CAPSTONE PROJECT

ON

SHOPFORHOME

Prepared By:

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Under the guidance of

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(Training mentor)

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Secondly, I am grateful to our teammates for their recommendations and invaluable advice. Thank you so much for standing with me, especially through the most challenging days of working on this project. Thank you for ensuring that I complete my project as expected.

Thank you all.

Ravi Jain

Shubham Yadav

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ABSTRACT

The COVID-19 pandemic has forever changed online shopping behaviours, according to a survey of about 3,700 consumers in nine emerging and developed economies. The survey, entitled "COVID-19 and E-commerce", examined how the pandemic has changed the way consumers use e-commerce and digital solutions. Following the pandemic, more than half of the survey's respondents now shop online more frequently and rely on the internet more for news, health-related information and digital entertainment. Consumers in emerging economies have made the greatest shift to online shopping, the survey shows.

"The COVID-19 pandemic has accelerated the shift towards a more digital world. The changes we make now will have lasting effects as the world economy begins to recover."

The acceleration of online shopping globally underscores the urgency of ensuring all countries can seize the opportunities offered by digitalization as the world moves from pandemic response to recovery.

Hence, we develop a web application named **ShopforHome** to provide the service of online shopping, through which we people can buy all our home needs and accessories.

There are two users on the Shop for Home Application:

- User
- Admin

User Stories:

- As a user I should be able to login, Logout and Register into the application
- As a user I should be able to ask any question under any topic
- As a user I should be able to search the question on any string written in search box
- As a user I should be able to Answer any question asked
- As a user I should be able to answer more than one question and more than one time
- As a user I should be able to chat with other users
- As a user I should be able to upload images to refer

Admin Stories:

- As an Admin I should be able to login, Logout and Register into the application.
- As an Admin I should be able to get mail as soon as any new Question is asked or any Answers given
- As an Admin I should be able to approve the question and Answer. Any Question or Answer will be visible on the platform only if it is approved.
- As an Admin I should be able to delete inappropriate Questions or Answers.

TECHNOLOGIES USED

The technologies used in our project are:

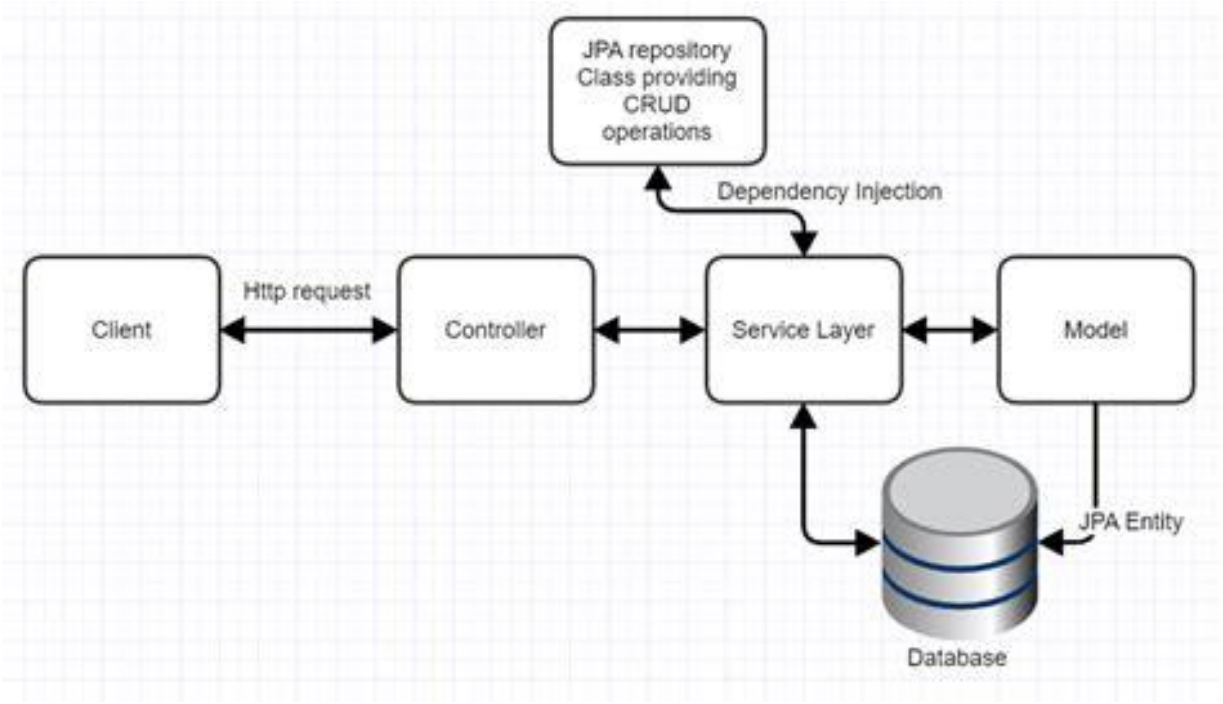
- Spring Boot
- Spring Data JPA
- Angular
- Java

Spring Boot:

It is built on the top of the spring and contains all the features of spring. It is becoming favourite of developer's these days because of it's a rapid production-ready environment which enables the developers to directly focus on the logic instead of struggling with the configuration and set up. It is a microservice-based framework and making a production- ready application in it takes very less time. It is better to use if we want to develop a simple Spring-based application or RESTful services.

