esteemed guide, Mrs. Sonali Mogal for providing me with the right guidance and advice at the crucial juncture sand for showing me the right way. I extend my sincere thanks to our respected Centre Co-Ordinator Mr. Rohit Puranik, for allowing us to use the facilities available. I would like to thank the other faculty members also, at this occasion. Last but not the least, I would like to thank my friends and family for the support and encouragement theyhave given me during the course of our work.

Pradnya Vilas Patil (239062)

Sayali Satish Patil(239089)

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INTRODUCTION

Nowadays, the excitement of the customers for clothes shopping is getting crushed by crowdie malls, the long lines involved in the manual process of payments & what not. This is why many customers are opting to enjoy shopping from home instead of shopping at malls, shops etc.

This document includes Software Requirements Specification which is built to describe the agreement between the customer and the developer regarding the specification of the software requested for 'Online Clothing Store '. Its primary purpose is to provide a clear and descriptive 'Statement of User Requirements' that can be used as a reference in further development of the software system. This document is broken into a number of sections used to logically separate the whole content for the ease of reference. This Software Requirements Specification aims to describe the Assumptions, Constraints, Scope of Software to be developed, Functional Requirements, Non-Functional Requirements, various diagrams used while software development related to software described throughout the rest of the document.

This SRS describes, in clear terms, the software's primary uses and required functionality needed to general customer. This project of developing a hazel –free online portal for clothes shopping is providing separate portals for both customers & managers. Also, this online website aims towards reserving the rights to add & update products only to managers.

1 FEATURES

1.1 PROJECT OBJECTIVE

The main functionality of this project is that, to provide a secured online platform for Women's clothe shopping available 24 x 7 for all the enthusiastic customers. This application provides proper security as well as attractive Graphical User Interface (GUI) to attract andensure best services to all the customers.

1.2 PROJECT OVERVIEW

With the main objective of providing hassle-free online platform for online clothes shopping, this application provides different searching and sorting options. Also, some of the features like browsing variety of clothes products even without customer Login. The excitement of the customers for clothes shopping is getting crushed by crowdie malls, thelong lines involved in the manual process of payments & what not. This is why many customers are opting to enjoy shopping from home instead of on site shopping.

1.3 PROJECT SCOPE

OutFits (Online Clothing Store) will allow any user to create an account to become a customer. The application will allow users to browse, search, select, and add clothes products to a cart. Then, after selecting products in their cart, they can pay for the order items as per the order details. The above specified web application also allows an admin to manage the stock with full create, retrieve, update and delete (CRUD) functionality.

The application can by deployed by the owner provided with the specified requirements of server, virtual space & database versions. Also, it can be accessed by the normal users simply with the help of an updated Google Chrome Browser.

1.4 STUDY OF THE SYSTEM

1.4.1 MODULES:

The system after careful analysis has been identified to be presented with the following modules and roles.

The modules involved are:

- Customer:-

  The customer can browse variety of clothes products on the basic of different categories like T Shirt, Shirt, Pant etc. The authenticated (valid) customer can add multiple products to a cart and manage quantity as per the requirements.

- Admin :-

  The admin have the authority of adding new products and update existing products. Also, the admin have the rights to cancel the order in case of emergency.

2 SYSTEM ANALYSIS

System analysis is the process of gathering and interpreting facts, diagnosing problems, and using the information to recommend improvements on the system. System analysis is a problem-solving activity that requires intensive communication between the system users and system developers.

System analysis or study is an important phase of any system development process. The system is viewed as a whole, the inputs are identified, and the system is subjected to close study to identify the problem areas. The solutions are given as a proposal. The proposal is reviewed on user request and suitable changes are made. This loop ends as soon as the user is satisfied with the proposal.

2.1 PROPOSED SYSTEM

The proposed web application provides following functionalities in order to attract more customers for buying clothes online.

- ✓ The whole web application is hassle-free and provided best GUI.
- ✓ Security of the data is maintained properly by using in built Spring Security.
- ✓ Conditional Rendering is also used in order to achieve selective response generation.
- ✓ As it's an online web application and available for 24 x 7, customers may enjoy the shopping without any time constraints.

2.2 SYSTEM REQUIREMENT SPECIFICATION

2.2.1 FUNCTIONAL REQUIREMENTS

OutFits (Online Clothing Store) will provide the followingfunctionalities:-

User Authentication:

POST /api/auth/register: Allows users to create a new account on the platform by providing necessary details such as username, email, and password. Upon successful registration, the user's information is stored in the database for future authentication.

POST /api/auth/login: Enables users to log in to their accounts by providing valid credentials (email and password). Upon successful authentication, the system generates a JSON Web Token (JWT) and returns it to the user, allowing them to access protected resources.

User Management :

PUT /api/auth/user/{userId}: Allows administrators to update user information using the provided userId.

GET /api/auth/user/{userId}: Permits administrators to retrieve user details using the specified userId.

User Wishlist/Favorites Management:

POST /api/favorites/items: Allows users to add a product to their list of favorites. Users specify the productId of the product to be added.

GET /api/favorites/items: Retrieves all items marked as favorites by the user. Users can view their list of favorite products.

DELETE /api/favorites/items/{itemId}: Enables users to remove a specific product from their list of favorites. Users specify the itemId of the product to be removed.

Product Management:

GET /api/products: Retrieves a list of all available products from the inventory. Each product is listed with basic information such as name, price, and availability.

GET /api/products/{productId}: Fetches detailed information about a specific product identified by its unique identifier (productId). This includes attributes such as name, description, price, and availability.

POST /api/products: Allows administrators to add a new product to the inventory. Admins provide details such as name, description, price, and availability to create a new product entry.

PUT /api/products/{productId}: Enables administrators to update the details of an existing product identified by its unique identifier (productId). Admins can modify attributes such as name, description, price, and availability.

DELETE /api/products/{productId}: Allows administrators to delete a product from the inventory. This action permanently removes the product entry from the database.

Review Management:

POST /api/products/{productId}/reviews: Enables users to add a review for a specific product identified by its productId. Users provide a rating and optional comment to share their feedback about the product.

GET /api/products/{productId}/reviews: Retrieves all reviews associated with a particular product identified by its productId. Users can view ratings and comments provided by other users for the product.

Cart Management:

POST /api/cart/items: Allows users to add items to their shopping cart. Users specify the productId and quantity of the item they wish to add.

GET /api/cart/items: Retrieves all items currently in the user's shopping cart. Users can view details such as product name, quantity, and total price.

DELETE /api/cart/items/{itemId}: Allows users to remove a specific item from their shopping cart. Users specify the itemId of the item to be removed.

Order Management:

POST /api/orders: Allows users to place a new order for the items in their shopping cart. Users provide necessary details such as shipping address and payment information to complete the order.

GET /api/orders: Retrieves a list of all orders placed on the platform. Admins have access to this endpoint to view order history and track sales.

PUT /api/orders/status/{orderId}: Enables admins to update the status of an order identified by its orderId. Admins can change the order status to reflect the current stage of order processing.

PUT /api/orders/cancel/{orderId}: Allows admins to cancel an order identified by its orderId. This action cancels the order and updates the inventory accordingly.

