

# SHOP FOR HOME C1 G11

-Developed By

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# Shop For Home



Home shopping is a popular store in the market which allows consumers to shop for goods from the privacy of their own home, as opposed to traditional shopping, which requires one to visit brick and mortar stores and shopping malls.

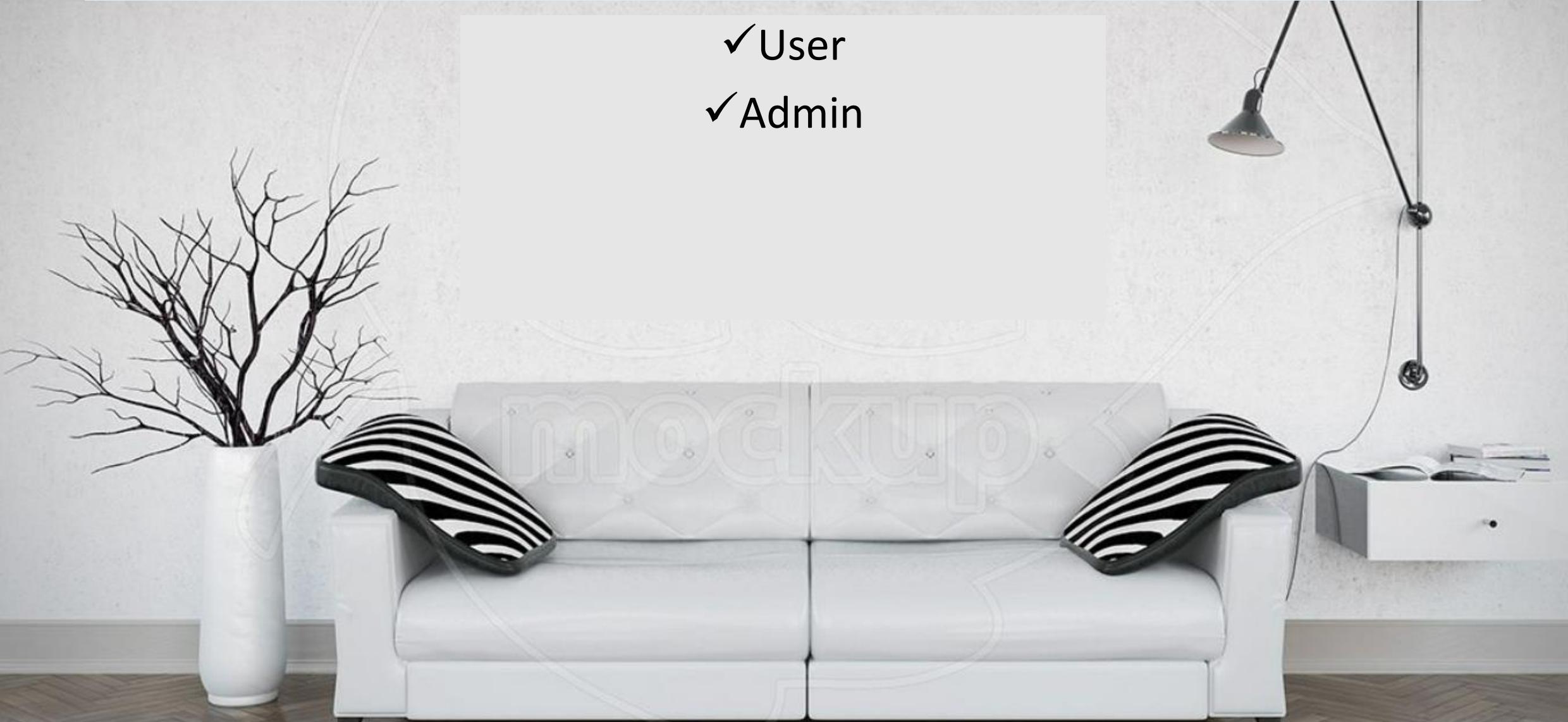
# Pros Of Ecommerce

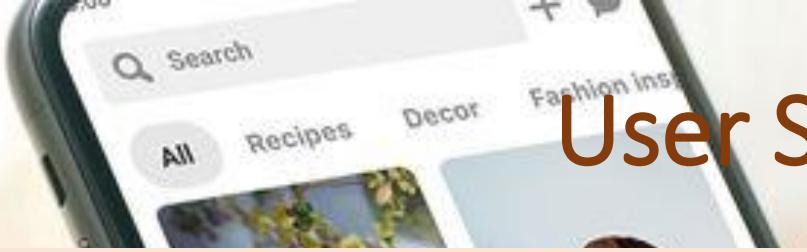
- E-commerce helps organizations to reduce the cost to create process, distribute, retrieve and manage the paper based information by digitizing the information.
- E-commerce improves the brand image of the company.
- E-commerce helps organization to provide better customer services.
- E-commerce helps to simplify the business processes and makes them faster and efficient.
- E-commerce reduces the paper work.



# Controllers Division:

- ✓ 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 see the products in different categories.
- As a user I should be able to sort the products.
- As a user I should be able to add the products into the shopping cart.
- As a user I should be able to increase or decrease the quantity added in the cart.
- As a user I should be able to add “n” number of products in the cart.
- As a user I should be able to get the Wishlist option where I can add those products which I want but don’t want to order now.
- As a user I should get different discount coupons.

# 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 perform CRUD on Users.
- As an Admin I should be able to Perform CRUD on the products.
- As an Admin I should be able to get bulk upload option to upload a csv for products details
- As an Admin I should be able to get the stocks.
- As an Admin I should be able to mail if any stock is less than 10.
- As an Admin I should be able to get the sales report of a specific duration.
- As an Admin I should be able to set the discount coupons for the specific set of users

A photograph showing five wooden blocks arranged horizontally. Each block has a large, bold, black capital letter on it: A, D, M, I, and N. These letters together spell out the word "ADMIN". The blocks are placed on a surface that appears to be covered with a patterned cloth or paper featuring various words and code snippets in purple and blue ink.

- OBJECTIVES:

1. Users should be able to search for products and get a complete product descriptions.
2. Add an item to the wish list and to the cart and can delete them according to their wish.
3. Admin can see the stock details.
4. If stock is less than 10 the application automatically sends the email to the admin.
5. Admin can view their sales.
6. Admin can add the discount coupon to the particular user.

