INSTITUTE FOR ADVANCED
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Documentation On

"ELECTRONICS E-COMMERCE STORE"

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Submitted By:

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ACKNOWLEDGEMENT

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Glossary

LAN-Local Area Network

GUI-Graphical User Interface

OS-Operating System

RAM-Random Access Memory

SRS-Software Requirements Specification

1. Introduction

The main aim of this project is to provide the customer's an ease to order the products mainly electronics items from their home. The customers are being able to view the products and its related description with Price and other Functionalities. Also the customers must be able to perform the basic operations such as adding the items to the Cart or deleting the items if not required. The project also includes the payment options. This project provides an interactive way to order the products from their home. This project also aims to provide an online platform to the sellers for selling their products.

Document Purpose

The Electronics E-commerce Store is a web application that is intended to provide a platform for sellers as well as customers in order to sell a product or buy it respectively. It provides an easy way for both of them to buy the product in online mode without the hassle to visit the shop physically.

Sellers have the specific functionality to add or delete the products as per the need whereas the customers can purchase the products which are available on a single click.

Problem Statement

There are many other websites that provide a way to purchase the products online. The main problem of some websites is the interactive way of showing all the categories on a single one. Customers sometimes find it difficult to understand the UI and purchase the product of the category. This project has a simple interactive environment that helps the customers in providing an ease for their online purchase.

Product Scope

- The current system can be extended to allow the users to create accounts and save products in to wish list.
- The users could subscribe for price alerts which would enable them to receive messages when price for products fall below a particular level.
- Users can have multiple shipping and billing information saved. During checkout they can use the drag and drop feature to select shipping and billing information.
- The system can be further extended to provide a tracking system to track the delivery of the products and also provide a more secure payment option.

Aims & Objectives

Specific goals are: -

- To provide a web based system that allows the sellers to edit the products as per the need and sell them in an interactive manner worldwide.
- To ease customers ordering the product in an interactive online manner.
- To view the products online in an easy way.

Overall Description

Product Perspective:

2.1.1 Existing system function:

The Existing system consists of going to the shop and buy the electronics items from the shops or showrooms. In order to reduce the efforts of the Customers this application is used to order the items easily from their homes and the Items will be delivered at the door steps. Using this system, the customers can add the products to the Cart, remove them if needed and order the product by paying the amount required. Also the project involves Electronics Store only so it is easy for customers to quickly find the product and order them.

- **III. PROPOSED SYSTEM**

Product functionality:

The project includes functionalities for Customer (User), Seller and Admin. The functionalities can be defined as follows:

Customer Management:

Customers can view a specific product which is available on the website, add them to the cart or remove them from the cart if not needed. Customers can also order the product by making the specific payment. The customers have a login page which can be accessed by logging by entering the valid credentials on the page.

Seller Management:

Sellers can perform the login by entering the valid credentials. The functions of the seller include add the products on the website, delete the products from the website as per the requirement. The seller can view the orders and manage them.

Admin Management:

Admin can manage the products, manage the credentials and can also manage the orders. Admin also play an important role in maintenance of the products and sellers.

Benefits of Electronics E-Commerce Store

- This online store is fully functional and flexible.
- It is very easy to use.
- It saves a lot of time, money and labor.
- The application acts as an office that is open 24/7.
- It increases the efficiency of the management at offering quality services to the customers.
- It provides custom features development and support with the application.

Users and Characteristics:

Admin:

- Admin can login to the system.
- View the list of all products.
- Add new Seller.
- Delete Seller.
- Update Seller and Product Details.
- Manages Orders.

Sellers

- Sellers can login to the system.
- View his/her details.
- View products.
- Add or delete products.
- Check Orders.

Customers

- Customers can login to the system.
- View his/her details.
- View products.
- Add or delete products from the Cart.
- Order Products.

Requirements:

Hardware and Software Requirements:

Processor: Intel® Core I3 Processor
HDD: Minimum 500GB Disk Space
RAM: Minimum 4 GB
OS: Windows 10
Database: MySQL

Software Requirements:

Operating System: Windows 10
Browser: Google Chrome
Front End : VS Code
Backend : Spring Tool Suite, MySQL

Design and Implementation Constraints:

- The application will use React, Ajax, JavaScript, jQuery and css as main web technologies.
- HTTP and FTP protocols are used as communication protocols. FTP is used to upload the web application in live domain and the client can access it via HTTP protocol.
- Several types of validations make this web application a secured one and SQL Injections can also be prevented.
- Database used in the project is MySQL in which the tables are Created and used in backend.
- Spring Boot is used in the project as Back End Technology.

Specific Requirement

External Interface Requirements:

User Interfaces:

- A Default Home Page will appear when the browser is launched. This page contains Login Button which when clicked asks the users a username and a password.
- After being authenticated by correct username and password, user will be redirect to their corresponding page where different products will be available.
- The user interface will be simple and consistence, using terminology commonly understood by intended users of the system. The system will have simple interface, consistence with standard interface, to eliminate need for user training of infrequent users.