2.2.2 NON - FUNCTIONAL REQUIREMENTS

OutFits (Online Clothing Store) will provide the following non –functional requirements:-

i. Interface :-

~ OutFits (Online Clothing Store) must provide userinteractive interface in order to attract more users.
~ The application should use best available attractive colour shade combinations.

ii. Performance:-

~ Number of Concurrent Users: - The application must handle maximum number of requests.

iii. Security:-

~ The Online Clothing Store must provide maximum level ofsecurity regarding data.
~ The data of the users, product details, valuable feedbacks, login credentials must be protected in order to maintain high customer satisfaction.
~ The application must provide separation via Authorization & Authentication.

iv. Availability:-

~ OutFits (Online Clothing Store) must be available 24 X7 i.e. throughout the day & night, so that users can enjoy shopping all the time.

v. Reliability:-

~ The specified application must be reliable, especially at the time of weekend, festival days, year endings etc.
~ The application must be reliable in the perspective of login / payment failures also.

vi. Safety:-

~ The online application must be saved against session fixations / SQL injection etc. malicious attacks.
~ The whole software must use firewall configurations in order to safeguard the application.

vii. Maintainability:-

~ The OutFits (Online Clothing Store) should be able tomaintain with as less efforts & changes as possible.

viii. Portability:-

~ The specified application must provide portability in order to change components of architecture in case of emergencies.
~ It should hazel – free facility to replace the databases to enhance the efficiency in needed in future. Like replacement from MYSQL to Oracle or MYSQL to MongoDB.

ix. Accessibility:-

~ The online website must be accessible via desktops, laptops, smart devices including mobile phones, tablets etc.
~ The UI – UX must not hamper in case of above options. It should remain uniform throughout all the devices.

x. Durability:-

~ The overall application should be durable, especially in the terms of data, product availability, and uniform performance over time.

xi. Other Requirements:-

- Hardware: - The application is expected to function on Dell G3 – 15 with 1100 MHz Pre Processor Equivalent Or Above, 4 GB RAM, 512 GB HDD.

- Software: - The OutFits (Online Clothes Shopping

Website) shall work on Microsoft Windows operating systems family (MS Windows XP & Above). It configures to work with MYSQL database.This System works on Apache Tomcat server. It uses browser Google Chrome Browser.

3 DIAGRAMS

3.1 USE CASE DIAGRAM:-

A use case diagram is used to represent the dynamic behavior of a system. It encapsulates the system's functionality by incorporating use cases, actors, and their relationships. It models the tasks, services, and functions required by a system / subsystem of an application. It depicts the high-level functionality of a system and also tells how the user handles a system.

Here are all the basic terms used in the Use Case Diagram:-

1. Use cases: Horizontally shaped ovals that represent the different uses that a user might have.
2. Actors: Stick figures that represent the people actually employing the use cases.
3. Associations: A line between actors and use cases. In complex diagrams, it is important to know which actors are associated with which use cases. In this, Usually two keywords are used to denote the tight coupling & loose coupling i.e. include & extends respectively.
2. System boundary boxes: A box that sets a system scope to use cases. All use cases outside the box would be considered outside the scope of that system.

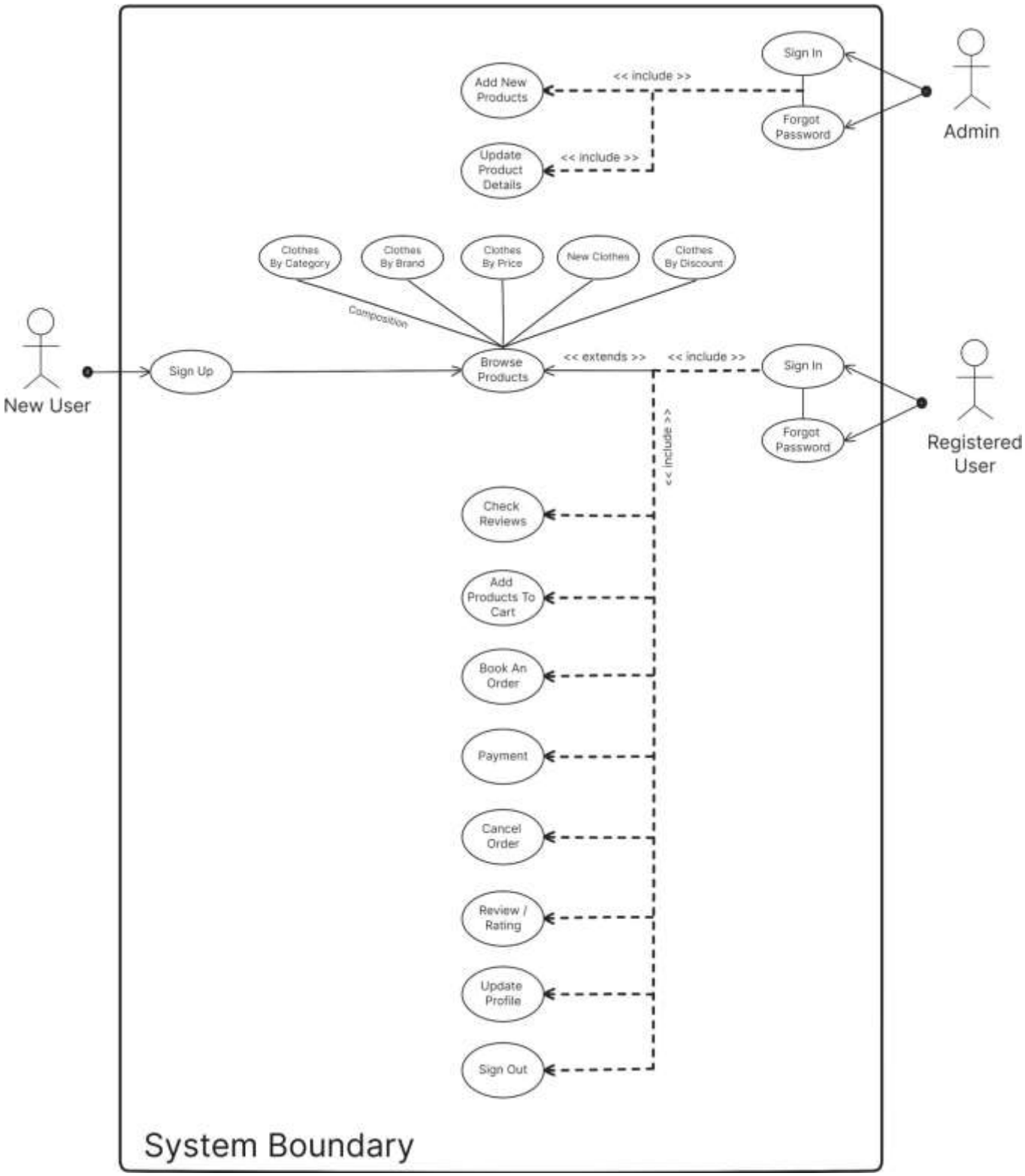


Fig. 1 : UML Use Case Diagram

3.2. E-R DIAGRAM:-

Entity Relationship Diagram is used to define the data elements and relationship for a specified application. It develops a conceptual design for the database. It also develops a very simple and easy to design view of the data.

In Entity Relationship Diagram, the data is represented by using various components including entities, attributes, relationships (One To Many / Many To Many etc.)