Architecture:

- It creates a data access layer and performs CRUD operation.
- The client makes the HTTP requests.
- The request goes to the controller, and the controller maps that request and handles it. After that, it calls the service logic if required.
- In the service layer, all the business logic performs. It performs the logic on the data that is mapped to JPA with model classes.
- A JSP page is returned to the user if no error occurred.



Features:

- It consists of embedded Tomcat-server, no need to install explicitly
- It avoids the xml configuration instead it use the application properties file to specify configuration
- We can add starters
- It reduces boiler-plate code
- It provides the default configuration for running the application

Spring Data JPA:

It is a part of the larger Spring Data family, makes it easy to easily implement JPA based repositories. This module deals with enhanced support for JPA based data access layers. It makes it easier to build Spring-powered applications that use data access technologies.

Spring Data provides multiple repository interfaces that are used for different purposes.it can be used whenever we want to create a JPA-based repository layer that is mainly for CRUD operations.

Features:

- It creates and support repositories created with spring and JPA
- It supports xml mapping for entities
- Reduces code size for performing crud operations by using CrudRepository

ANGULAR:

Angular is a widely used web application platform and framework created and maintained by Google. TypeScript is the core of Angular, being the language upon which Angular is written. As such, Angular implements major and core functionalities as TypeScript libraries while building client applications with additional HTML.

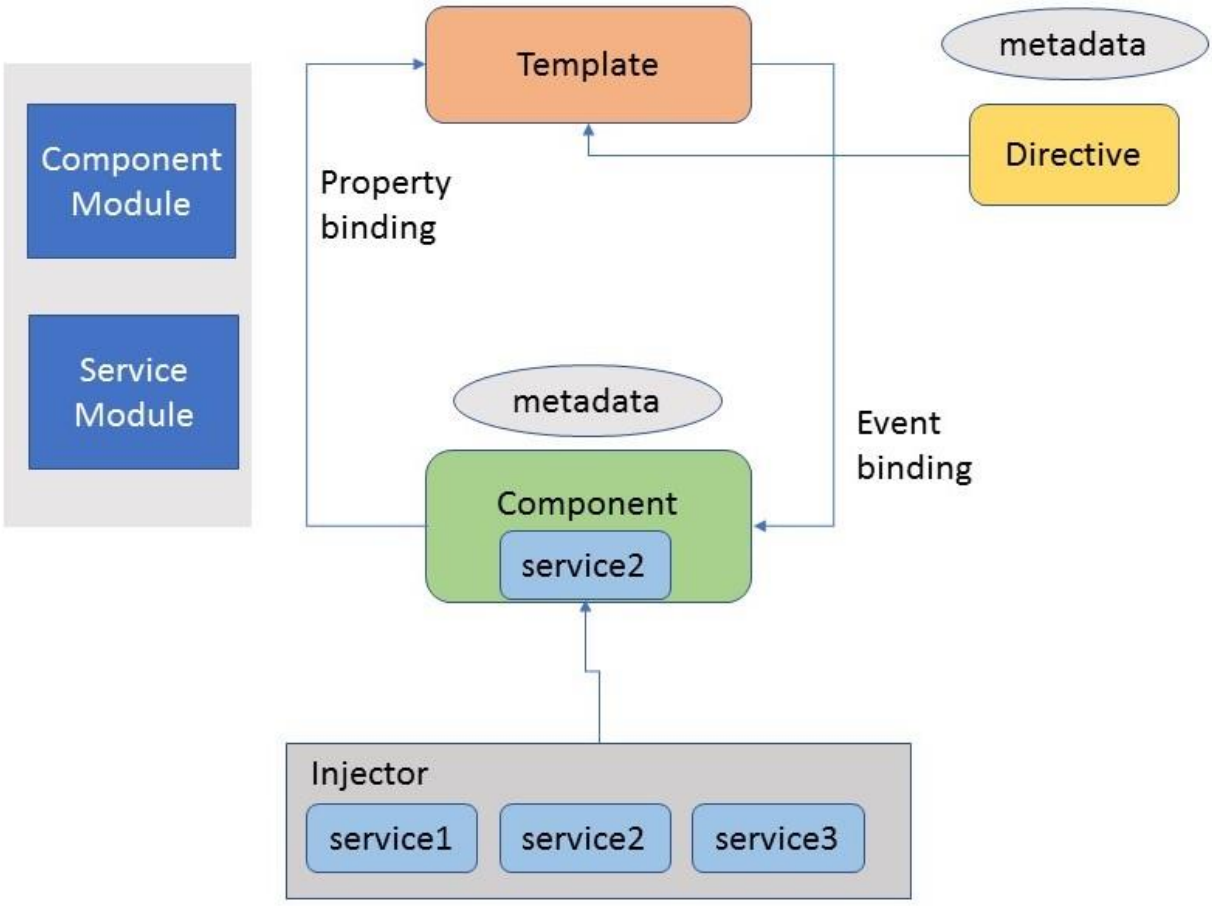
Angular is the most popular JavaScript framework and platform for developing client-side mobile and desktop web apps or single page applications. It is written in TypeScript and complied into JavaScript. Angular is used to create **dynamic web applications**.