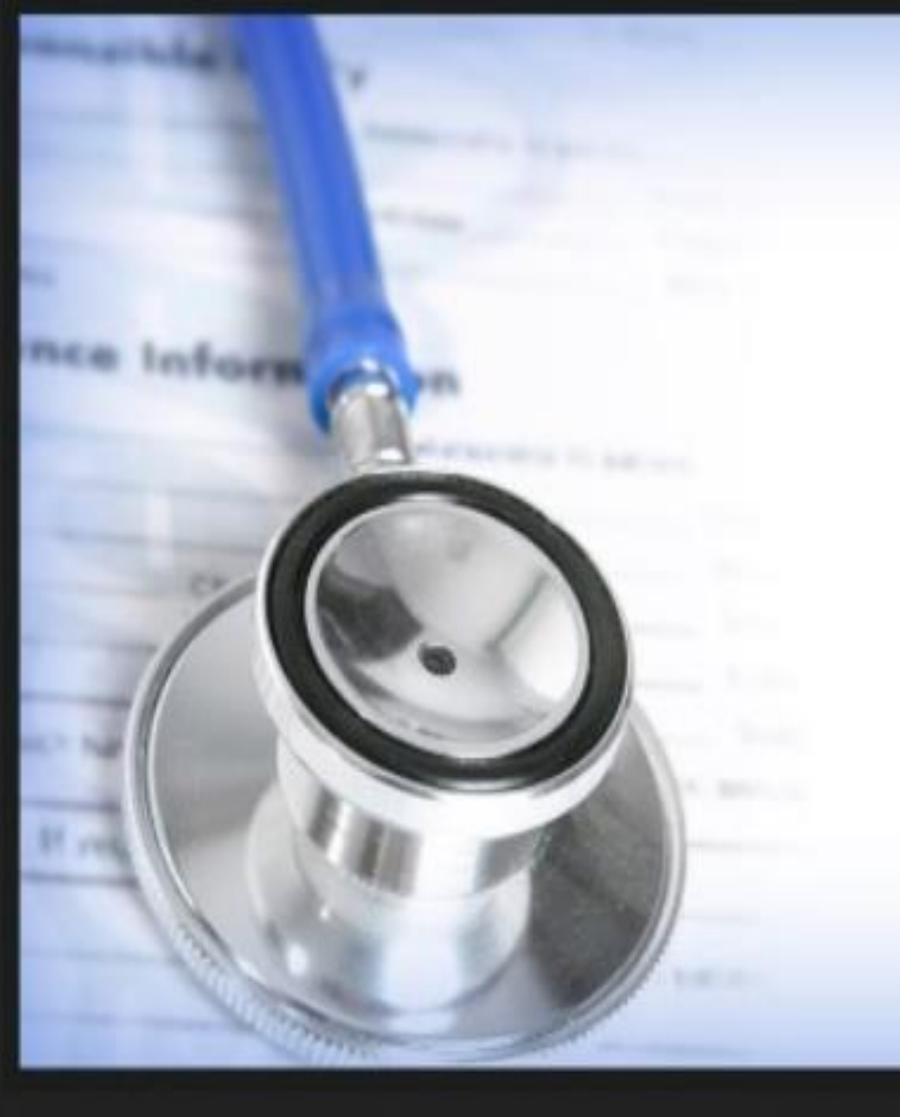


## **SOFTWARE REQUIREMENTS:**

1. JDK 1.8 AND ABOVE
2. ECLIPSE IDE
3. VS CODE EDITOR
4. MYSQL 8.0 DATABASE

## **TECHNOLOGIES USED:**

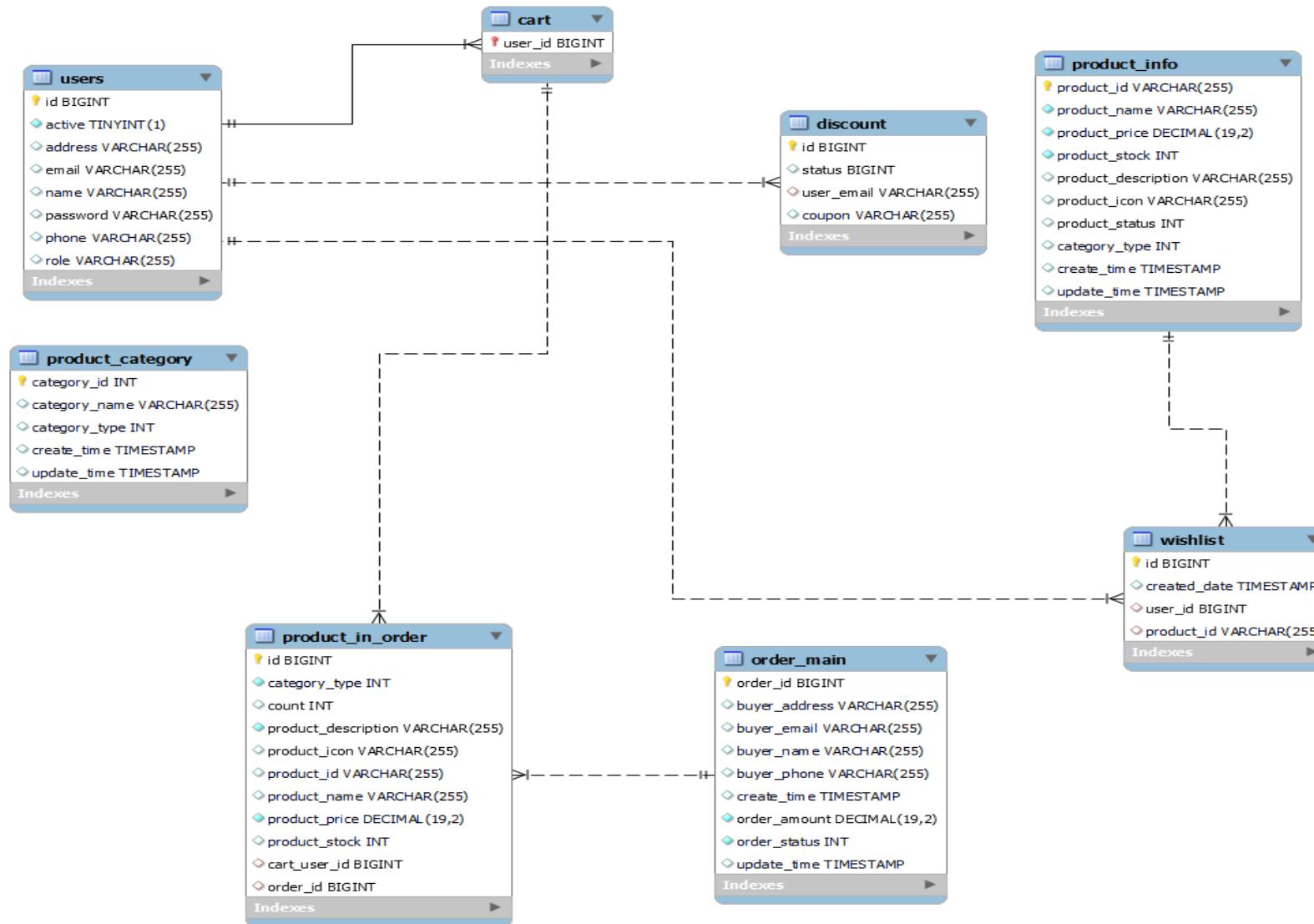
1. ANGULAR 8
2. CSS 3
3. HTML 5
4. SPRING BOOT
5. MYSQL 8.0 WORKBENCH
6. MYSQL 8.0 COMMAND LINE CLIENT



## **SCOPE OF THE PROJECT:**

Our project Shop For Home provides a 24×7 service, where all the customers can surf the website, place orders to get the items and customers can enjoy easy shopping from anywhere. This computerized internet socializing can enjoy massive savings and time, and also offer great safety in shopping from home, especially in a pandemic. Sellers make websites where they display images of their products with prices and descriptions. Shoppers who buy the products have multiple payment options like COD, e-wallet, net banking, credit card, and so on. Online sellers have the responsibility of shipping the product to the buyer and ensuring safe and timely delivery. Online Sellers can also be notified when the Stocks are very less in the Stock section.

## DATABASE E-R DIAGRAM:



# BRIEF DESCRIPTION OF TECHNOLOGIES:

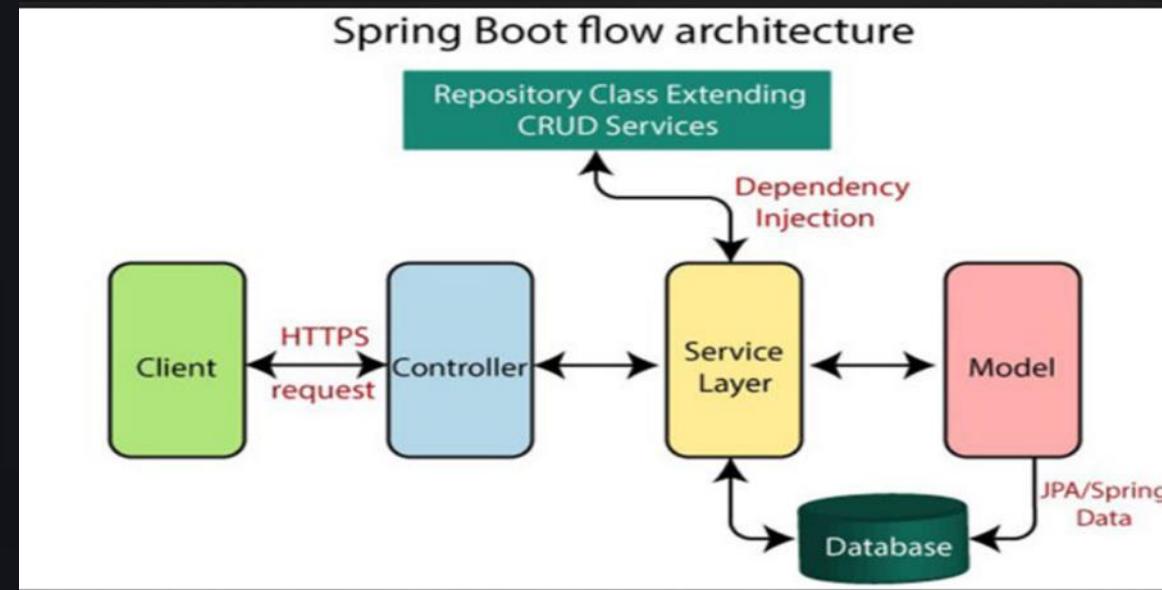
## ✓ ANGULAR 8 :

Angular is an open-source Javascript framework that is completely written in typescript primarily aimed to develop Single Paged Applications which use the HTML Syntax to express your application components clearly and is maintained by Google.

## ✓ BUILDING BLOCKS OF ANGULAR :

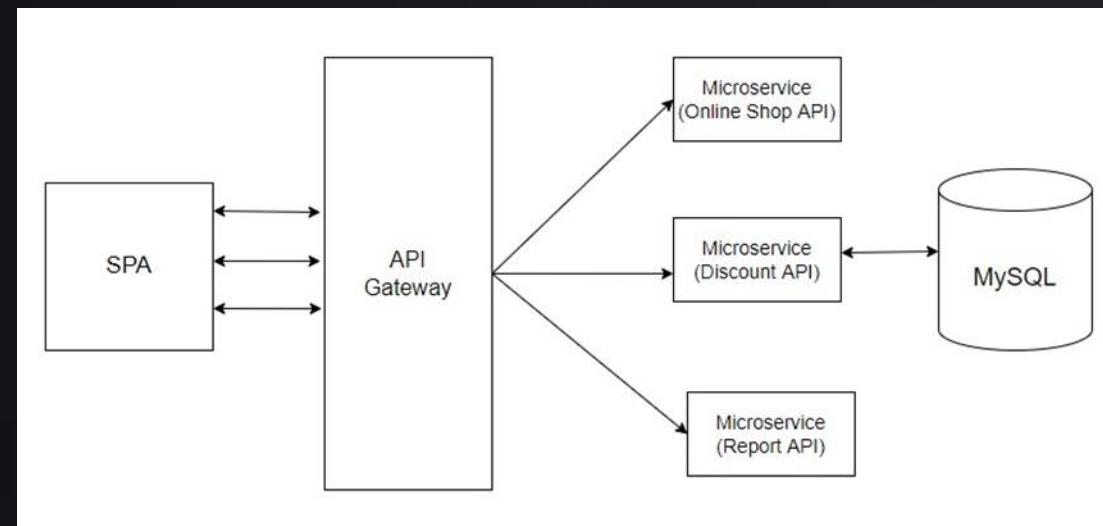
1. Modules
2. Components
3. Templates
4. Metadata
5. Data binding
6. Directives
7. Services
8. Dependency Injection.