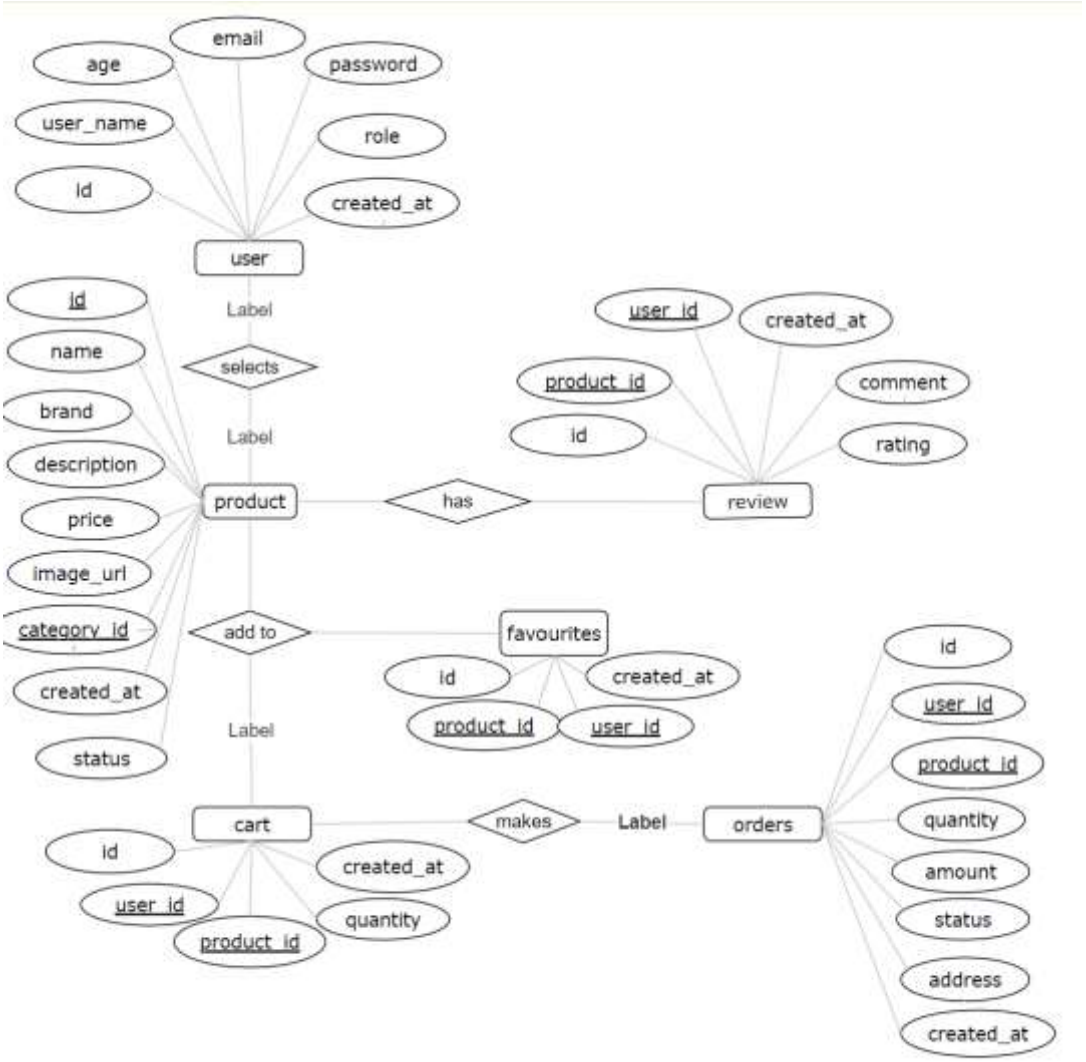


Fig. 2 : ER Diagram

3.3. CLASS DIAGRAM:-

Class diagram is a static diagram. It represents the static view of an application. Class diagram is not only used for visualizing, describing, and documenting different aspects of a system but also for constructing executable code of the software application. Class diagram describes the attributes and operations of a class and also the constraints imposed on the system. The class diagrams are widely used in the modeling of object oriented systems because they are the only UML diagrams, which can be mapped directly with object-oriented languages.

Class diagram shows a collection of classes, interfaces, associations, collaborations, and constraints. It is also known as a structural diagram. The purpose of the class diagram can be summarized as:-

A. Analysis and design of the static view of an application.
B. Describe responsibilities of a system.
C. Base for component and deployment diagrams.
D. Forward and reverse engineering.