Dynamic web application can be defined as it can be change the data from user to user.

Angular Architecture:

- **Components:** Defines a class that contains application data and logic and works with an HTML template that defines a view.
- **Template:** Combines HTML with Angular markup that can modify HTML elements before they are displayed.
- **Directive:** Attaches custom behavior to elements in the DOM.
- **Two-way data binding:** Coordinates the parts of a template with the parts of a component.
- **Services:** Typically, a class used to increase modularity and reusability with a narrow and well-defined purpose.

- **Dependency injection:** Provides components with needed services and gives access to a service class.
- **Routing:** Defines a navigation path among the different application states lets you view application hierarchies.



Features:

- It supports TypeScript
- It provides routing
- Data binding
- Dependency injection
- Angular CLI
- Directives
- Cross platform
- Lazy loading

Java:

Java is one of the most popular and widely used programming language and platform. A platform is an environment that helps to develop and run programs written in any programming language. java has removed many confusing and rarely-used features like explicit pointers, operator overloading etc.

It also takes care of memory management and for that, it provides an automatic garbage collector. This collects the unused objects automatically. it was found to be able to address larger problems, including check casing of Web and mobile applications. It can be used to create applications for small to large businesses and even for supercomputers.

It was named *Oak* but later renamed to Java. Thus, Java was developed as a portable and platform-independent language that could execute code on any platform.

Features:

- **Robust**: It has been made more robust through efficient memory management and exception handling features.
- **Simple**: The syntax is derived from its predecessor programming languages like C, C++. This makes it easy for developers to learn Java quickly.
- **Platform independent**: The code run on any Operating System.
- **Object oriented**: Java is based on the object-oriented programming paradigm. Thereby, it is well suited for the development of real-world applications.
- **Multithreading**: Java supports the development of multithreaded applications to perform multiple tasks concurrently. In a multithreaded application, a single program can have multiple threads performing tasks independently and concurrently.

SOFTWARE TOOLS

Tools that are used for our project are:

- Spring Tool Suite
- Visual Studio Code
- SQLyog
- Github

Spring Tool Suite

It is a java IDE tailored for developing Spring-based enterprise applications. It is most importantly it is based on Eclipse IDE. STS is free, open-source, and powered by VMware. Largely rebuilt from scratch, it provides world-class support for developing Spring-based enterprise applications. It provides a ready-to-use environment to implement, debug, run and deploy your applications. It is owned by pivotal company.

Features:

- It is easier
- Faster

Visual Studio Code:

Visual Studio Code is "a free-editor that helps the programmer write code, helps in debugging and corrects the code using the intelli-sense method". In normal terms, it facilitates users to write the code in an easy manner. It mainly helps the front-end developers as compared with the back-end developers.

Features:

- It can support HTML, CSS
- It is open source

SQLYOG :

It is a Visual database designing and modeling access tool for SQLyog server relational database. It facilitates creation of new physical data models and modification of existing SQLyog databases with reverse/forward engineering and change management functions. The purpose of SQLyog workbench is to provide the interface to work with databases more easily and in a more structured way.

It provides SQL development, data modeling, data migration, and comprehensive administration tools for server configuration, user administration, backup, and many more. We can use this Server Administration for creating new physical data models, E-R diagrams, and for SQL development.

Features:

- **Modelling and designing**: This provides the capability that enables you to create models of the database Schema graphically, performs reverse and forward engineering between a Schema and a live database, and edit all aspects of the database using the comprehensive Table editor
- **To develop SQL query**: This provides the capability that enables you to execute SQL queries, create and manage connections to the database Servers with the help of built-in SQL editor.

Github:

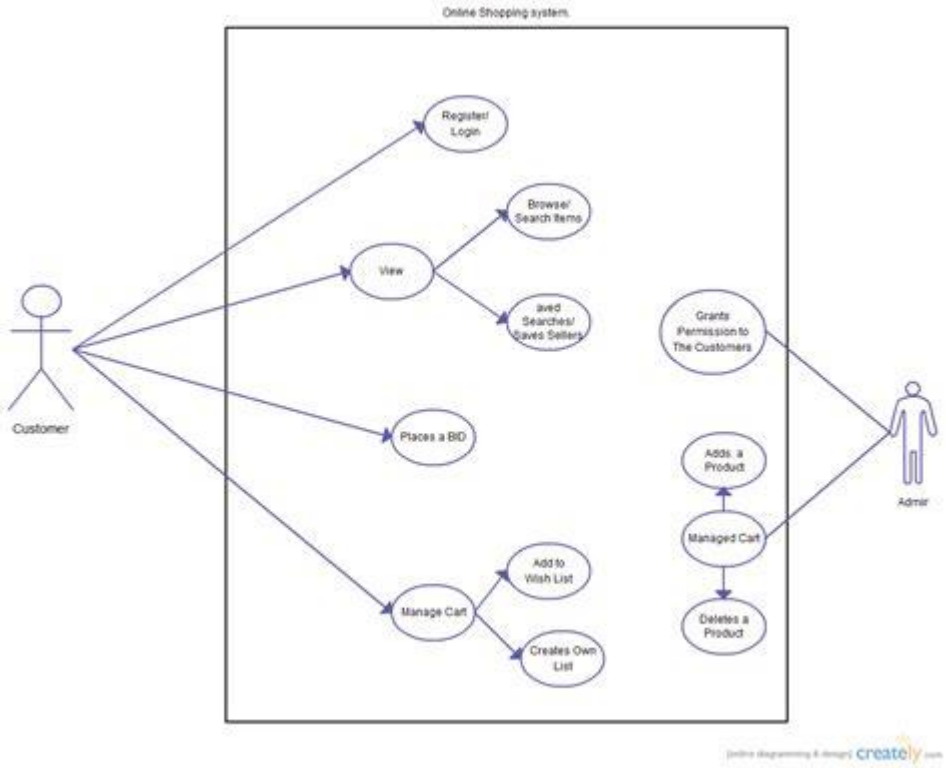
It is modern and widely used **distributed version control** system in the world. It is developed to manage projects with high speed and efficiency. The version control system allows us to monitor and work together with our team members at the same workspace.

Features:

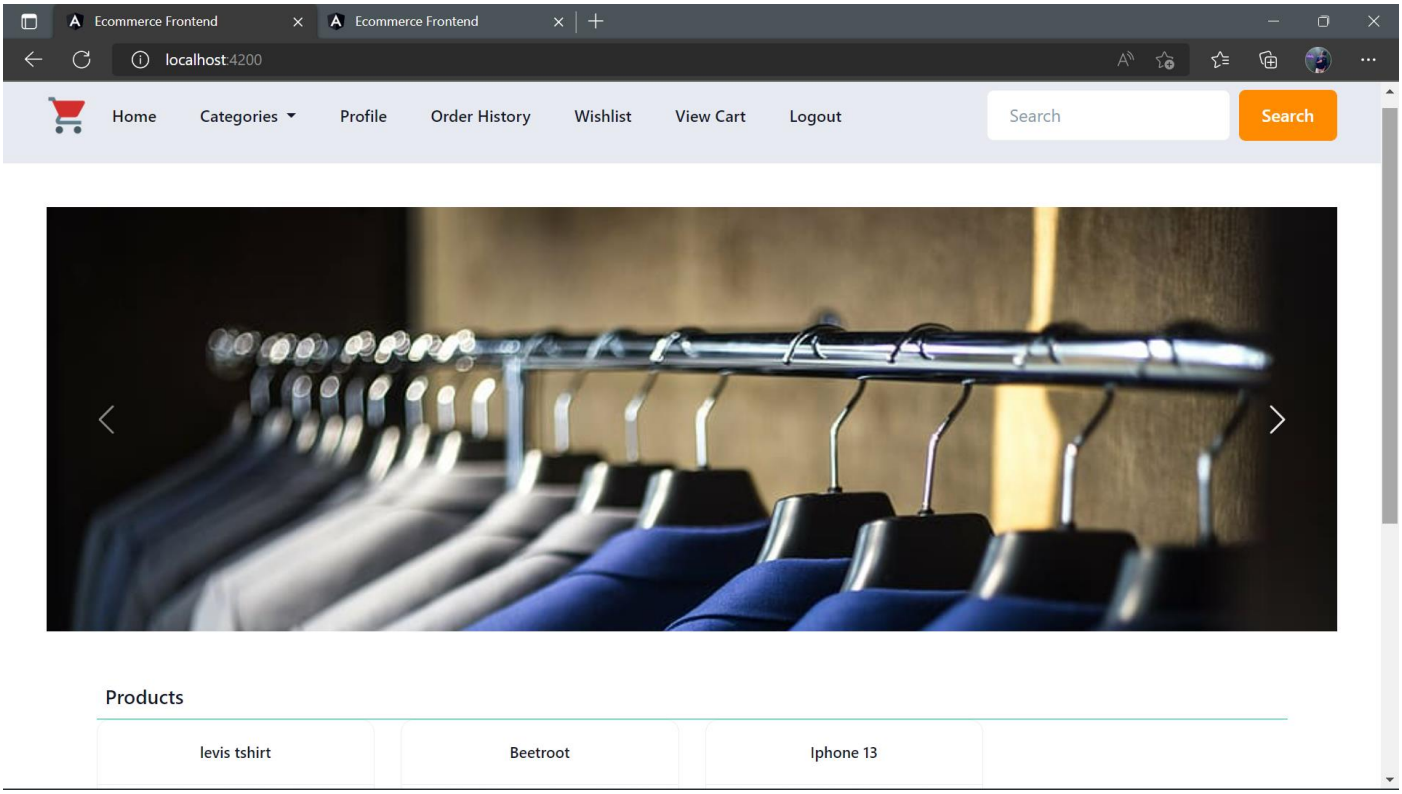
- **Scalable**: when the number of users increases, the Git can easily handle such situations.
- **Distributed**: Distributed means that instead of switching the project to another machine, we can create a "clone" of the entire repository. Also, instead of just having one central repository that you send changes to, every user has their own repository that contains the entire commit history of the project. We do not need to connect to the remote repository; the change is just stored on our local repository. If necessary, we can push these changes to a remote repository.
- Security
- Branching and merging