Hardware Interfaces:

- No extra hardware interfaces are needed.
- The system will use the standard hardware and data communication resources.
- This includes, but not limited to, general network connection at the server/hosting site, network server and network management tools.

Application Interfaces:

OS: Windows 10, Linux

Web Browser:

The system is a web-based application; clients need a modern web browser such as Mozilla Firebox, Internet Explorer, Opera, and Chrome. The computer must have an Internet connection in order to be able to access the system.

Communications Interfaces:

- This system uses communication resources which includes but not limited to, HTTP protocol for communication with the web browser and web server and TCP/IP network protocol with HTTP protocol.

3.3 Non-Functional Requirements

3.3.1 Reliability

The reliability of the overall project depends on the reliability of the separate components. The main pillar of reliability of the system is the backup of the database which is continuously maintained and updated to reflect the most recent changes. Also the system will be functional under a container. Thus the overall stability of the system depends on the stability of the container and its underlying OS.

3.3.2 Availability

The system should be available at all the times, meaning the user can access it using a web browser, only restricted by the down time of the server on which system runs. A customer friendly system which is in access of people around the worlds should work 24 hours. In case
of a hardware failure or database corruption, a replacement page will be shown. Also in case of hardware failure or database corruption backups of the database should be
retrieved from the server and saved by the Organizer. Then the service will be restarted. It means 24x7 availability.

3.3.3 Maintainability

In case of a failure, a re-initialization of the system will be done. Also the
software design is being done with modularity in mind so that maintainability can be done efficiently.

3.3.4 Supportability

The code and supporting modules of the system will be well documented and easy to understand. Online user documentation and Help system requirements will be provided.

System Design

ER Diagram

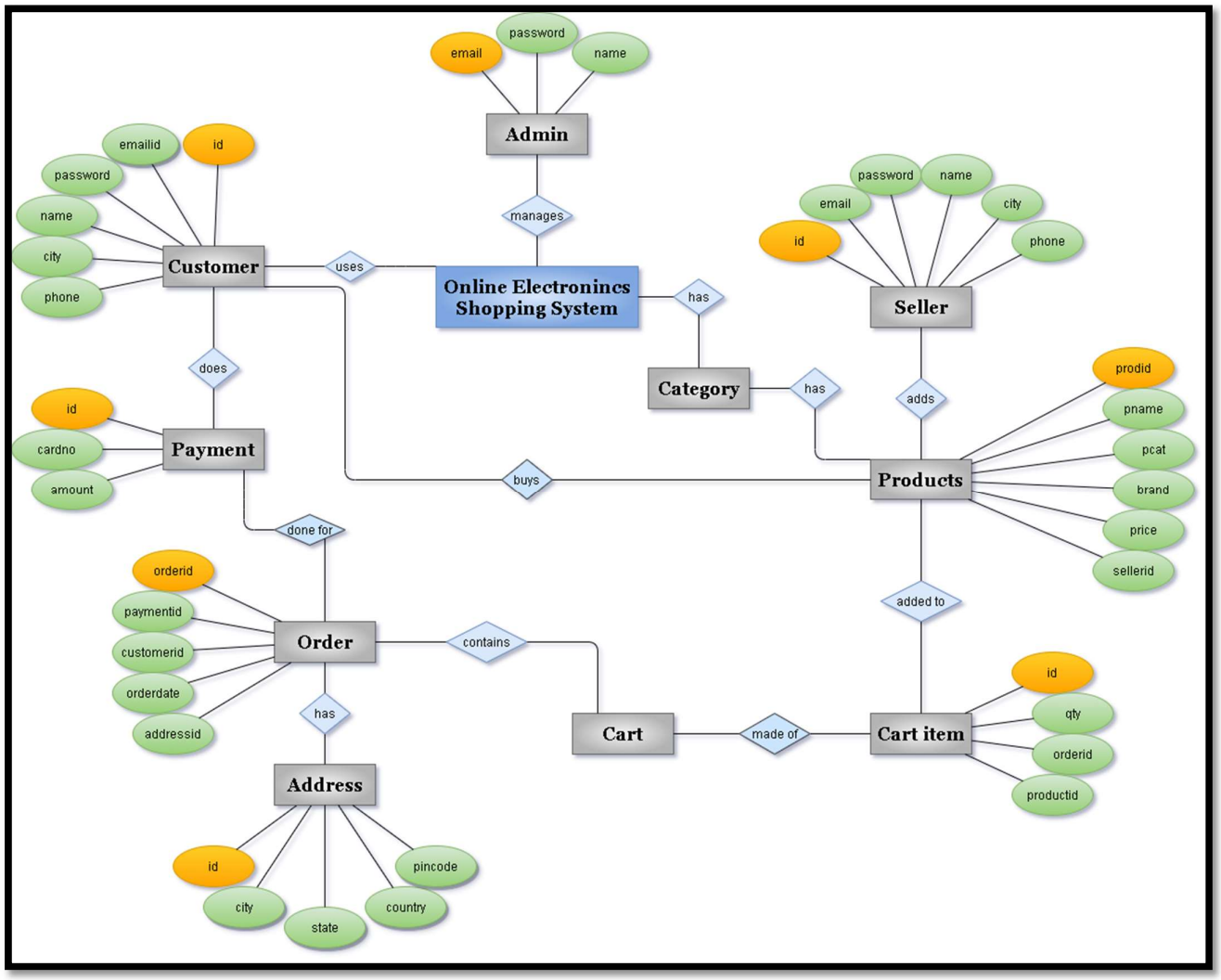
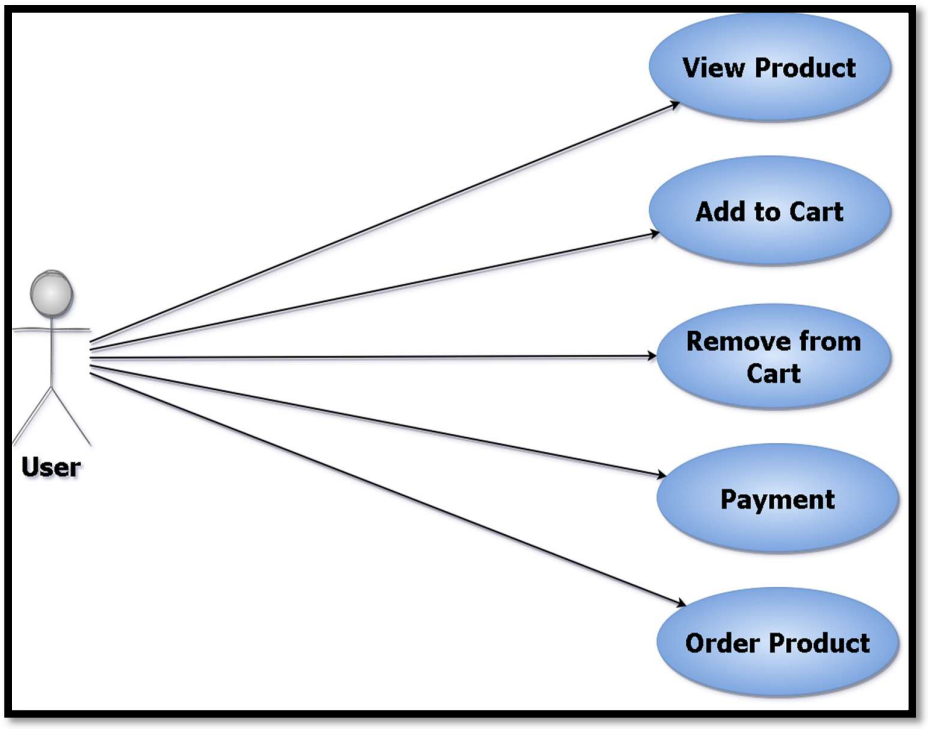