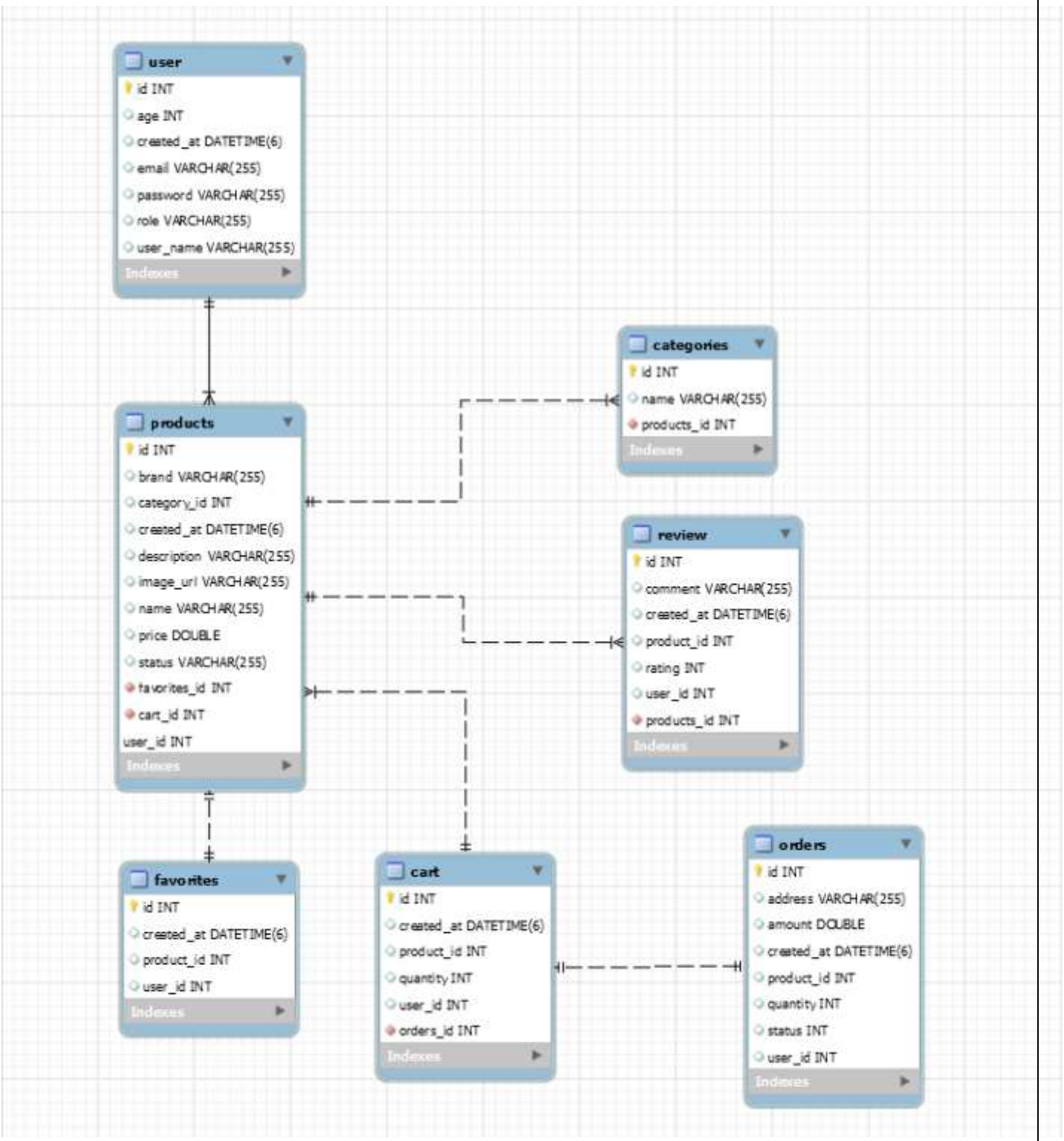


Fig. 3 : Class Diagram

3.4. ACTIVITY DIAGRAM:-

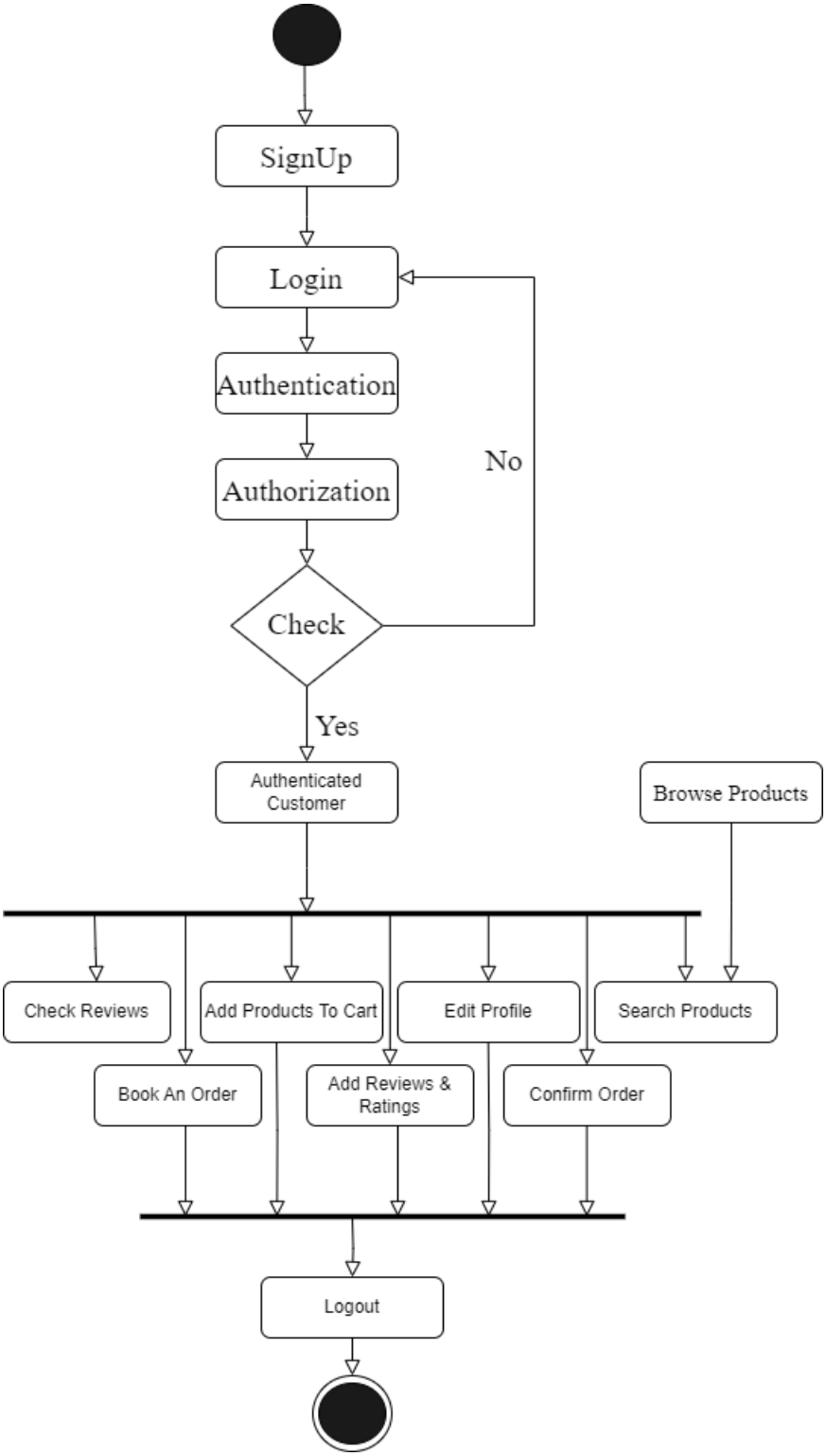


Fig. 4 : Activity Diagram

3.5. DATA FLOW DIAGRAMS:-

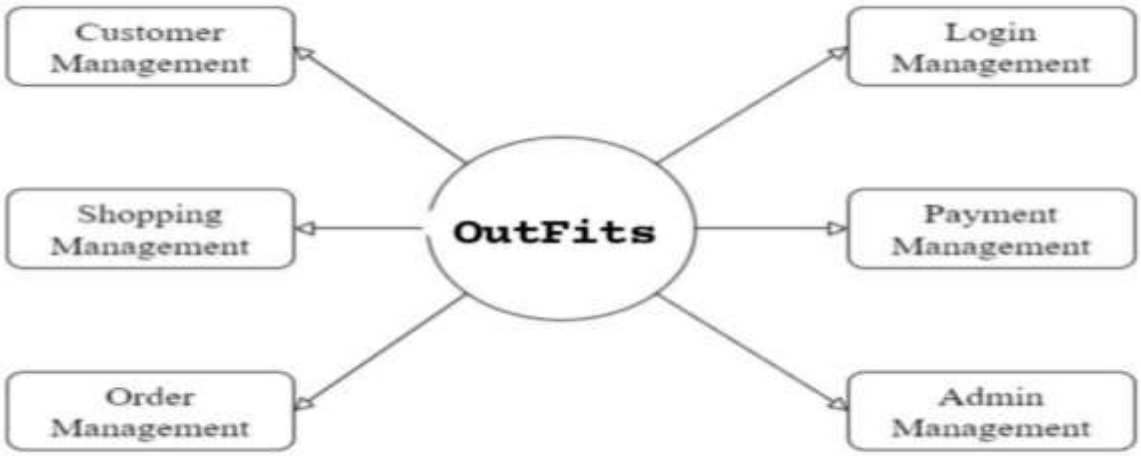


Fig. 5: Zero Level Data Flow Diagram

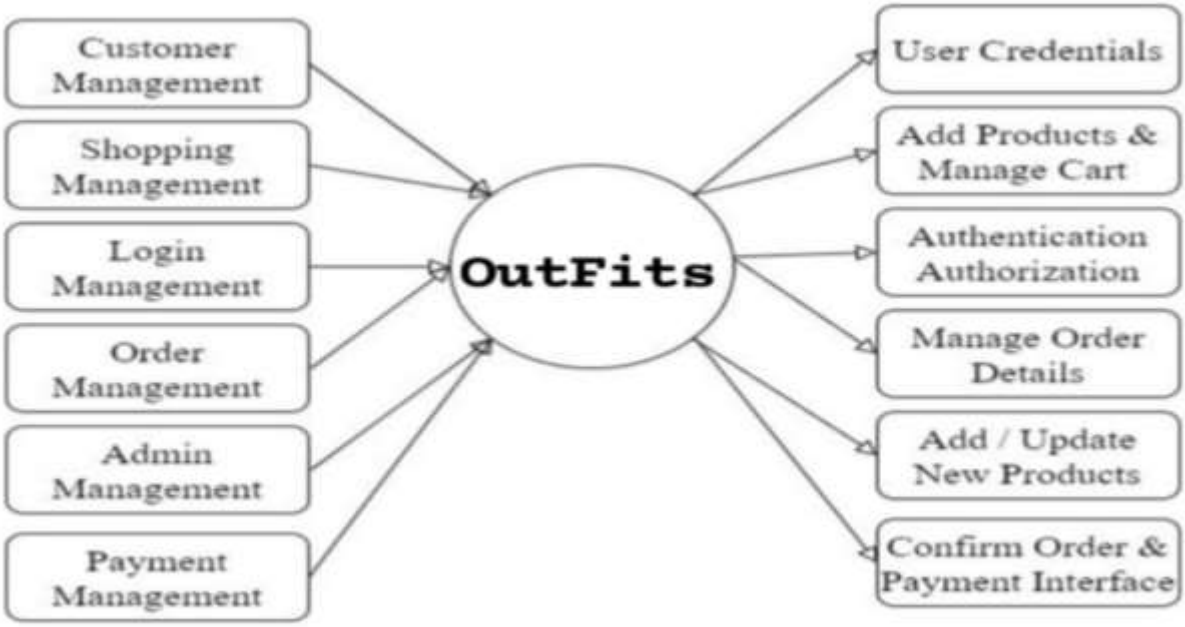


Fig. 6: First Level Data Flow Diagram

3.5. DEPLOYMENT DIAGRAM:-

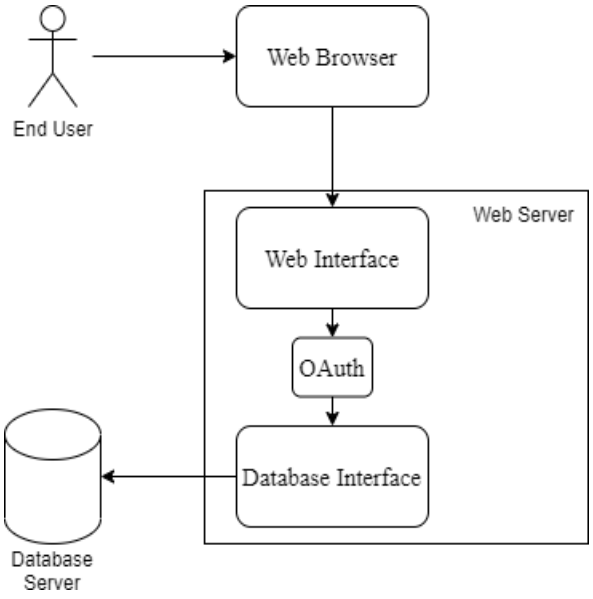


Fig. 7: Deployment Diagram

3.5. SEQUENCE DIAGRAM:

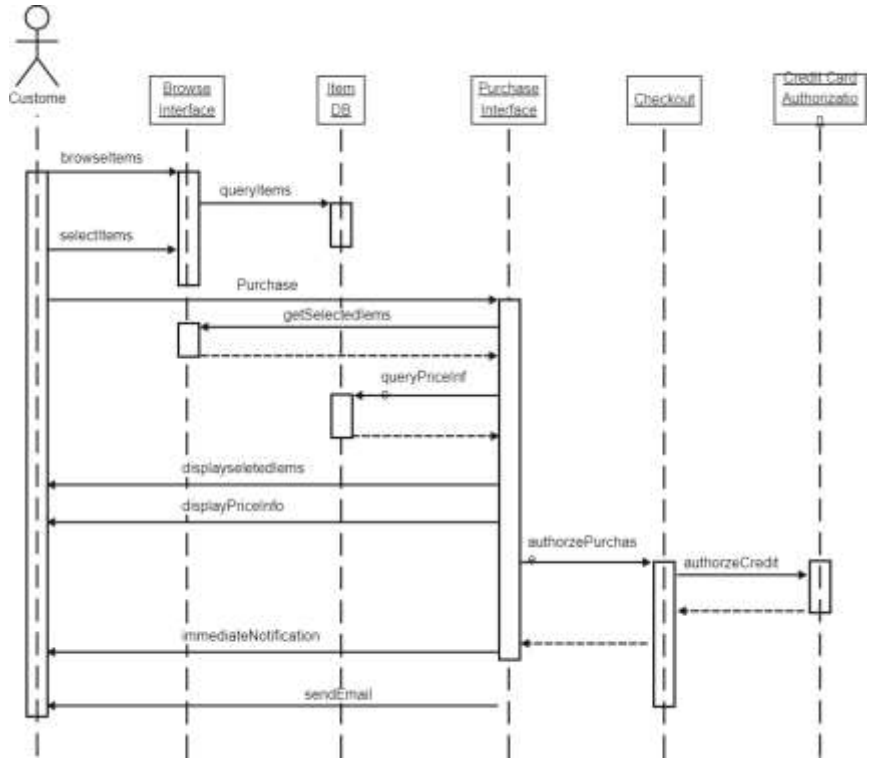


Fig. 8: Sequence Diagram

4 TABLE STRUCTURES

OutFits (Online Clothing Store) generate following tables in thedatabase:-

```
mysql>desc user;
+-------------+--------------+------+-----+---------+----------------+
| Field       | Type         | Null | Key | Default | Extra          |
+-------------+--------------+------+-----+---------+----------------+
| id          | int          | NO   | PRI | NULL    | auto_increment |
| age         | int          | YES  |     | NULL    |                |
| created_at  | datetime(6)  | YES  |     | NULL    |                |
| email       | varchar(255) | YES  |     | NULL    |                |
| password    | varchar(255) | YES  |     | NULL    |                |
| role        | varchar(255) | YES  |     | NULL    |                |
| user_name   | varchar(255) | YES  |     | NULL    |                |
+-------------+--------------+------+-----+---------+----------------+
7 rows in set (0.00 sec)
```

```
root>desc product;
+--------------------+--------------+------+-----+-------------------+-------------------+
| Field              | Type         | Null | Key | Default           | Extra             |
+--------------------+--------------+------+-----+-------------------+-------------------+
| productId          | int          | NO   | PRI | NULL              | auto_increment    |
| productName        | varchar(500) | YES  |     | NULL              |                   |
| productDescription | varchar(1000)| YES  |     | NULL              |                   |
| productPrice       | double       | YES  |     | NULL              |                   |