USE CASE DIAGRAM

- A use case diagram in the unified modelling language is a type of behavioral diagram defined by and created from the use-case analysis.
- Its purpose is to present a graphical overview of the functionality provided by a system in terms of actors, their goals and any dependencies between those use cases
- The main purpose of a use case diagram is to show what system functions are performed for which actor. Roles of the actors in the system can be depicted.



SNAPSHOTS


Ecommerce Frontend
Ecommerce Frontend
localhost:4200
Home
Categories
Profile
Order History
Wishlist
View Cart
Logout
Search
Search
Products
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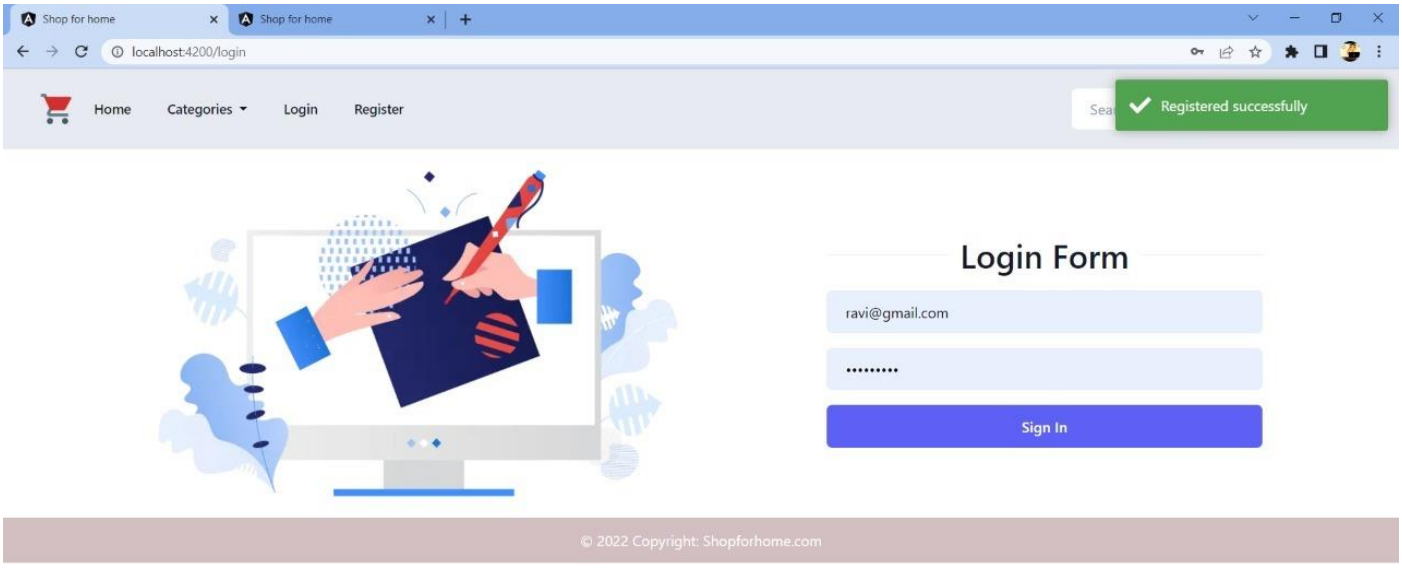
Beetroot
Iphone 13