Figure 1: ER Diagram



`Figure 2: Customer (User) Use Case Diagram

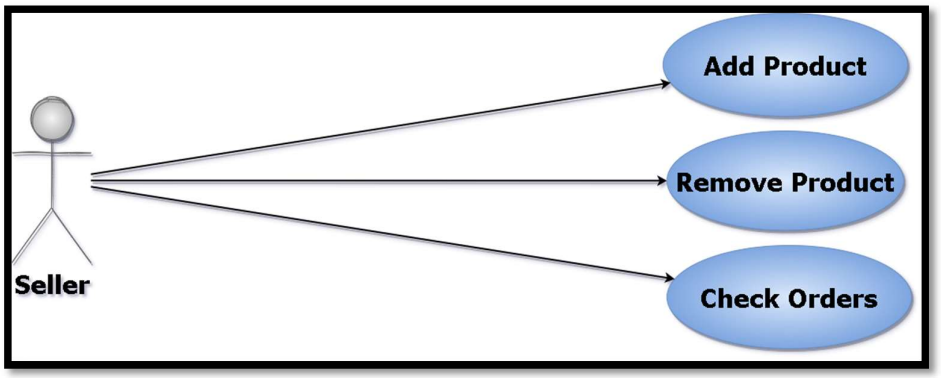


Figure 3: Seller Use Case Diagram