- SPRING BOOT:
- Spring is a framework that was created to help developers build systems and run applications on the JVM conveniently, simply, and quickly.
- Spring framework is a collection of many different small projects, such as Spring MVC (used to build web-based applications), Spring Data, and Spring Boot.
- Spring Boot is the fastest way to create a standalone REST service. Spring Boot simplifies deploying and packing applications into a jar package and it can be easily integrated into web containers.



## MICROSERVICES:

In Spring boot-microservices, as the name suggests it is the group of micro or small services altogether. By the use of microservices we can distribute the large application into the smaller process, it works at the process level, but our spring boot work at the component level. By the use of it, we can make the spring boot application or the service loosely coupled process. To make this enable into our project we have to make the required configurations else it will not work as expected. We have so many benefits of using microservices like they are very independent, have their own database, and can be written in any programming language irrespective of the core application.



# MICROSERVICES IMPLEMENTATION IN OUR PROJECT:

The screenshot shows the Eclipse IDE interface with the following details:

- Title Bar:** eclipse-workspace - Shop\_For\_Home\_G11\_File/src/main/java/Shop\_For\_Home\_G11\_File/ShopForHomeG11FileApplication.java - Eclipse IDE
- Menu Bar:** File Edit Source Refactor Navigate Search Project Run Window Help
- Toolbar:** Standard Eclipse toolbar icons.
- Package Explorer:** Shows projects: Discount-MicroService, EurekaServer, Report-MicroService, and Shop\_For\_Home\_G11\_File.
- Editor Area:** Displays the `ShopForHomeG11FileApplication.java` file content. The code is a Spring Boot application with annotations for `@SpringBootApplication`, `@EnableEurekaClient`, and `@Override` methods.

```
1 package Shop_For_Home_G11_File;
2
3 import org.springframework.boot.SpringApplication;
4
5 @SpringBootApplication
6 @EnableEurekaClient
7 public class ShopForHomeG11FileApplication {
8
9     @Bean
10    public PasswordEncoder passwordEncoder() {
11        return new BCryptPasswordEncoder();
12    }
13
14    @Bean
15    public WebMvcConfigurer corsConfigurer() {
16        return new WebMvcConfigurerAdapter() {
17            @Override
18        }
```

- Console:** Shows "No consoles to display at this time."
- Bottom Status Bar:** Writable, Smart Insert, 22 : 1 : 890, and system icons.
- Taskbar:** Shows various application icons including File Explorer, Task View, Start, Search, Chat, File Manager, Edge, Mail, File Explorer, Firefox, WhatsApp, Word, and Task View.
- System Tray:** Shows ENG IN, battery level, signal strength, volume, and date/time (23-08-20).

## MICROSERVICES LINKED WITH EUREKA SERVER:

The screenshot shows the Spring Eureka UI running at [localhost:8761](http://localhost:8761). The interface includes a header with the Eureka logo and navigation icons, and a sidebar with various application icons.

**System Status**

Environment	test	Current time	2022-08-23T15:46:36 +0530
Data center	default	Uptime	00:01
		Lease expiration enabled	false
		Renews threshold	6
		Renews (last min)	0

**DS Replicas**

localhost

Instances currently registered with Eureka

Application	AMIs	Availability Zones	Status
CAPSTONEC1G11MAIN-SERVICE	n/a (1)	(1)	UP (1) - <a href="#">KARTHIK-25:capstonec1g11main-service</a>
DISCOUNT-MICROSERVICE	n/a (1)	(1)	UP (1) - <a href="#">KARTHIK-25:discount-microservice:8081</a>
REPORT-SERVICE	n/a (1)	(1)	UP (1) - <a href="#">KARTHIK-25:report-service:8082</a>

**General Info**

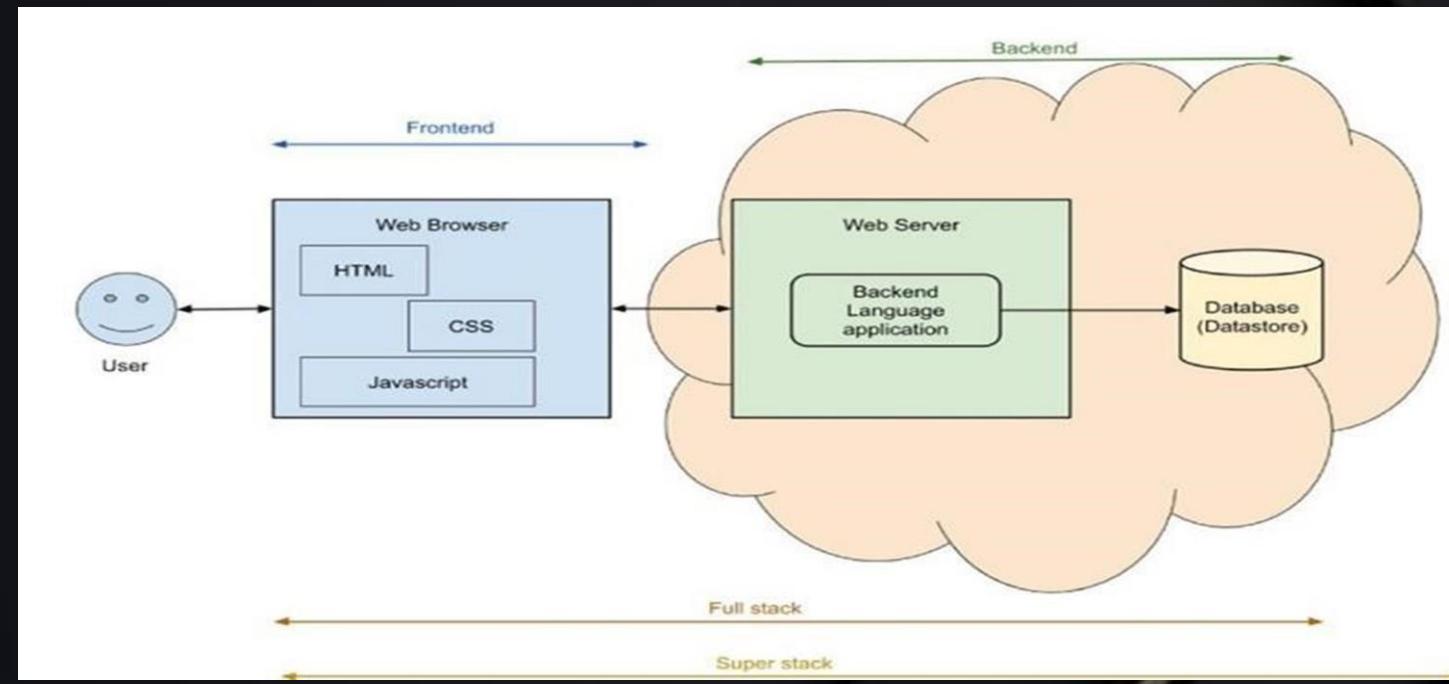
Windows taskbar icons: File Explorer, Search, Task View, Chat, Mail, File Manager, Edge, Firefox, WhatsApp, Word, Excel, Powerpoint, Taskbar settings.

System tray icons: Volume, Network, Battery, ENG IN, WiFi, 15:47, 23-08-2022, 24.