| productAddedDate   | timestamp    | YES  |     | CURRENT_TIMESTAMP | DEFAULT_GENERATED |
| imageUrl           | varchar(500) | YES  |     | NULL              |                   |
| categoryId         | int          | YES  | MUL | NULL              |                   |
+--------------------+--------------+------+-----+-------------------+-------------------+
7 rows in set (0.01 sec)
```

```
mysql>desc categories;
+-------+--------------+------+-----+---------+----------------+
| Field | Type         | Null | Key | Default | Extra          |
+-------+--------------+------+-----+---------+----------------+
| id    | int          | NO   | PRI | NULL    | auto_increment |
| name  | varchar(255) | YES  |     | NULL    |                |
+-------+--------------+------+-----+---------+----------------+
2 rows in set (0.00 sec)
```

```
mysql>desc cart;
+------------+-------------+------+-----+---------+----------------+
| Field      | Type        | Null | Key | Default | Extra          |
+------------+-------------+------+-----+---------+----------------+
| id         | int         | NO   | PRI | NULL    | auto_increment |
| created_at | datetime(6) | YES  |     | NULL    |                |
| product_id | int         | YES  |     | NULL    |                |
| quantity   | int         | YES  |     | NULL    |                |
| user_id    | int         | YES  |     | NULL    |                |
+------------+-------------+------+-----+---------+----------------+
5 rows in set (0.01 sec)
```

```
mysql>desc favorites;
+------------+-------------+------+-----+---------+----------------+
| Field      | Type        | Null | Key | Default | Extra          |
+------------+-------------+------+-----+---------+----------------+
| id         | int         | NO   | PRI | NULL    | auto_increment |
| created_at | datetime(6) | YES  |     | NULL    |                |
| product_id | int         | YES  |     | NULL    |                |
| user_id    | int         | YES  |     | NULL    |                |
+------------+-------------+------+-----+---------+----------------+
4 rows in set (0.00 sec)
```