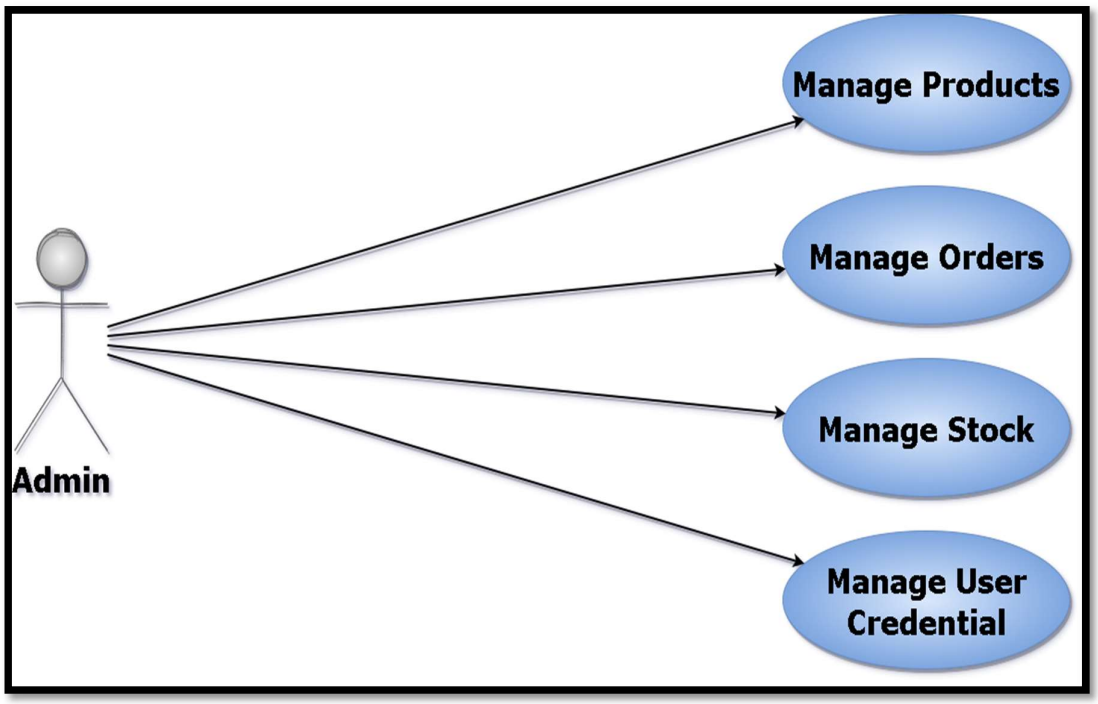


Figure 4: Admin Use Case Diagram

Class Diagram

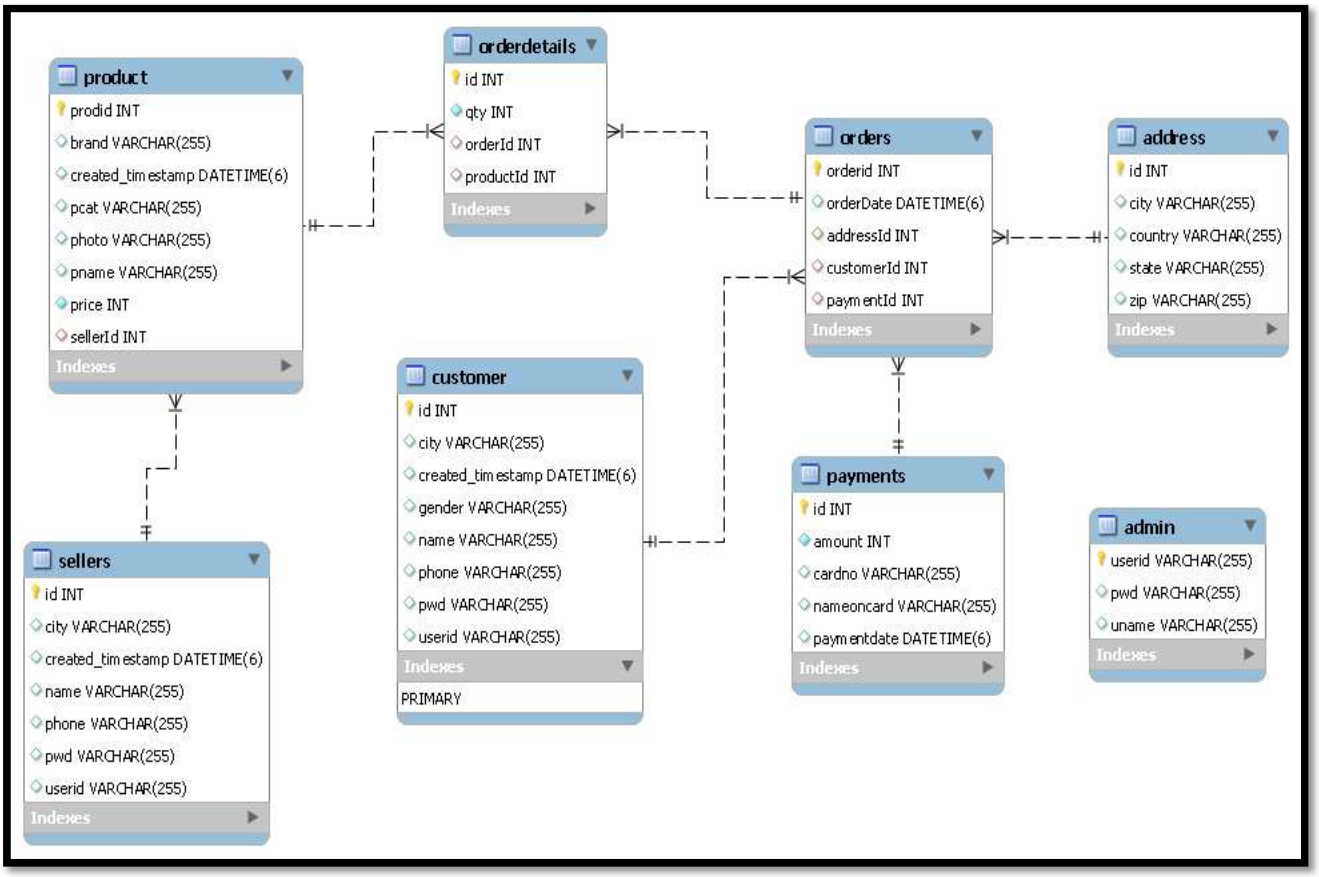


Figure 5: Class Diagram
(Table Relationship)