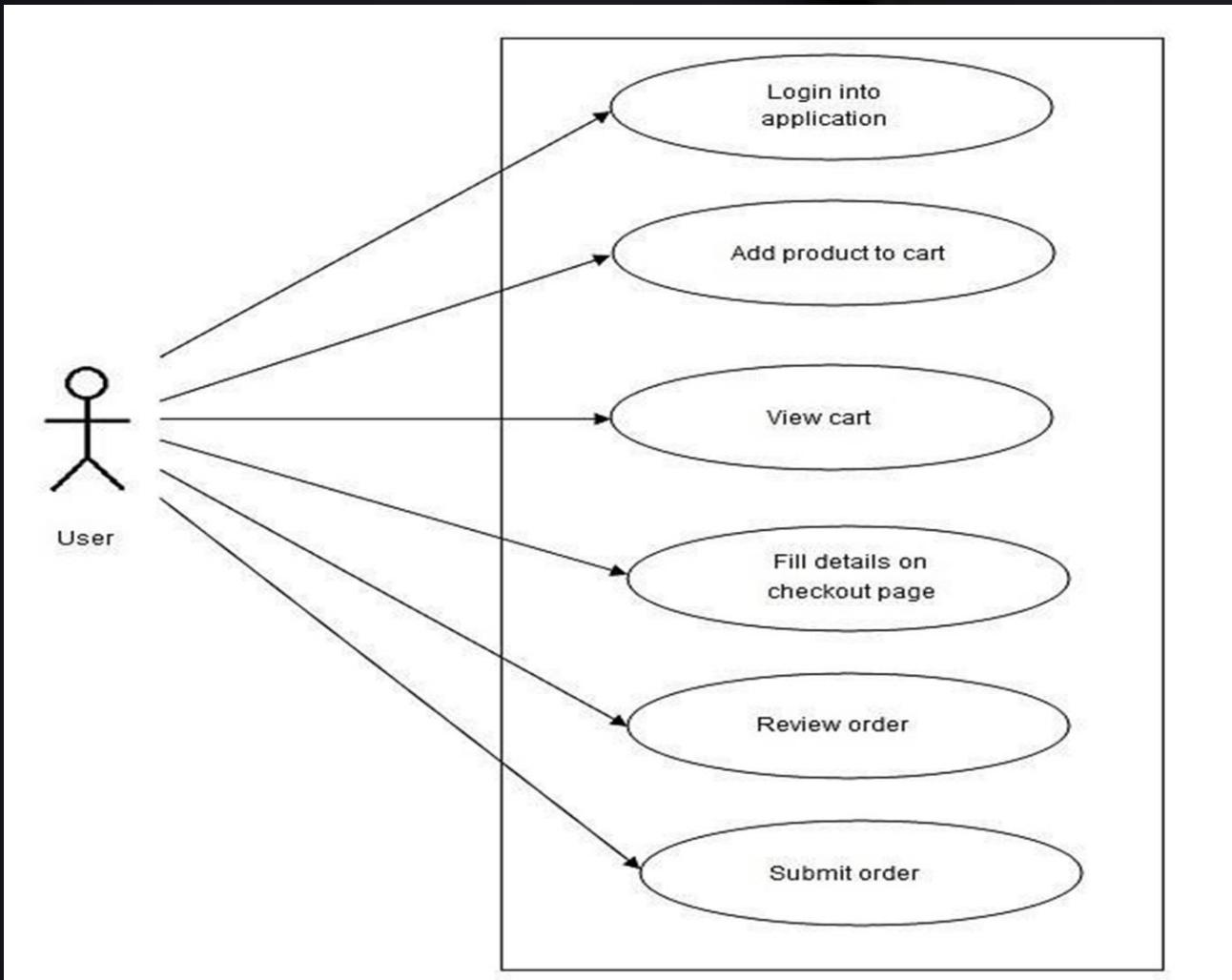
## MYSQL DATABASE:

MySQL is fast and easy to use. RDBMS is used for many small and big businesses. MySQL is developed, marketed, and supported by MySQL AB. MySQL is popular for many reasons like it is released under an open source license. So you have nothing to pay to use it. It is a very powerful program in its own right. Handles a large subset of the functionality of the most expensive and powerful database packages.

## CONNECTIVITY OF WHOLE PROJECT:

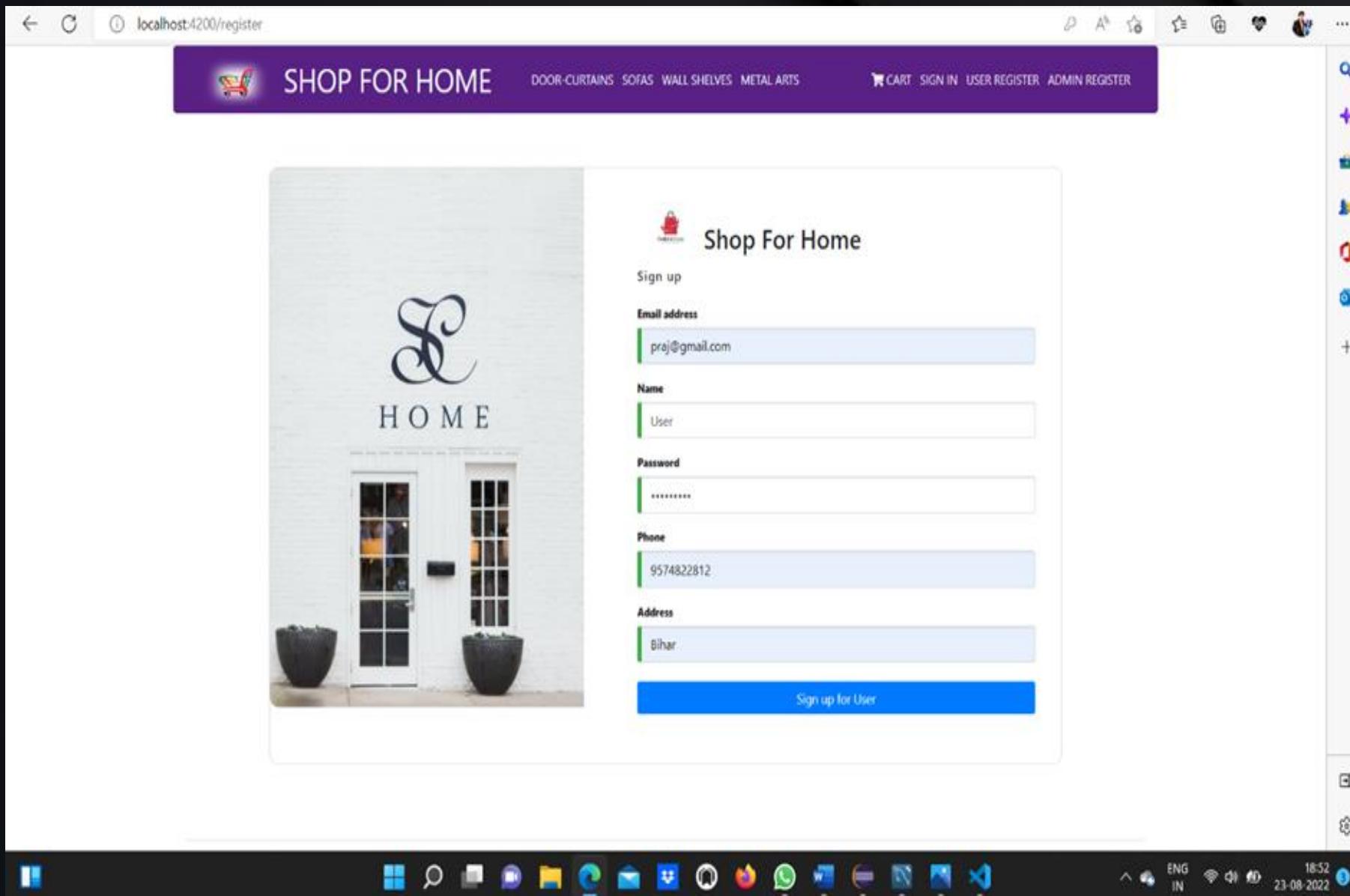


- USER FUNCTIONALITIES:

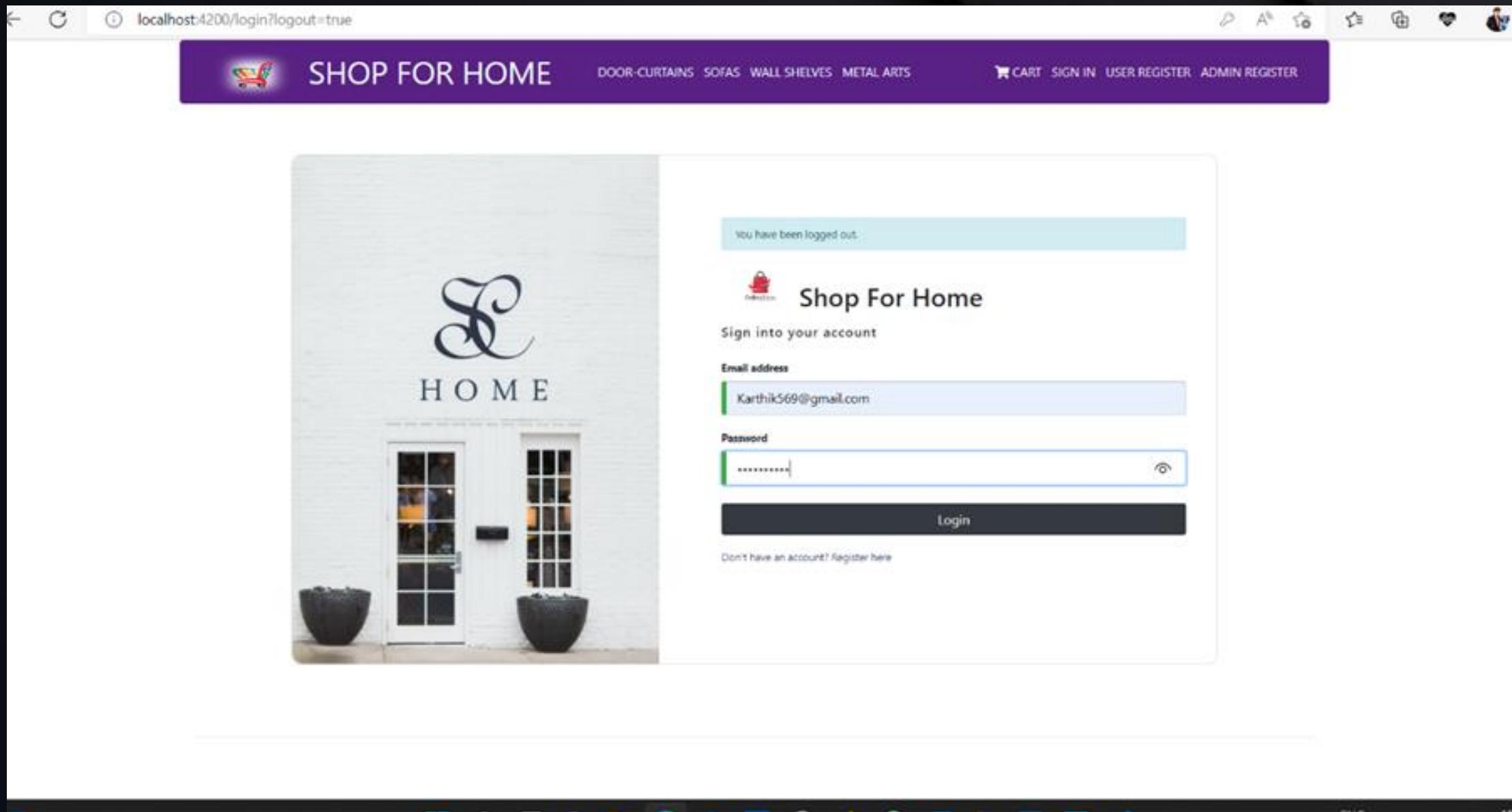


- USER FUNCTIONALITIES SCREENSHOTS:

## USER REGISTRATION



- USER LOGIN TO THE PROJECT WEBSITE:



## SEARCH FUNCTIONALITY:

Screenshot of the ShopForHome website search functionality.

The search bar at the top contains the text "metal".

The search results display three items:

- Marcus Wood & Metal Wall Shelf**: An image of a white shelf unit mounted on a light green wall, holding books, a small potted plant, and a decorative object. Price: Rs. 849. Free shipping. Add to cart button.
- Iron Cat Metal Wall Art**: An image of a black cat wearing sunglasses, mounted on a wall above a dark wooden chair. Price: Rs. 1540. Free shipping. Add to cart button.
- Metal Multicolor Bike Wall Art**: An image of a colorful, stylized metal bike mounted on a wall above a sofa with grey pillows. Price: Rs. 999. Free shipping. Add to cart button.

Sort by options: ALL PRODUCTS, ASC PRICES, DESC PRICES.

Header navigation: DOOR-CURTAINS, SOFAS, WALL SHELVES, METAL ARTS, CART, WISHLIST, ORDERS, Userone, SIGN OUT.

Bottom navigation: Eureka, Windows Start button, Taskbar icons (Search, File Explorer, Mail, Edge, Firefox, WhatsApp, Word, Excel, Powerpoint, OneDrive, etc.), System tray (Network, Battery, Volume, Date/Time).

•

## USER ADDING HIS PRODUCT TO CART :

Eureka    ShopForHome

localhost:4200/product/D2

SHOP FOR HOME

DOOR-CURTAINS SOFAS WALL SHELVES METAL ARTS

CART WISHLIST ORDERS Username SIGN OUT

Iron Cat Metal Wall Art

Description: Metal Wall home decor

Price: Rs. 1540

Stock: 97

Sub Total: Rs. 13860

Quantity

Add to Cart

Ratings

19:06 ENG IN 23-08-2022

## ORDER REVIEW AT THE CHECKOUT SECTION:

Screenshot of a web browser showing the "My Cart" section of the "ShopForHome" website.

The browser window title is "ShopForHome" and the URL is "localhost:4200/cart".

The page header includes the "SHOP FOR HOME" logo, navigation links for "DOOR-CURTAINS", "SOFAS", "WALL SHELVES", and "METAL ARTS", and user account links for "CART", "WISHLIST", "ORDERS", "Userone", and "SIGN OUT".

The main content area is titled "My Cart" and displays a table of items:

Photo	Name	Price	Quantity	Subtotal	Discard Product
	Iron Cat Metal Wall Art	₹1,540.00	<input type="button" value="10"/> +	₹15,400.00	<a href="#">Remove</a>

Below the table, there is a "Select Coupon" dropdown menu and a total amount displayed as "Total: ₹15,400.00". A prominent yellow "Checkout" button is located at the bottom right.

The system tray at the bottom shows various icons and system status information, including the date "23-08-2022" and time "19:06".

## ORDER DETAILS OF THE PRODUCT IN CART:

The screenshot shows a web browser window with multiple tabs open at the top. The active tab is titled "localhost:4200/order/13". Below the tabs, the browser's address bar displays the same URL. The main content area of the browser shows a purple header for "Shop For Home" with navigation links for "DOOR-CURTAINS", "SOFAS", "WALL SHELVES", and "METAL ARTS". On the right side of the header, there are links for "CART", "WISHLIST", "ORDERS", "PrafulRaj", and "SIGN OUT".

The main content of the page is titled "Order Detail". It features a product card for a yellow sofa. The product image shows a yellow armchair with a white cushion. To the right of the image, the product name is listed as "Ladybug1-seater-sofa", the price as "Price: Rs.1300", and the quantity as "Quantity : 2". A detailed description below states: "Description : Fabric does not lose color with rubbing". The total sub-total for this item is listed as "SubTotal : 2600". At the bottom of the product card, it says "Total: Rs. 2600".

## ADDING A PRODUCT TO WISHLIST:

Screenshot of a web browser displaying a product page from "ShopForHome" on localhost:4200/product/C2.

The page shows a "Marcus Wood & Metal Wall Shelf" with the following details:

- Description: Decorative metal and wooden hanging wall shelves
- Price: Rs. 849
- Stock: 99
- Sub Total: Rs. 849

The quantity is set to 1. A red heart icon indicates the item is already added to the wishlist. A yellow "Add to Cart" button is visible.

Ratings: ★★★★★

The browser interface includes a purple header bar with the shop logo, navigation links (DOOR-CURTAINS, SOFAS, WALL SHELVES, METAL ARTS), and user account options (CART, WISHLIST, ORDERS, Userone, SIGN OUT). The address bar shows the URL as localhost:4200/product/C2.

## PRODUCT DETAILS IN WISHLIST:

Screenshot of a web browser window showing the "ShopForHome" application's wishlist page.

The browser title bar shows "Eureka" and "ShopForHome" with the URL "localhost:4200/wishlist".

The header includes a logo with a shopping cart icon, the text "SHOP FOR HOME", and navigation links: DOOR-CURTAINS, SOFAS, WALL SHELVES, METAL ARTS, CART, WISHLIST, ORDERS, Userone, and SIGN OUT.

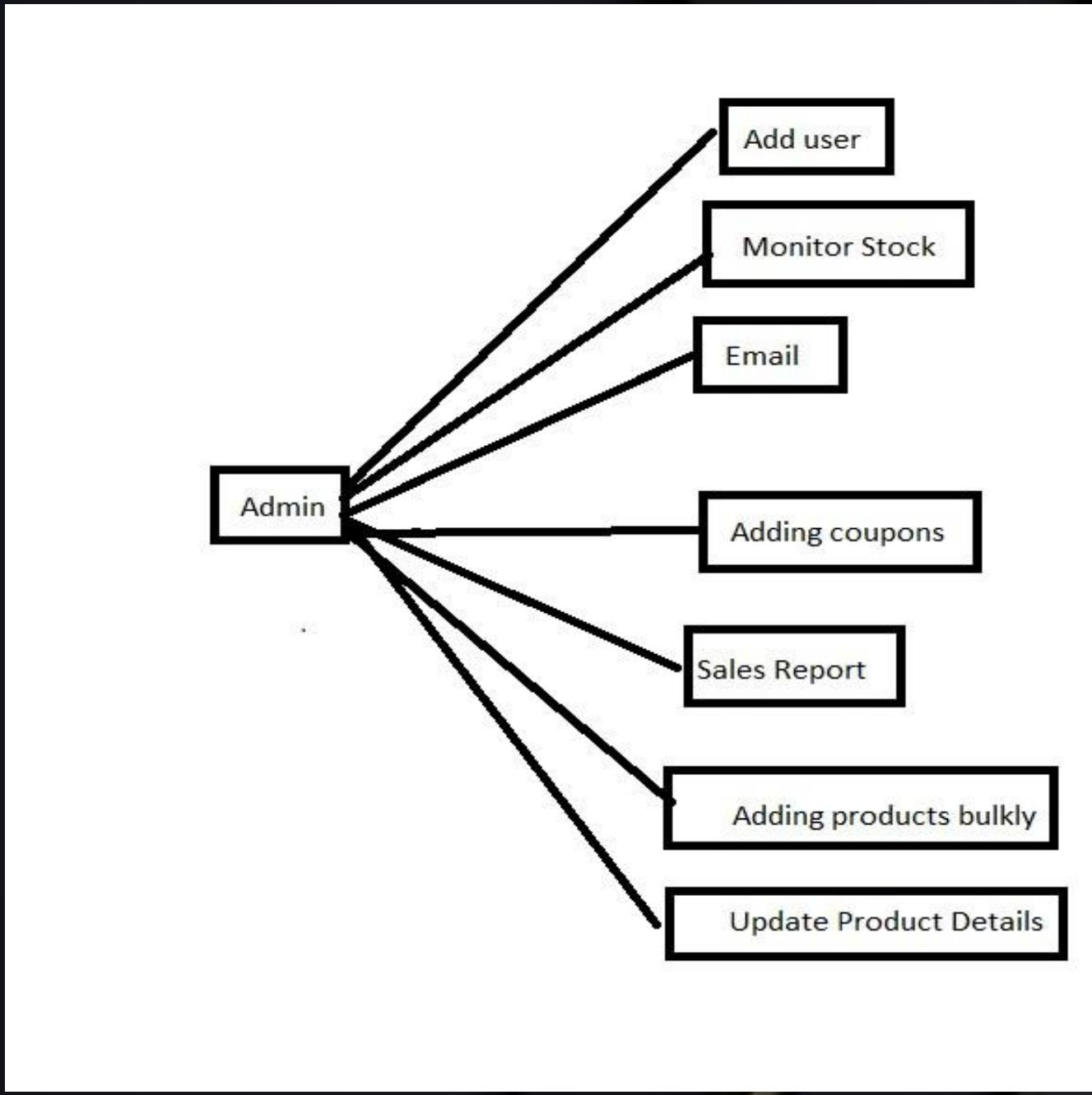
A sidebar on the right contains various icons for file operations like search, copy, paste, and refresh.