Shop for home
Shop for home
localhost:4200/login
Home
Categories
Login
Register
Registered successfully
Login Form
ravi@gmail.com
Sign In
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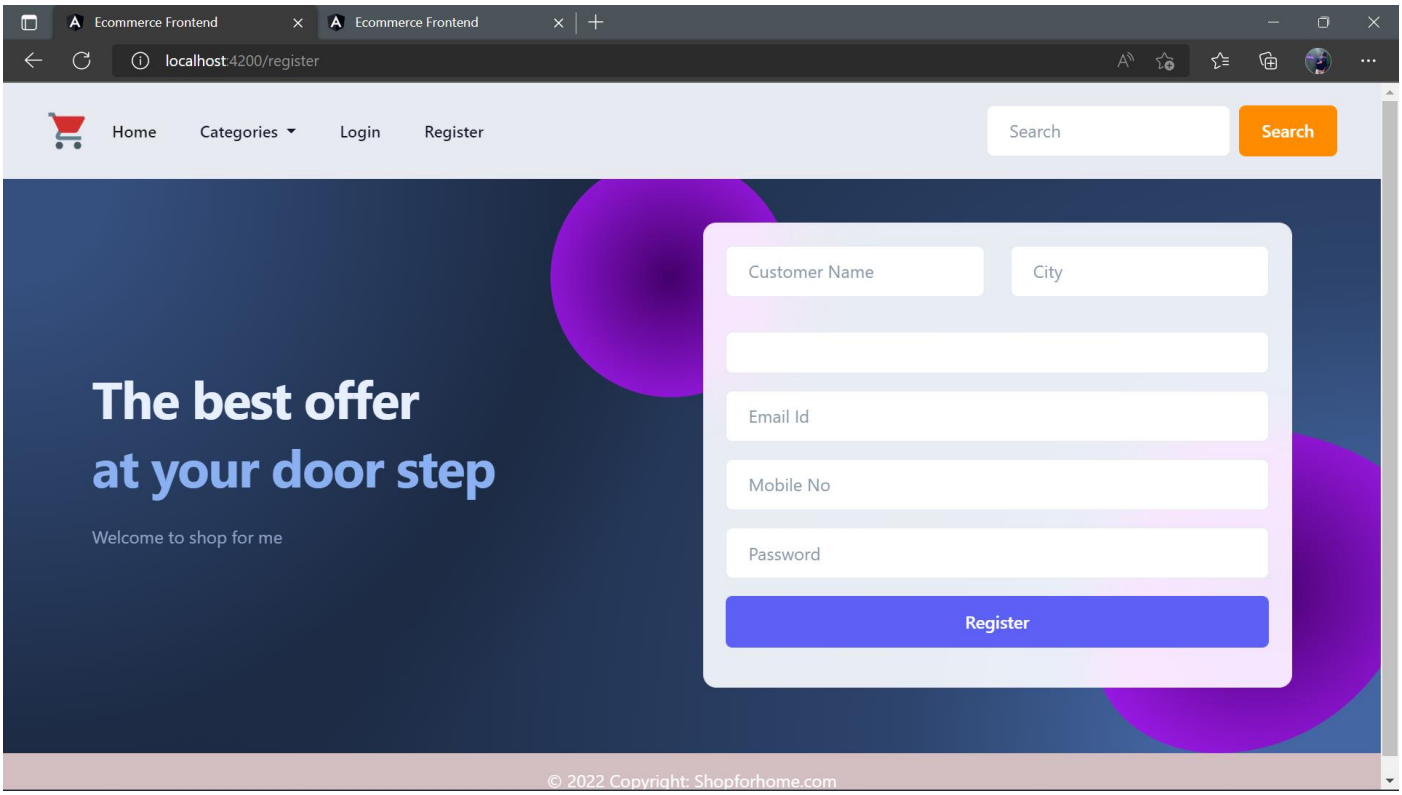
Ecommerce Frontend
Ecommerce Frontend
localhost:4200/register
Home
Categories
Login
Register
Search
Search
The best offer
at your door step
Welcome to shop for me
Customer Name
City
Email Id
Mobile No
Password
Register
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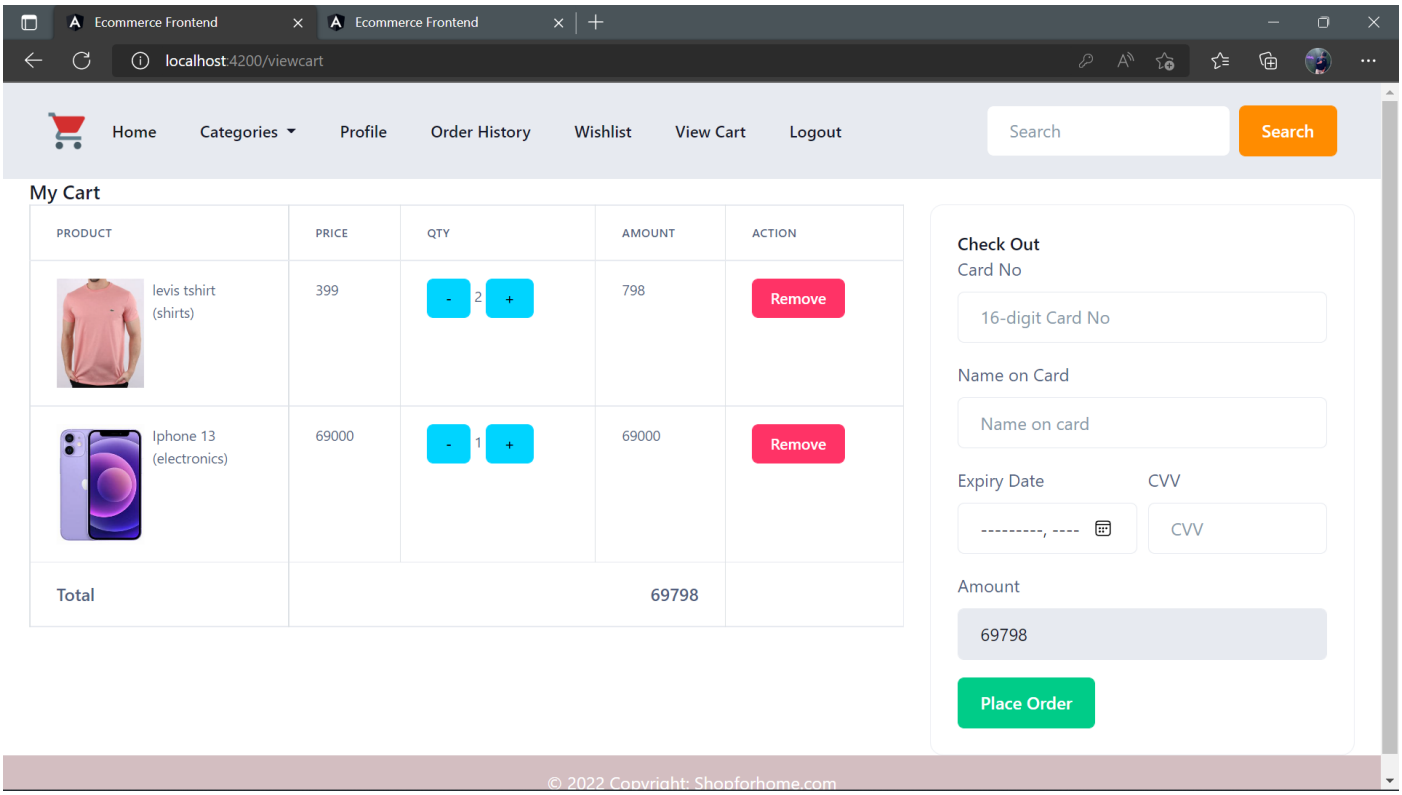
Ecommerce Frontend
Ecommerce Frontend
localhost:4200/viewcart
Home
Categories
Profile
Order History
Wishlist
View Cart
Logout
Search
Search
My Cart
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PRICE
QTY
AMOUNT
ACTION
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(shirts)
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2
798
Remove
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Place Order
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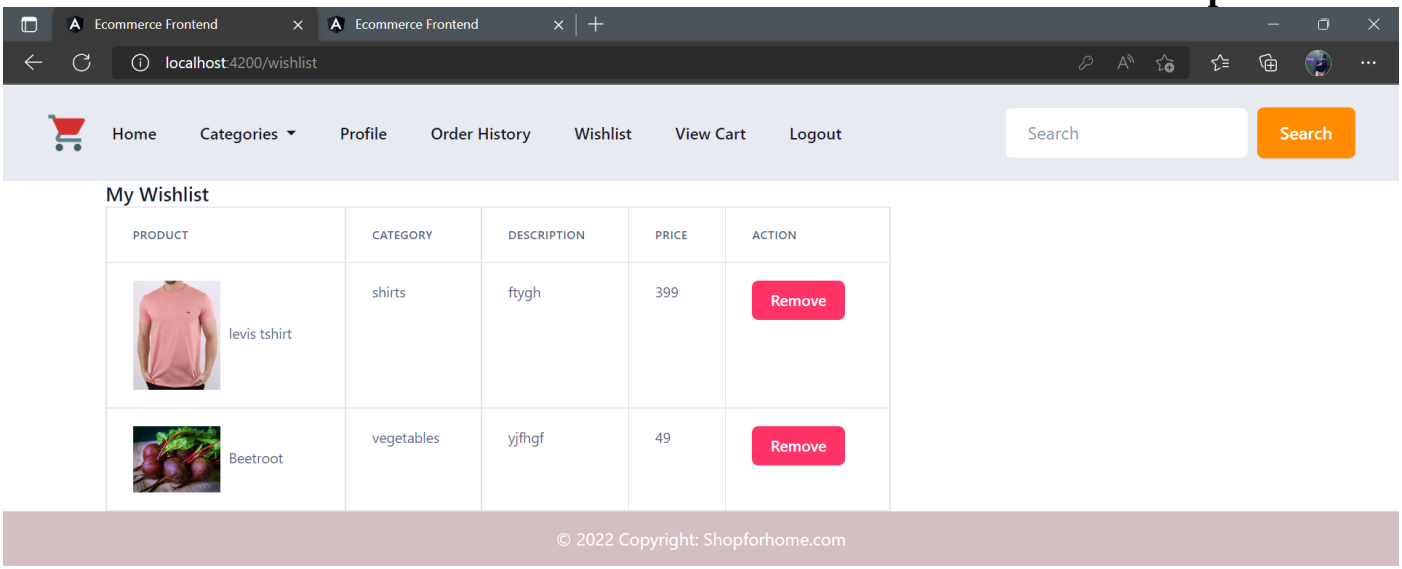
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Ecommerce Frontend
localhost:4200/wishlist
Home
Categories
Profile