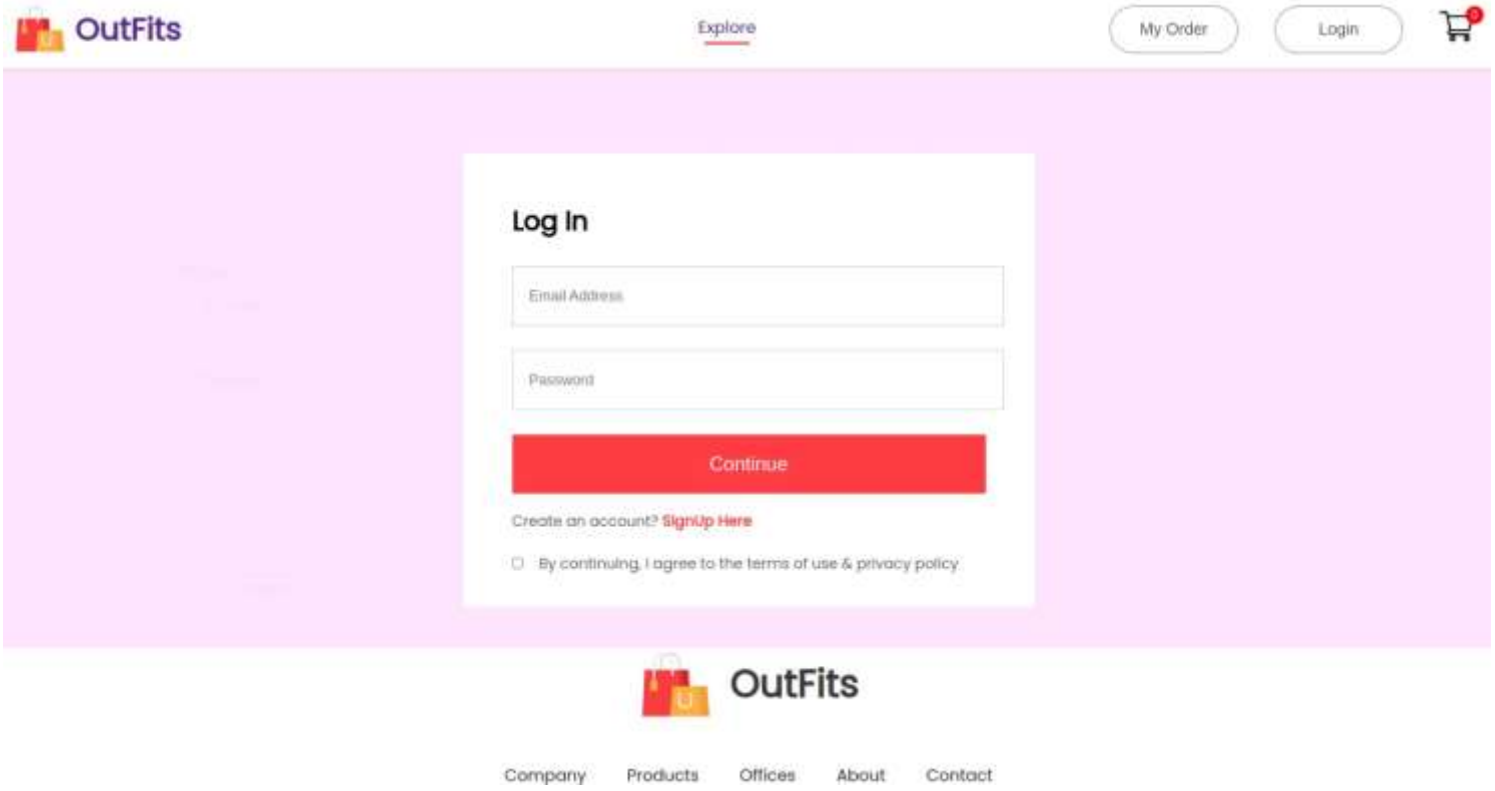
```
mysql>desc orders;
+------------+--------------+------+-----+---------+----------------+
| Field      | Type         | Null | Key | Default | Extra          |
+------------+--------------+------+-----+---------+----------------+
| id         | int          | NO   | PRI | NULL    | auto_increment |
| address    | varchar(255) | YES  |     | NULL    |                |
| amount     | double       | YES  |     | NULL    |                |
| created_at | datetime(6)  | YES  |     | NULL    |                |
| product_id | int          | YES  |     | NULL    |                |
| quantity   | int          | YES  |     | NULL    |                |
| status     | int          | YES  |     | NULL    |                |
| user_id    | int          | YES  |     | NULL    |                |
+------------+--------------+------+-----+---------+----------------+
8 rows in set (0.00 sec)
```

```
root>desc category;
+--------------+--------------+------+-----+---------+----------------+
| Field        | Type         | Null | Key | Default | Extra          |
+--------------+--------------+------+-----+---------+----------------+
| categoryId   | int          | NO   | PRI | NULL    | auto_increment |
| categoryName | varchar(250) | YES  |     | NULL    |                |
+--------------+--------------+------+-----+---------+----------------+
2 rows in set (0.00 sec)
```

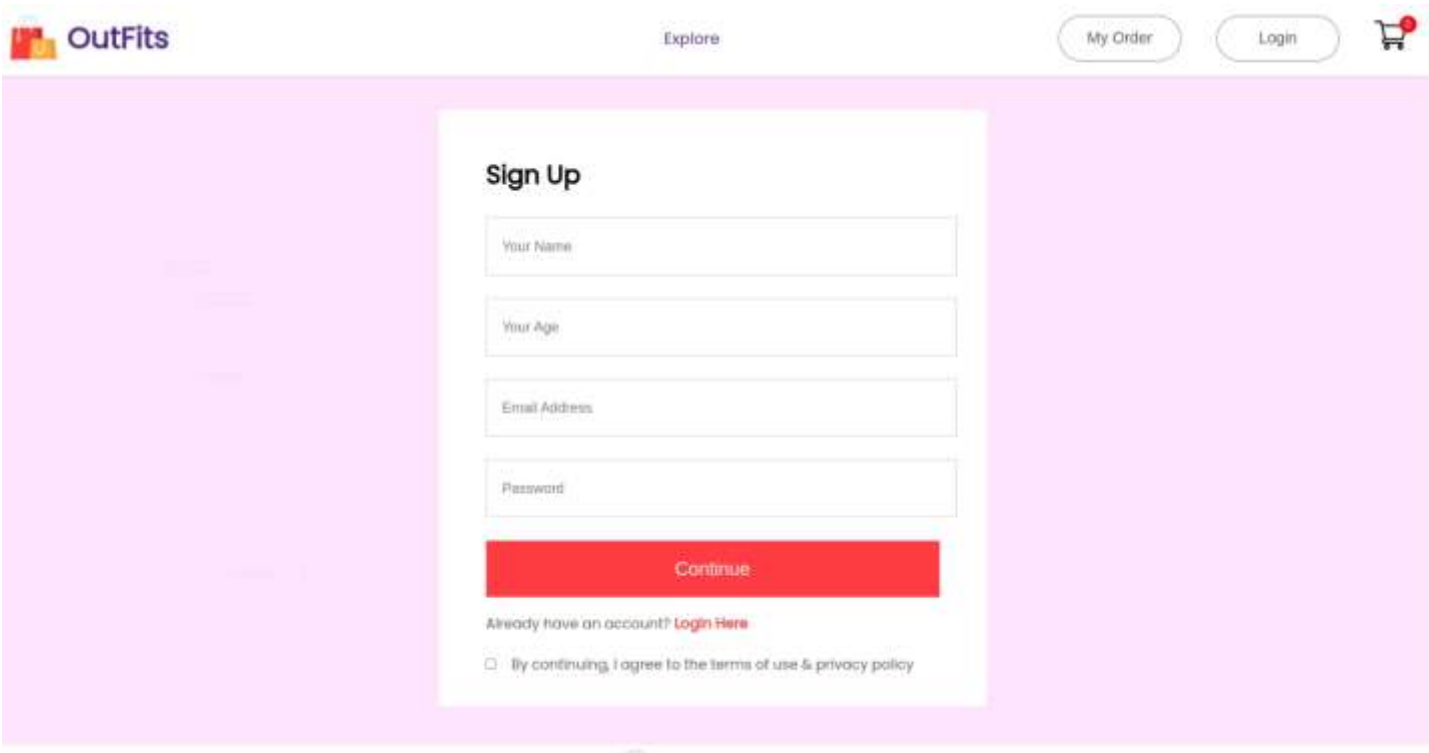
```
mysql>desc review;
+------------+--------------+------+-----+---------+----------------+
| Field      | Type         | Null | Key | Default | Extra          |
+------------+--------------+------+-----+---------+----------------+
| id         | int          | NO   | PRI | NULL    | auto_increment |
| comment    | varchar(255) | YES  |     | NULL    |                |
| created_at | datetime(6)  | YES  |     | NULL    |                |
| product_id | int          | YES  |     | NULL    |                |
| rating     | int          | YES  |     | NULL    |                |
| user_id    | int          | YES  |     | NULL    |                |
+------------+--------------+------+-----+---------+----------------+
6 rows in set (0.00 sec)
```