The main content area displays a table titled "WishList" with the following data:

WishList	Product Name	ID	Price	Action
	Marcus Wood & Metal Wall Shelf	C2	Rs. 849	<a href="#"> Remove</a>

The system tray at the bottom shows standard Windows icons for power, search, task manager, and file explorer, along with network and battery status. The date and time are listed as "23-08-2022 19:11".

## ADMIN FUNCTIONALITIES:



# ADMIN FUNCTIONALITIES SCREENSHOTS:

## ADMIN REGISTRATION:

The screenshot shows a web browser window titled "ShopForHome" at the URL "localhost:4200/adminsignup". The page features a purple header bar with the "SHOP FOR HOME" logo, a shopping cart icon, and links for "DOOR-CURTAINS", "SOFAS", "WALL SHELVES", "METAL ARTS", "CART", "SIGN IN", "USER REGISTER", and "ADMIN REGISTER". Below the header is a large image of a white brick building with a glass door and two black planters. To the right of the image is a sign-up form titled "Shop For Home" with the sub-instruction "Sign up". The form includes fields for "Email address" (containing "Admin@gmail.com"), "Name" (containing "Admin"), "Password" (containing a masked password), "Phone" (containing "8674738292"), and "Address" (containing "India"). A blue "Sign up for admin" button is at the bottom of the form. The browser's taskbar at the bottom shows various application icons, and the system tray indicates the date as "23-08-2022" and time as "19:16".

## ADMIN LOGIN TO WEBSITE:

Eureka

localhost:4200/login?logout=true

SHOP FOR HOME

DOOR-CURTAINS SOFAS WALL SHELVES METAL ARTS

CART SIGN IN USER REGISTER ADMIN REGISTER

You have been logged out.

Shop For Home

Sign into your account

Email address

Admin@gmail.com

Password

.....

Login

Don't have an account? Register here.

19:22 23-08-2022

ENG IN

## ADMIN CAN REVIEW THE LIST OF USERS:

The screenshot shows a web browser window titled "ShopForHome" with the URL "localhost:4200/admin/user". The page has a purple header with the "SHOP FOR HOME" logo and navigation links for DISCOUNT, USERS, STOCKS, SALES REPORT, Admin, and SIGN OUT. On the right side, there is a vertical toolbar with icons for search, refresh, and other functions. The main content area is titled "Users" and contains a table with the following data:

Email	Name	Role	Action
p9472947204@gmail.com	Admin1	ROLE_MANAGER	
Karthik25@gmail.com	User1	ROLE_CUSTOMER	<a href="#">Remove User</a>
praj@gmail.com	User2	ROLE_CUSTOMER	<a href="#">Remove User</a>
KarraSaikarthyk2001@gmail.com	Admin1	ROLE_MANAGER	
Karthik569@gmail.com	Userone	ROLE_CUSTOMER	<a href="#">Remove User</a>
Admin@gmail.com	Admin	ROLE_MANAGER	

At the bottom of the table, there is a blue "add User" button. Below the table, there are navigation buttons for "Previous" and "NEXT". The browser's address bar shows "localhost:4200/admin/user". The desktop taskbar at the bottom has several pinned icons, including File Explorer, Edge, and various system icons. The system tray shows the date and time as "23-08-2022 20:09".

## ADMIN PROVIDING DISCOUNT COUPONS TO SPECIFIC USERS:

The screenshot shows a web browser window titled "ShopForHome" at the URL "localhost:4200/discount". The page has a purple header bar with the "SHOP FOR HOME" logo and navigation links for "DISCOUNT", "USERS", "STOCKS", "SALES REPORT", "Admin", and "SIGN OUT". On the left, there is a sidebar with various icons. The main content area is titled "Coupons" and contains a form for "Add Coupon" with a text input field labeled "Enter coupon code". Below this, a section titled "Select a User to issue coupon of him" lists several user email addresses with checkboxes. Two checkboxes are checked: "Karthik25@gmail.com" and "praj@gmail.com". A "Add Coupon" button is located below the selection list. A table displays two rows of coupon information:

Couponcode	User	Action
rj678	praj@gmail.com	Delete
rj678	Karthik25@gmail.com	Delete

The bottom of the screen shows the Windows taskbar with various pinned icons and the system tray.

## ADMIN REVIEWING STOCK INFORMATION :

Screenshot of a web browser showing the "ShopForHome" application interface. The page displays three product items: A1, A2, and A3, each with an image, product ID, name, category, description, price, stock level, and edit/email buttons.

The browser title bar shows "Eureka" and "localhost:4200/seller/product". The top navigation bar includes links for DISCOUNT, USERS, STOCKS, SALES REPORT, Admin, and SIGN OUT. On the right side, there is a vertical sidebar with various icons for search, file management, and system settings.

**Product A1:**  
Product Id: A1  
Product Name: Blue Polycotton Curtain  
Category Type: Books  
Product Description: Blue Polycotton Light Filtering 5 Feet Eyelet Curtain (Set of 2)  
Price: 225  
Stock: 25

**Product A2:**  
Product Id: A2  
Product Name: Beige multicolor Floral  
Category Type: Books  
Product Description: Skyloom 100% Premium Fabric Floral Self Design Maroon Color Curtain  
Price: 250  
Stock: 44

**Product A3:**  
Product Id: A3  
Product Name: Grey Polyester Floral Curtain  
Category Type: Books  
Product Description: Stylish, Modern, Floral Curtains  
Price: 600  
Stock: 99

**Common Buttons:**  
Choose File No file chosen  
Upload  
Download

## ADMIN CAN EDIT THE PRODUCT INFO:

Screenshot of a web browser showing the "Edit Product" page for a blue polycotton curtain. The browser window title is "ShopForHome" and the URL is "localhost:4200/seller/product/A1/edit".

### Edit Product



The product details are as follows:

- Code:** A1
- Photo Link:** <https://ii1.pepperfry.com/media/catalog/product/b/l/800x880/l>
- Name:** Blue Polycotton Curtain
- Category:** Mobiles
- Description:** Blue Polycotton Light Filtering 5 Feet Eyelet Curtain (Set of 2)
- Price:** 225
- Stock:** 26
- Status:** Unavailable

A blue "Submit" button is located at the bottom right of the form.

System tray icons include: Cloudy (28°C), Windows Start, Search, Task View, File Explorer, Mail, File History, Firefox, WhatsApp, Google Chrome, Microsoft Edge, and File Explorer.

Bottom right corner shows: ENG IN, 13:22, 19-08-2022, and a battery icon with a '3'.

## ADMIN CAN BULK UPLOAD THE PRODUCTS TO THE WEBSITE:

Screenshot of a web browser showing the "Shop For Home" website's product management interface.

The URL in the address bar is `localhost:4200/seller/product`.

The page title is "Shop For Home".

Top navigation menu items include: DISCOUNT, USERS, STOCKS, SALES REPORT, Admin, and SIGN OUT.

A central feature is a "CSV BULK UPLOAD" section with a file input field containing "2.csv", a yellow "Upload" button, and a "Download" button.

Three product cards are displayed, each showing a product image and detailed information:

- Product Id: A1**  
Product Name: Blue Polycotton Curtain  
Category Type: Books  
Product Description: Blue Polycotton Light Filtering 5 Feet Eyelet Curtain (Set of 2)  
Price: 225  
Stock: 25
- Product Id: A2**  
Product Name: Beige multicolor Floral  
Category Type: Books  
Product Description: Skyloom 100% Premium Fabric Floral Self Design Maroon Color Curtain  
Price: 250  
Stock: 44
- Product Id: A3**  
Product Name: Grey Polyester Floral Curtain  
Category Type: Books  
Product Description: Stylish, Modern, Floral Curtains  
Price: 600  
Stock: 98

For each product, there are "Edit" and "Email" buttons at the bottom.

The system status bar at the bottom shows: ENG IN, 20:20, 23-08-2022, and a battery icon.