Table Structure

Customer:

```
mysql> desc customer;
+-------------------+-------------+------+-----+---------+----------------+
| Field             | Type        | Null | Key | Default | Extra          |
+-------------------+-------------+------+-----+---------+----------------+
| id                | int         | NO   | PRI | NULL    | auto_increment |
| city              | varchar(255)| YES  |     | NULL    |                |
| created_timestamp | datetime(6) | YES  |     | NULL    |                |
| gender            | varchar(255)| YES  |     | NULL    |                |
| name              | varchar(255)| YES  |     | NULL    |                |
| phone             | varchar(255)| YES  |     | NULL    |                |
| pwd               | varchar(255)| YES  |     | NULL    |                |
| email             | varchar(255)| YES  | UNI | NULL    |                |
+-------------------+-------------+------+-----+---------+----------------+
8 rows in set (0.05 sec)
```

Seller:

```
mysql> desc sellers;
+-------------------+-------------+------+-----+---------+----------------+
| Field             | Type        | Null | Key | Default | Extra          |
+-------------------+-------------+------+-----+---------+----------------+
| id                | int         | NO   | PRI | NULL    | auto_increment |
| city              | varchar(255)| YES  |     | NULL    |                |
| created_timestamp | datetime(6) | YES  |     | NULL    |                |
| name              | varchar(255)| YES  |     | NULL    |                |
| phone             | varchar(255)| YES  |     | NULL    |                |
| pwd               | varchar(255)| YES  |     | NULL    |                |
| email             | varchar(255)| YES  | UNI | NULL    |                |
+-------------------+-------------+------+-----+---------+----------------+
7 rows in set (0.00 sec)
```

Admin:

```
mysql> desc admin;
+--------+-------------+------+-----+---------+-------+
| Field  | Type        | Null | Key | Default | Extra |
+--------+-------------+------+-----+---------+-------+
| userid | varchar(255) | NO   | PRI | NULL    |       |
| pwd    | varchar(255) | YES  |     | NULL    |       |
| uname  | varchar(255) | YES  |     | NULL    |       |
+--------+-------------+------+-----+---------+-------+
3 rows in set (0.06 sec)
```

Address:

```
mysql> desc address;
+---------+-------------+------+-----+---------+----------------+
| Field   | Type        | Null | Key | Default | Extra          |
+---------+-------------+------+-----+---------+----------------+
| id      | int         | NO   | PRI | NULL    | auto_increment |
| city    | varchar(255) | YES  |     | NULL    |                |
| country | varchar(255) | YES  |     | NULL    |                |
| state   | varchar(255) | YES  |     | NULL    |                |
| zip     | varchar(255) | YES  |     | NULL    |                |
+---------+-------------+------+-----+---------+----------------+
5 rows in set (0.00 sec)
```

Orders:

```
mysql> desc orders;
+------------+-------------+------+-----+---------+----------------+
| Field      | Type        | Null | Key | Default | Extra          |
+------------+-------------+------+-----+---------+----------------+
| orderid    | int         | NO   | PRI | NULL    | auto_increment |
| orderDate  | datetime(6) | YES  |     | NULL    |                |
| addressId  | int         | YES  | MUL | NULL    |                |
| customerId | int         | YES  | MUL | NULL    |                |
| paymentId  | int         | YES  | MUL | NULL    |                |
+------------+-------------+------+-----+---------+----------------+
5 rows in set (0.00 sec)
```

Order Details:

```
mysql> desc orderdetails;
+-----------+------+------+-----+---------+----------------+
| Field     | Type | Null | Key | Default | Extra          |
+-----------+------+------+-----+---------+----------------+
| id        | int  | NO   | PRI | NULL    | auto_increment |
| qty       | int  | NO   |     | NULL    |                |
| orderId   | int  | YES  | MUL | NULL    |                |
| productId | int  | YES  | MUL | NULL    |                |
+-----------+------+------+-----+---------+----------------+
4 rows in set (0.00 sec)
```

Products:

```
mysql> desc product;
+-------------------+--------------+------+-----+---------+----------------+
| Field             | Type         | Null | Key | Default | Extra          |
+-------------------+--------------+------+-----+---------+----------------+
| prodid            | int          | NO   | PRI | NULL    | auto_increment |
| brand             | varchar(255) | YES  |     | NULL    |                |
| created_timestamp | datetime(6)  | YES  |     | NULL    |                |
| pcat              | varchar(255) | YES  |     | NULL    |                |
| photo             | varchar(255) | YES  |     | NULL    |                |
| pname             | varchar(255) | YES  |     | NULL    |                |
| price             | int          | NO   |     | NULL    |                |
| sellerId          | int          | YES  | MUL | NULL    |                |
+-------------------+--------------+------+-----+---------+----------------+
8 rows in set (0.00 sec)
```