5 PROJECT DIAGRAMS

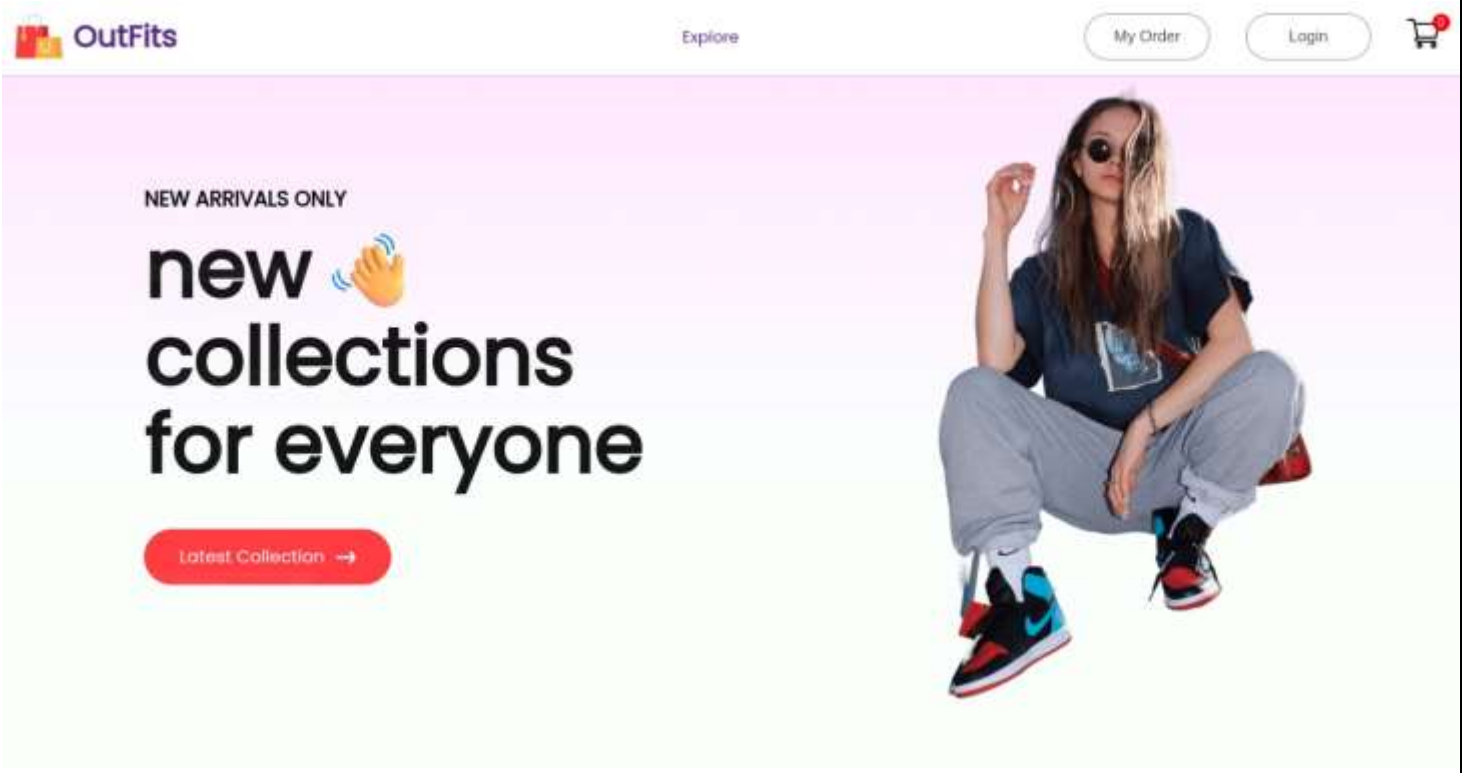
- Log in :-



- Sign up :-

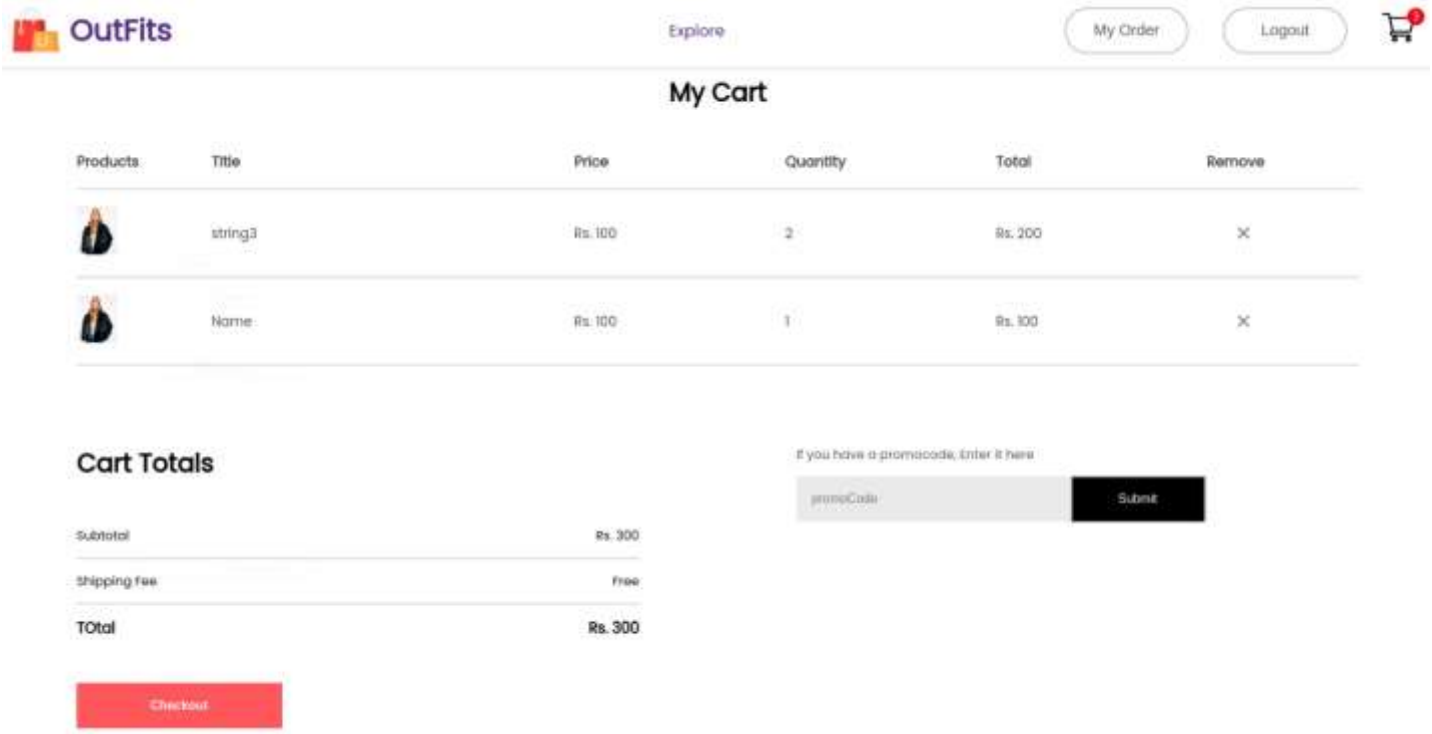

OutFits
Explore
My Order
Login
Sign Up
Your Name
Your Age
Email Address
Password
Continue
Already have an account? Login Here
By continuing, I agree to the terms of use & privacy policy