**ADMIN CAN DOWNLOAD THE STOCK INFORMATION:**

## ADMIN CAN GET THE SALES REPORT OF THE PRODUCTS ORDERED:

The screenshot shows a web browser window titled "ShopForHome" at "localhost:4200/order". The header includes a logo, navigation links for "DOOR-CURTAINS", "SOFAS", "WALL SHELVES", and "METAL ARTS", and user links for "CART", "WISHLIST", "ORDERS", "Userone", and "SIGN OUT".

The main content is titled "Orders" and shows a table of three orders from the year 2022. The table columns are "ID", "Total", "Order Date", "Status", and "Action".

Orders	ID	Total	Order Date	Status	Action
Buyer Name:Userone Buyer Email:Karthik569@gmail.com	11	Rs. 600	Tuesday, August 23, 2022	New	<a href="#">Cancel</a>
Buyer Name:Userone Buyer Email:Karthik569@gmail.com	10	Rs. 849	Friday, August 23, 2019	New	<a href="#">Cancel</a>
Buyer Name:Userone Buyer Email:Karthik569@gmail.com	9	Rs. 15400	Thursday, August 23, 2018	New	<a href="#">Cancel</a>

Below the table is a chart titled "2022 Sales" showing a single data point at approximately 180 units.

The browser's taskbar at the bottom shows various pinned icons, and the system tray indicates the date as 23-08-2022 and time as 20:33.

## ADMIN'S MAIL FUNCTIONALITY:

The screenshot shows a web browser window titled "localhost:4200/email". The main content area displays an "Information Email" template. The template includes fields for "ADDRESS:", "EMAIL:", and "PHONE:". The "ADDRESS:" field contains "Shop For Home, Hyderabad, India". The "EMAIL:" field contains "shopforhome@gmail.com +91 9999999999". The "PHONE:" field is empty. Below these fields, there are two input fields: one for "ParthSukhla" with the email "parth.sukhla1989@gmail.com" and another for "Less Stocks" with the message "Increase the limit of your product stocks". A red "Send Message" button is located at the bottom left of the template. To the right of the template is a large, stylized blue icon of an envelope with a white envelope inside it. The browser's toolbar at the top includes standard icons for back, forward, search, and refresh. The status bar at the bottom shows system information like weather (77°F Partly cloudy), date (23-08-2022), and time (21:38).

## **GOOGLE CLOUD PLATFORM(GCP):**

- Google Cloud Platform is a part of **Google Cloud**, which includes the Google Cloud Platform public cloud infrastructure, as well as Google Workspace (G Suite), enterprise versions of Android and Chrome OS, and application programming interfaces (APIs) for machine learning and enterprise mapping services.
- We encountered using some products of GCP:

### **COMPUTE :**

1. App Engine - Platform as a Service to deploy Java, PHP, Node.js, Python, C#, .Net, Ruby, and Go applications.
2. Compute Engine - Infrastructure as a Service to run Microsoft Windows and Linux virtual machines.

### **STORAGE:**

1. Cloud Storage - Object storage with integrated edge caching to store unstructured data.
2. Cloud SQL - Database as a Service based on MySQL, PostgreSQL, and Microsoft SQL Server.

**SO IN OUR PROJECT, WE HAVE USED VM INSTANCES FOR THE DEPLOYMENT OF BOTH FRONTEND AND BACKEND CODES.**



Google Cloud

- FRONTEND CODE DEPLOYMENT IN THE BUCKET(CLOUD STORAGE).

The screenshot shows the Google Cloud Storage interface. A bucket named 'bucket\_shop1' is selected. The 'OBJECTS' tab is active, showing a single item: '(qwiklabs-gcp-02-6f55891315c3)'. Below the objects list, there's a Cloud Shell terminal window. The terminal output shows the following commands and their results:

```
student_00_bef1ed600de@cloudshell:~/angular-app-gcp (qwiklabs-gcp-02-6f55891315c3)$ cd dist
student_00_bef1ed600de@cloudshell:~/angular-app-gcp/dist (qwiklabs-gcp-02-6f55891315c3)$ gcloud app deploy
You are creating an app for project (qwiklabs-gcp-02-6f55891315c3).
WARNING: Creating an App Engine application for a project is irreversible and the region
cannot be changed. More information about regions is at
<https://cloud.google.com/appengine/docs/locations>.

Please choose the region where you want your App Engine application located:
[1] asia-east1 (supports standard and flexible)
[2] asia-northeast1 (supports standard and flexible and search_api)
[3] asia-south1 (supports standard and flexible and search_api)
[4] asia-southeast1 (supports standard and flexible)
[5] australia-southeast1 (supports standard and flexible and search_api)
[6] europe-central2 (supports standard and flexible)
[7] europe-west (supports standard and flexible and search_api)
[8] europe-west2 (supports standard and flexible and search_api)
[9] europe-west3 (supports standard and flexible and search_api)
[10] us-central (supports standard and flexible and search_api)
[11] us-east1 (supports standard and flexible and search_api)
[12] us-east4 (supports standard and flexible and search_api)
[13] us-west1 (supports standard and flexible)
[14] us-west2 (supports standard and flexible and search_api)
[15] us-west3 (supports standard and flexible and search_api)
[16] us-west4 (supports standard and flexible and search_api)
[17] cancel
```

The terminal also displays a warning about the不可逆性 of changing the region.

- Initially We ran “ng-build” in angular VS code.

- After that a “dist” file will be created.

- Inside that file create an “app.yaml” file.

- Then create a Storage Bucket in the GCP.

- Upload the whole “dist” folder containing the app. yaml file in it, into the created Bucket.

- After Uploading the folder, Open the Cloud shell and Follow the commands:

- cd dist(change the directory)
- gcloud app deploy (to deploy the Application)

- Then finally after deployment a website with your project ID will be generated.

- DEPLOYMENT OF FRONTEND CODE SCREENSHOTS AFTER FOLLOWING ABOVE COMMANDS:

The screenshot shows a Google Cloud Storage bucket named "bucket\_shop1". The bucket details page includes information about its location (us), storage class (Standard), public access (Not public), and protection (None). The "OBJECTS" tab is selected, showing a list of files. Below the table, a terminal window displays deployment logs:

```
9%
10%
27%
36%
45%
55%
64%
73%
82%
91%
100%
100%
File upload done.
WARNING: The version cannot run because it is unable to generate an access token for the target service account qwiklabs-gcp-02-6f55891315c3@appspot.gserviceaccount.com. Please check that your project has the App Engine Standard Service Agent role following https://cloud.google.com/appengine/docs/standard/go/service-agent.
Updating service [default]...done.
Setting traffic split for service [default]...done.
Deployed service [default] to [https://qwiklabs-gcp-02-6f55891315c3.wl.r.appspot.com]

You can stream logs from the command line by running:
$ gcloud app logs tail -s default

To view your application in the web browser run:
$ gcloud app browse
student_00_bef16d6000de@cloudshell:~/angular-app-gcp/dist (qwiklabs-gcp-02-6f55891315c3)$ gcloud app browse
```

The system tray at the bottom shows the date (22-08-2022), time (17:30), battery level (92%), and network status (Partly sunny).

## FRONTEND OUTPUT AFTER DEPLOYMENT:

The screenshot shows a deployed frontend application with a purple header bar. The header contains the following elements:

- A logo icon on the left.
- The text "SHOP FOR HOME" in white capital letters.
- Navigation links: DOOR-CURTAINS, SOFAS, WALL SHELVES, METAL ARTS.
- A shopping cart icon followed by the word "CART".
- User account links: SIGN IN, USER REGISTER, ADMIN REGISTER.

Below the header is a purple button labeled "SORT BY" with four options: ALL PRODUCTS, ASC PRICES, and DESC PRICES.

On the left side of the main content area is a search bar with the placeholder text "Search Products".

At the bottom right of the main content area is a navigation bar with buttons for "Previous", "1", and "NEXT".

## **BACKEND DEPLOYMENT IN VM INSTANCES(COMPUTE ENGINE):**

### **INSTRUCTIONS TO FOLLOW:**

111. We are dealing with Three Microservices in the Project, in addition to the Eureka Server.
2. So First we cloned the Git repository in the Cloud Shell and deployed the Eureka Server.
3. Then after, we created a VM instance for the Shop\_For\_Home\_G11(First Microservice) and deployed it into the Google cloud.
4. Similarly we create one more VM instance for deploying both Discount and Report Microservice into the Google Cloud.
5. We followed the commands:
  - i) Create a VM instance
  - ii) Then go to the SSH Browser of that instance.
  - iii) Execute these Commands:

```
sudo apt-get update
sudo apt-get install openjdk-8-jdk
```
  - iv) Now clone the Git repository
  - v) Change into the respective git directory
  - vi) Then execute these commands:

```
chmod +x ./mvnw
./mvnw package
nohup java -jar springapp1-0.0.1-SNAPSHOT.war
```
  - vii) After this change the port number in firewall settings to deploy the backend file into that port.

## • EUREKA SERVER DEPLOYMENT:

Lab: Creating a Stream | Creating a Stream | VM instances - C | default-allow-htt... | Cloud Shell | Theia for Cloud | 34.134.1.253 | + | - | X

shell.cloud.google.com/?hl=en\_US&fromcloudshell=true&show=terminal

Gmail YouTube Maps Translate New Tab Continuous deploy...