Payments:

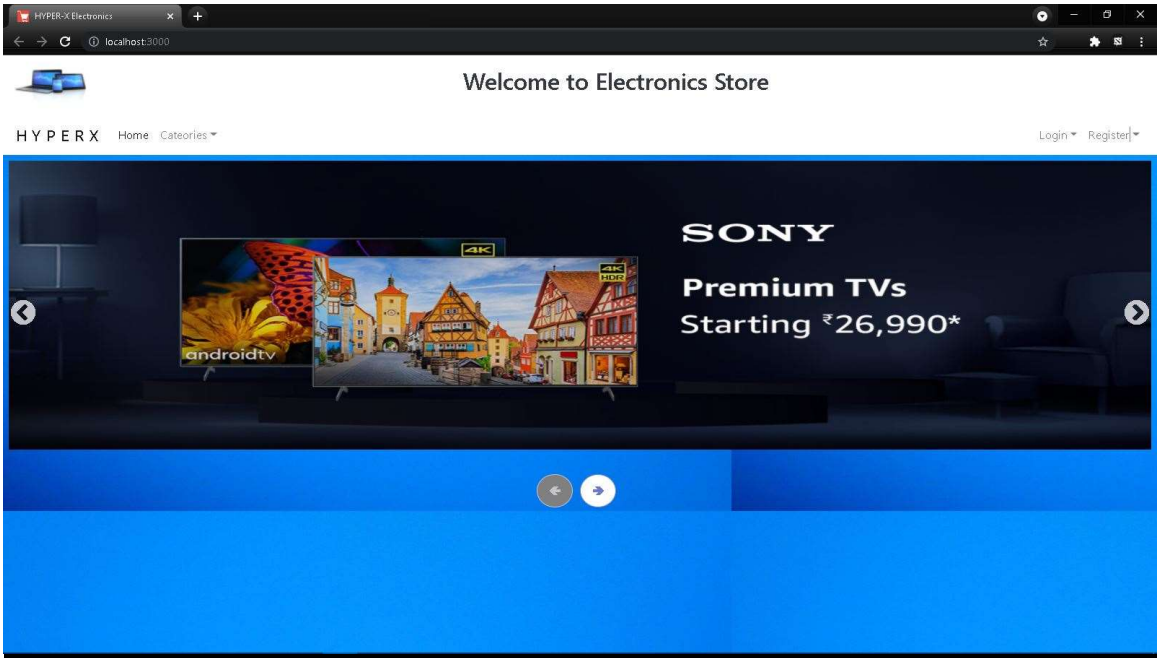
```
mysql> desc payments;
+-------------+--------------+------+-----+---------+----------------+
| Field       | Type         | Null | Key | Default | Extra          |
+-------------+--------------+------+-----+---------+----------------+
| id          | int          | NO   | PRI | NULL    | auto_increment |
| amount      | int          | NO   |     | NULL    |                |
| cardno      | varchar(255) | YES  |     | NULL    |                |
| nameoncard  | varchar(255) | YES  |     | NULL    |                |
| paymentdate | datetime(6)  | YES  |     | NULL    |                |
+-------------+--------------+------+-----+---------+----------------+
5 rows in set (0.00 sec)
```

Tables:

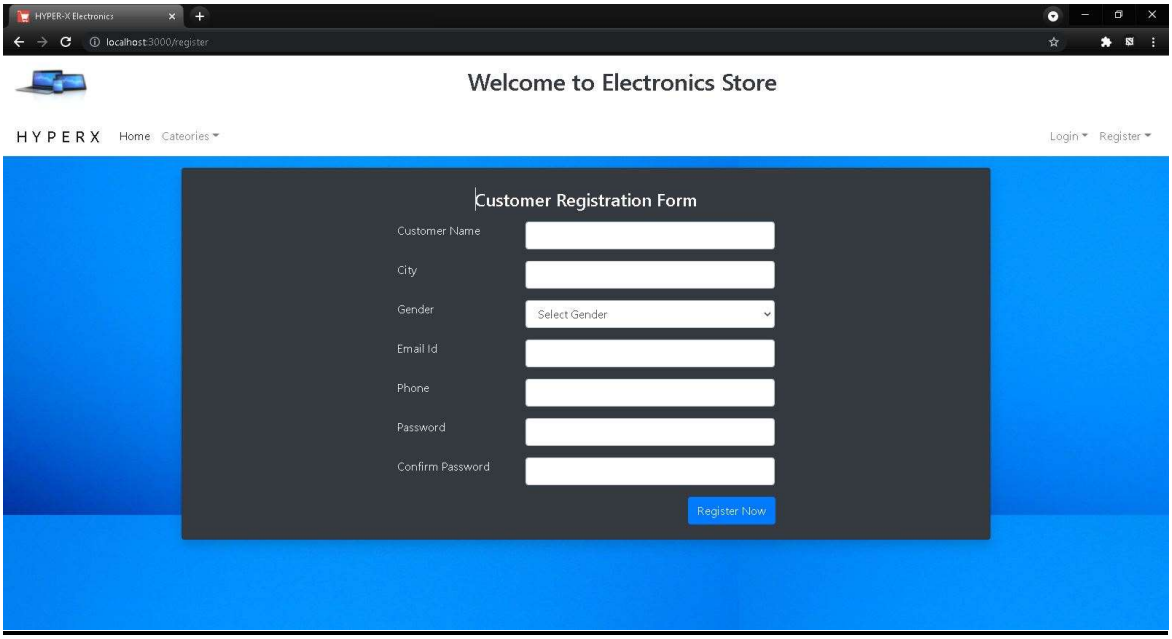
```
mysql> use ecom1;
Database changed
mysql> show tables;
+----------------+
| Tables_in_ecom1 |
+----------------+
| address         |
| admin           |
| customer        |
| orderdetails    |
| orders          |
| payments        |
| product         |
| sellers         |
+----------------+
8 rows in set (0.07 sec)
```