- Home Page

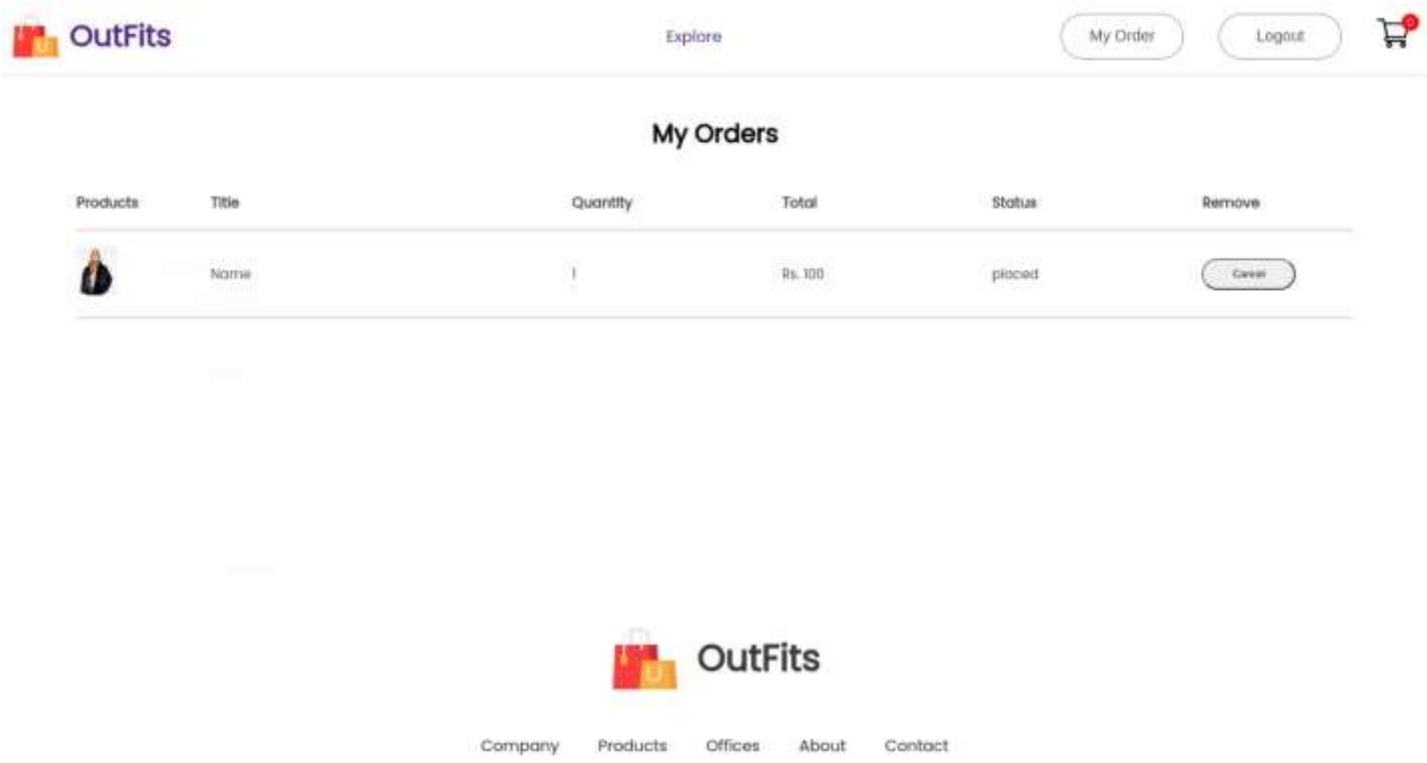

OutFits
Explore
My Order
Login
NEW ARRIVALS ONLY
new
collections
for everyone
Latest Collection

- Product Details

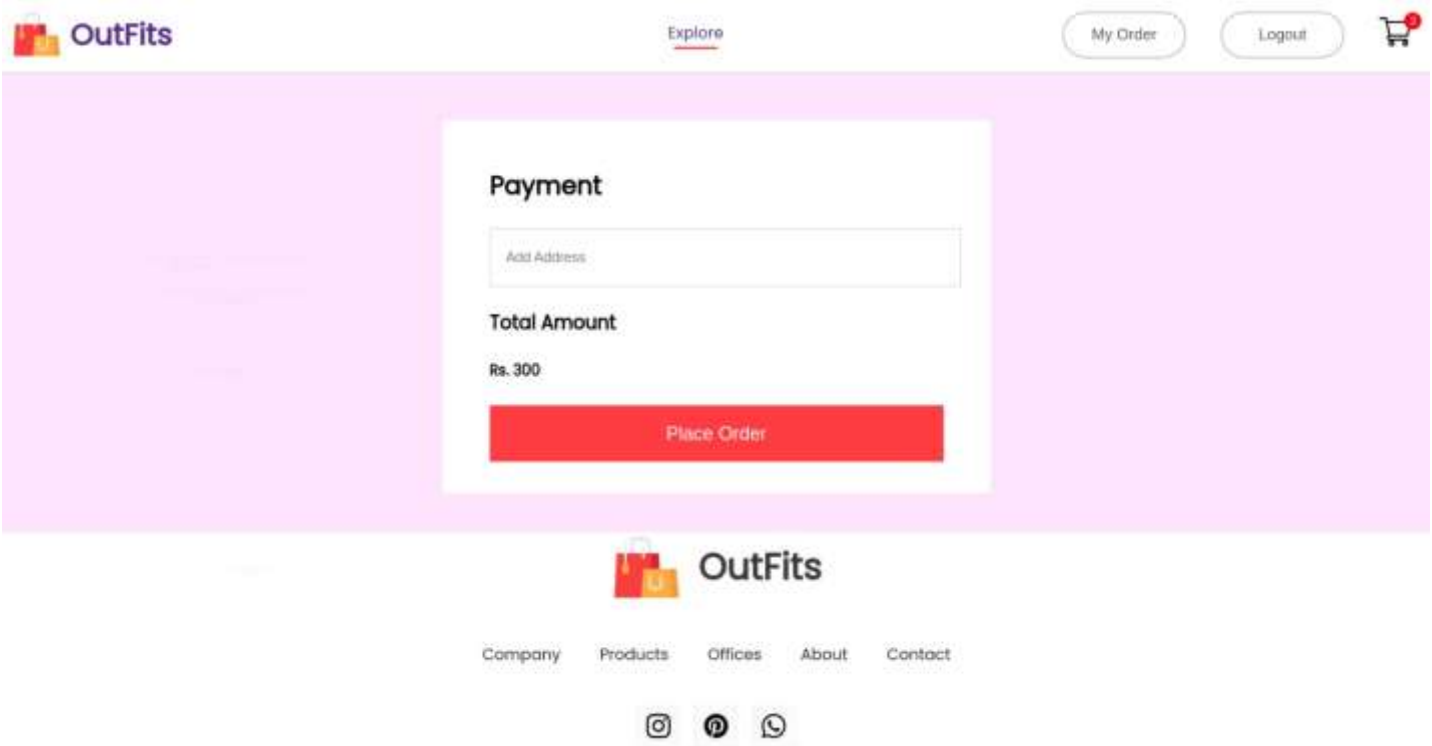
- Cart :-


OutFits
Explore
My Order
Logout
My Cart
Products
Title
Price
Quantity
Total
Remove
string3
Rs. 100
2
Rs. 200
Name
Rs. 100
1
Rs. 100
Cart Totals
If you have a promocode, Enter it here
promoCode
Submit
Subtotal
Rs. 300
Shipping Fee
Free
TOtal
Rs. 300
Checkout

- Order Details :-



- Order Place :-


OutFits
Explore
My Order
Logout
Payment
Add Address
Total Amount
Rs. 300
Place Order
OutFits
Company
Products
Offices
About
Contact

6 CONCLUSION

The project entitled OutFits (Online Clothing Store) was completed successfully.

The proposed web application has been developed with much care and free of errors and at the same time it is efficient and less time consuming. The purpose of this project was to develop a web application and provide a secured online platform for clothes shopping.
This project helped us in gaining valuable information and practical knowledge on several topics like designing web pages using React.js, usage of responsive templates, designing of android applications, and management of database using MySQL. The entire system is secured by using Spring Security. Also, the project helped us understanding about the development phases of a project and software development life cycle. We learned how to test different features of a project. This project has given us great satisfaction in having designed an application which can be implemented to any nearby shops or branded shops selling various kinds of products by simple modifications.

There is a scope for further development in our project to a great extent. A number of features can be added to this system in future like providing payment gateway for maintenance payment and maintain their records in dashboard. Another feature we wished to implement is the management interface for inventory. These features could have implemented unless the time did not limit us.

7 REFERENCES

[1] JavaScript Enlightenment, Cody Lindley-First Edition, based on JavaScript 1.5, ECMA-262, Edition

[2] Mc Graw Hill's, Java: The complete reference 7thEdition, Herbert Scheldt

[3] Complete CSS Guide, Maxine Sherrin and John Allsopp-O'ReillyMedia; September 2012

ONLINE REFERENCE

Following references are considered throughout the development of OutFits (Online Clothing Store):-

- Google for problem solving
- https://www.tutorialspoint.com/java/
- http://www.javatpoint.com/java-tutorial
- https://docs.oracle.com/javase/tutorial/
- Effective Java By Joshua Bloch
- http://www.tutorialspoint.com/mysql/