Order History
Wishlist
View Cart
Logout
Search
Search
My Wishlist
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CATEGORY
DESCRIPTION
PRICE
ACTION
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shirts
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Remove
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vegetables
yjfhgf
49
Remove
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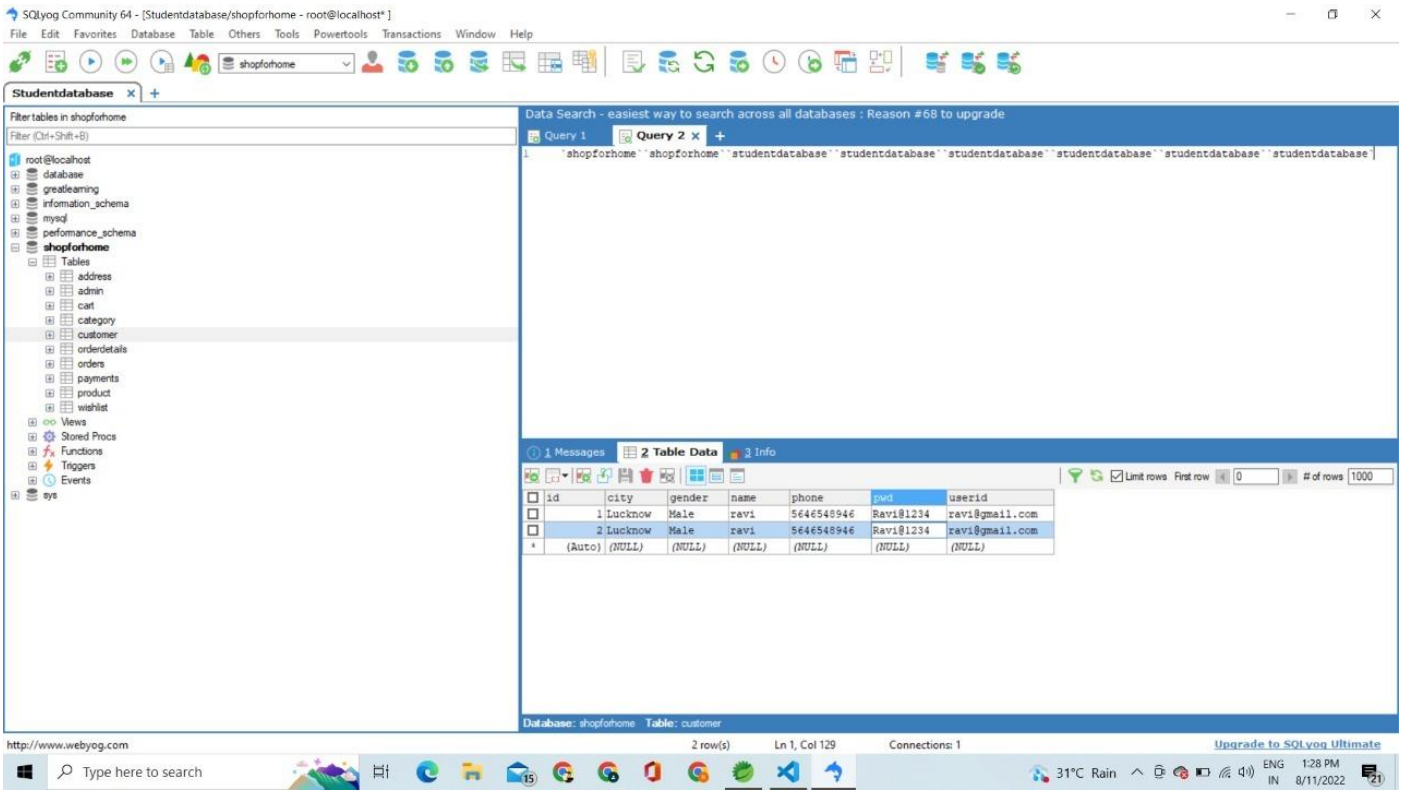
SQLyog Community 64 - [Studentdatabase/shopforhome - root@localhost*]
File Edit Favorites Database Table Others Tools Powertools Transactions Window Help
Studentdatabase
Filter tables in shopforhome
root@localhost
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greatlearning
information_schema
mysql
performance_schema
shopforhome
Tables
address
admin
cart
category
customer
orderdetails
orders
payments
product
wishlist
Views
Stored Procs
Functions
Triggers
Events
sys
Data Search - easiest way to search across all databases : Reason #68 to upgrade
Query 1
Query 2
1 Messages
2 Table Data
3 Info
id city gender name phone pwd userid
1 Lucknow Male ravi 5646548946 Ravi@1234 ravi@gmail.com
2 Lucknow Male ravi 5646548946 Ravi@1234 ravi@gmail.com
(Auto) (NULL) (NULL) (NULL) (NULL) (NULL) (NULL)
Database: shopforhome Table: customer
http://www.webyog.com
2 row(s)
Ln 1, Col 129
Connections: 1
Upgrade to SQLyog Ultimate
Type here to search
31°C Rain
ENG IN
1:28 PM 8/11/2022

CONCLUSION

Online Shopping Carts through electronic commerce is a piece of software that acts as an online stores catalog and ordering process. The purpose of a shopping cart is it allows the merchant to be able to manage online sales through inventory control as well as collect customer data and information when the customer has completed their order. The purpose of the shopping cart for the customer is it allows the customer to store all the items they would like to purchase in one central location, add and review the products/order and submit payment. The shopping cart is the final review before payment information is collected and submitted. The shopping cart feature can be basic to advance depending on the size of the online business. This process of online shopping has helped a lot of people during the COVID pandemic. It is also useful to reduce our everyday strain to go to store and buy stuff.