Screenshots:

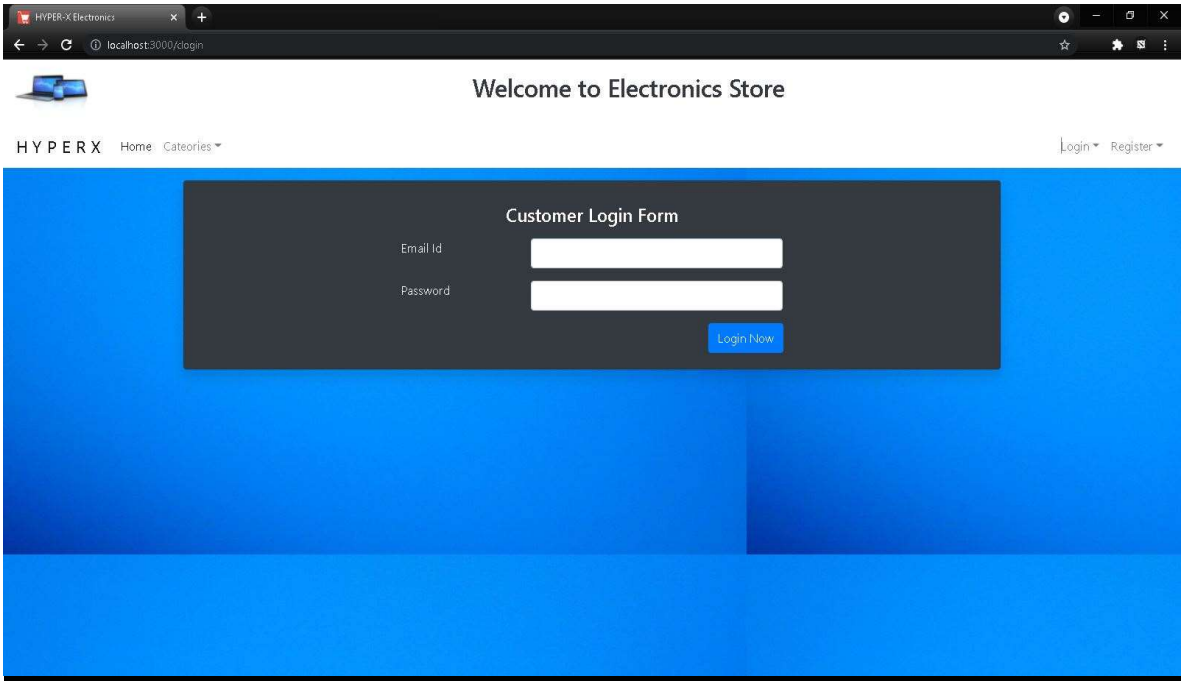
Home Page:



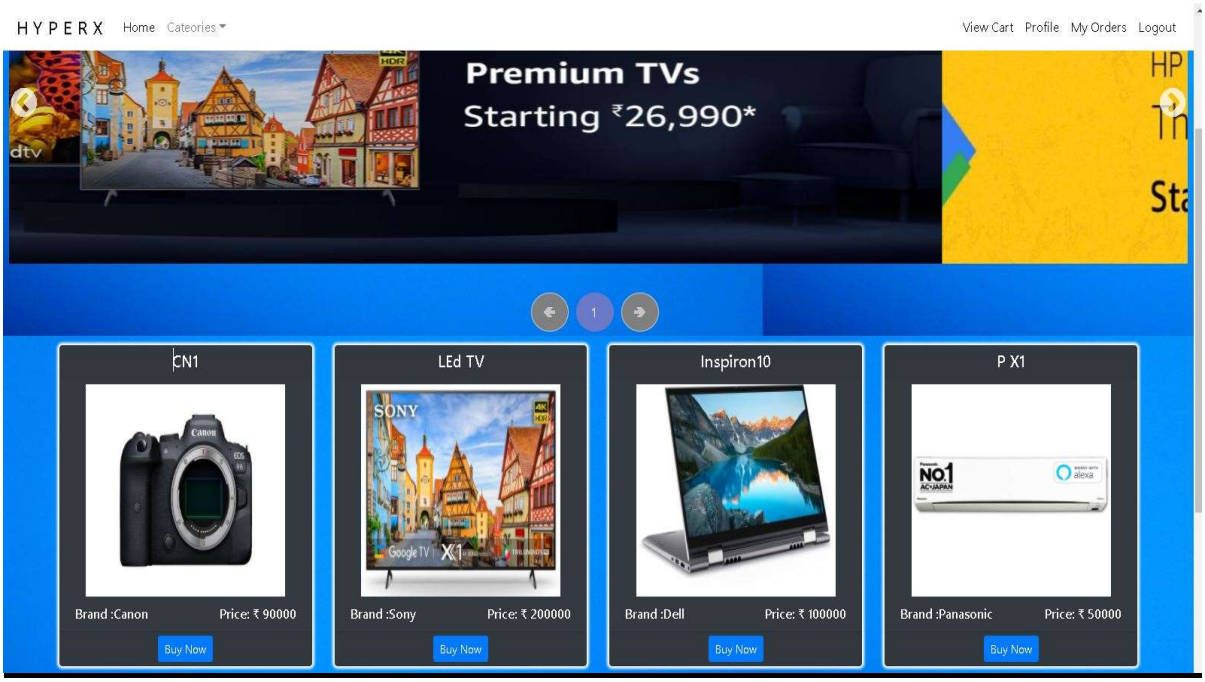
Customer Registeration:



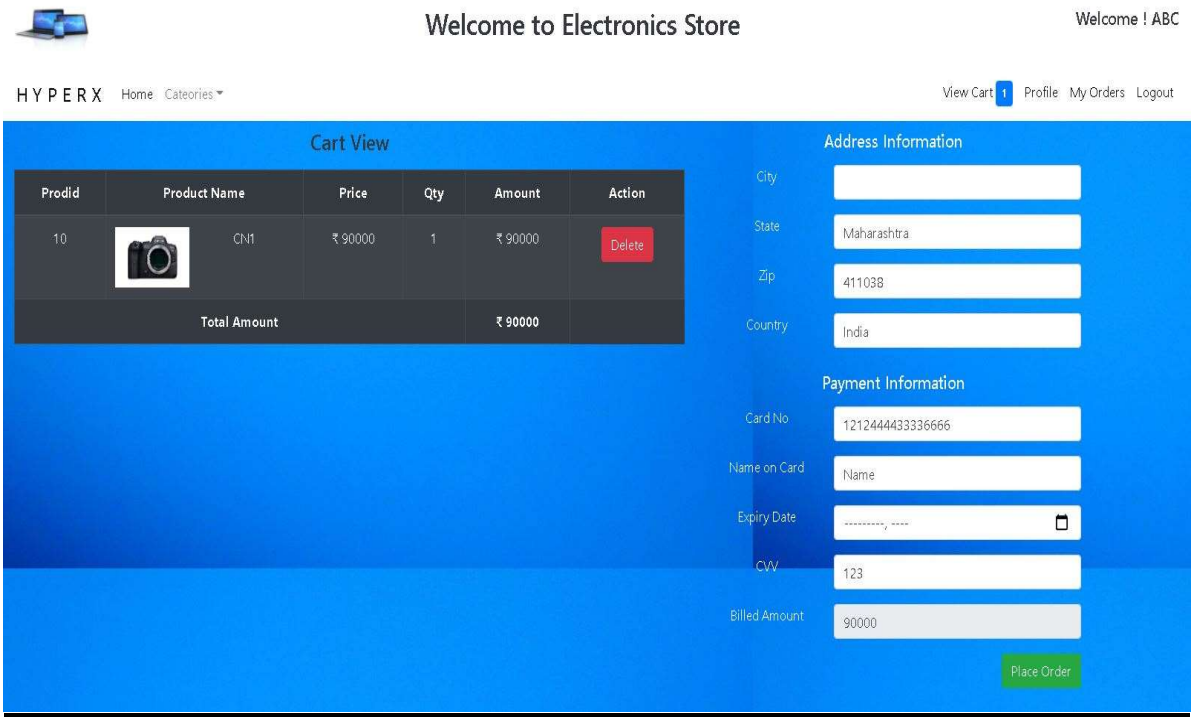
Customer Login:



Products List:



Payment and Address :



Conclusion

This project puts forth the actual working of an e-commerce system. The project is similar to the actual websites which are up and running. This provides all the functionalities of the typical ecommerce store. Customers, Admin, Sellers are the acting members of the Project. This can be used to purchase the things online which are needed by the customers.

Future Scope

The Project can be further extended to provide it with a reliable and genuine Payment System. Also the project can be extended in order to allow the tracking of the orders. Many other functionalities such as subscribing to future events, EMI Payments, Order Tracking and Returns can be added in order to make the system more efficient and more reliable.

7.0 References

[1] www.google.com.

[2] Wikipedia.com.

[3] “Sample Ecommerce Website” https://www.croma.com/.

[4] Java and Other Official Documentations

[5] https://www.w3schools.com/

[6] https://stackoverflow.com/