Cloud Shell Editor

(qwiklabs-gcp-04-387aae3e196b) X (qwiklabs-gcp-04-387aae3e196b) X (qwiklabs-gcp-04-387aae3e196b) X + X

```
Welcome to Cloud Shell! Type "help" to get started.
To set your Cloud Platform project in this session use "gcloud config set project [PROJECT_ID]"
student_04_a40a20595207@cloudshell:~$ gcloud config set project qwiklabs-gcp-04-387aae3e196b
Updated property [core/project].
student_04_a40a20595207@cloudshell:~ (qwiklabs-gcp-04-387aae3e196b)$ cd capstone
student_04_a40a20595207@cloudshell:~/capstone (qwiklabs-gcp-04-387aae3e196b)$ cd Capstone-Project-G11
student_04_a40a20595207@cloudshell:~/capstone/Capstone-Project-G11 (qwiklabs-gcp-04-387aae3e196b)$ cd Backend_G11
student_04_a40a20595207@cloudshell:~/capstone/Capstone-Project-G11/Backend_G11 (qwiklabs-gcp-04-387aae3e196b)$ ls
Discount-MicroService Report-MicroService Shop_For_Home_G11_FILE
student_04_a40a20595207@cloudshell:~/capstone/Capstone-Project-G11/Backend_G11 (qwiklabs-gcp-04-387aae3e196b)$ cd EurekaServer
student_04_a40a20595207@cloudshell:~/capstone/Capstone-Project-G11/Backend_G11/EurekaServer (qwiklabs-gcp-04-387aae3e196b)$ ls
EurekaServer
student_04_a40a20595207@cloudshell:~/capstone/Capstone-Project-G11/Backend_G11/EurekaServer (qwiklabs-gcp-04-387aae3e196b)$ cd EurekaServer
student_04_a40a20595207@cloudshell:~/capstone/Capstone-Project-G11/Backend_G11/EurekaServer (qwiklabs-gcp-04-387aae3e196b)$ mvnw mvnw.cmd pom.xml src
student_04_a40a20595207@cloudshell:~/capstone/Capstone-Project-G11/Backend_G11/EurekaServer (qwiklabs-gcp-04-387aae3e196b)$ chmod +x ./mvnw
student_04_a40a20595207@cloudshell:~/capstone/Capstone-Project-G11/Backend_G11/EurekaServer (qwiklabs-gcp-04-387aae3e196b)$ ./mvnw package
[INFO] Scanning for projects...
[INFO]
[INFO] -----< EurekaServer:EurekaServer >-----
[INFO] Building EurekaServer 0.0.1-SNAPSHOT
[INFO] --[ jar ]-----
Download from central: https://repo.maven.apache.org/maven2/org/springframework/cloud/spring-cloud-starter-netflix-eureka-server/3.1.3/spring-cloud-starter-netflix-eur...
eka-server-3.1.3.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/springframework/cloud/spring-cloud-starter-netflix-eureka-server/3.1.3/spring-cloud-starter-netflix-eure...
ka-server-3.1.3.pom (4.6 kB at 3.5 kB/s)
Download from central: https://repo.maven.apache.org/maven2/org/springframework/cloud/spring-cloud-netflix-eureka-server/3.1.3/spring-cloud-netflix-eureka-server-3.1.3...
.pom
Download from central: https://repo.maven.apache.org/maven2/org/springframework/cloud/spring-cloud-netflix-eureka-server/3.1.3/spring-cloud-netflix-eureka-server-3.1.3...
.pom (7.1 kB at 19 kB/s)
Download from central: https://repo.maven.apache.org/maven2/org/springframework/boot/spring-boot-starter-actuator/2.6.9/spring-boot-starter-actuator-2.6.9.pom
Download from central: https://repo.maven.apache.org/maven2/org/springframework/boot/spring-boot-starter-actuator/2.6.9/spring-boot-starter-actuator-2.6.9.pom (2.6 kB a...
t 6.9 kB/s)
Download from central: https://repo.maven.apache.org/maven2/org/springframework/boot/spring-boot-actuator-autoconfigure/2.6.9/spring-boot-actuator-autoconfigure-2.6.9.
```

28°C Rain to stop

28°C Rain to stop

Lab: Creating a Stream | Creating a Stream | VM instances - C | default-allow-htt... | Cloud Shell | Theia for Cloud | 34.134.1.253 | + | - | X

shell.cloud.google.com/?hl=en\_US&fromcloudshell=true&show=terminal

Gmail YouTube Maps Translate New Tab Continuous deploy...

Cloud Shell Editor

(qwiklabs-gcp-04-387aae3e196b) X (qwiklabs-gcp-04-387aae3e196b) X (qwiklabs-gcp-04-387aae3e196b) X + X

```
2022-08-23 11:47:32.809 INFO 1189 --- [           Thread-8] c.n.e.r.PeerAwareInstanceRegistryImpl : Got 1 instances from neighboring D5 node
2022-08-23 11:47:32.809 INFO 1189 --- [           Thread-8] c.n.e.r.PeerAwareInstanceRegistryImpl : Renew threshold is: 1
2022-08-23 11:47:32.810 INFO 1189 --- [           Thread-8] c.n.e.r.PeerAwareInstanceRegistryImpl : Changing status to UP
2022-08-23 11:47:32.827 INFO 1189 --- [           main] E.EurekaServerApplicationTests : Started EurekaServerApplicationTests in 5.896 seconds (JVM running for 7.507)
2022-08-23 11:47:32.891 INFO 1189 --- [           Thread-8] e.s.EurekaServerInitializerConfiguration : Started Eureka Server
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 7.144 s - in EurekaServer.EurekaServerApplicationTests
2022-08-23 11:47:33.445 INFO 1189 --- [ionShutdownHook] o.s.c.n.e.s.EurekaServiceRegistry : Unregistering application UNKNOWN with eureka with status DOWN
2022-08-23 11:47:33.455 INFO 1189 --- [ionShutdownHook] o.s.c.n.e.s.EurekaServerBootstrap : Shutting down Eureka Server..
2022-08-23 11:47:33.473 INFO 1189 --- [ionShutdownHook] c.n.eureka.DefaultEurekaServerContext : Shutting down ...
2022-08-23 11:47:33.511 INFO 1189 --- [ionShutdownHook] c.n.eureka.DefaultEurekaServerContext : Shut down
2022-08-23 11:47:33.511 INFO 1189 --- [ionShutdownHook] o.s.c.n.e.s.EurekaServerBootstrap : Eureka Service is now shutdown...
2022-08-23 11:47:33.514 INFO 1189 --- [ionShutdownHook] c.n.eureka.DefaultEurekaServerContext : Shutting down ...
2022-08-23 11:47:33.529 INFO 1189 --- [ionShutdownHook] c.n.eureka.DefaultEurekaServerContext : Shut down
2022-08-23 11:47:33.545 INFO 1189 --- [ionShutdownHook] com.netflix.discovery.DiscoveryClient : Shutting down DiscoveryClient ...
2022-08-23 11:47:33.547 INFO 1189 --- [ionShutdownHook] com.netflix.discovery.DiscoveryClient : Completed shut down of DiscoveryClient
[INFO]
[INFO] Results:
[INFO]
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO] -----< EurekaServer:EurekaServer >-----
[INFO] Building EurekaServer 0.0.1-SNAPSHOT
[INFO] --[ jar ]-----
[INFO] --- maven-jar-plugin:3.2.2:jar (default-jar) @ EurekaServer ---
[INFO] Building jar: /home/student_04_a40a20595207/capstone/Capstone-Project-G11/Backend_G11/EurekaServer/EurekaServer/target/EurekaServer-0.0.1-SNAPSHOT.jar
[INFO]
[INFO] --- spring-boot-maven-plugin:2.6.9:repackage (repackage) @ EurekaServer ---
[INFO] Replacing main artifact with repackaged archive
[INFO]
[INFO] BUILD SUCCESS
[INFO]
[INFO] Total time: 23.016 s
[INFO] Finished at: 2022-08-23T11:47:34Z
[INFO]
[INFO] student_04_a40a20595207@cloudshell:~/capstone/Capstone-Project-G11/Backend_G11/EurekaServer/EurekaServer (qwiklabs-gcp-04-387aae3e196b)$
```

28°C Rain to stop

28°C Rain to stop

## SHOP\_FOR\_HOME\_G11\_FILE DEPLOYMENT:

```
student_03_8e198ce40281@cloudshell:~ (qwiklabs-gcp-01-57fea720598f)$ mkdir new
student_03_8e198ce40281@cloudshell:~ (qwiklabs-gcp-01-57fea720598f)$ cd new
student_03_8e198ce40281@cloudshell:~/new (qwiklabs-gcp-01-57fea720598f)$ git clone https://github.com/Praful-Raj/Shop-For-Home-G11-Backend.git
Cloning into 'Shop-For-Home-G11-Backend'...
remote: Enumerating objects: 90, done.
remote: Counting objects: 100% (90/90), done.
remote: Compressing objects: 100% (76/76), done.
remote: Total 90 (delta 6), reused 90 (delta 6), pack-reused 0
Receiving objects: 100% (90/90), 90.17 KiB | 12.88 MiB/s, done.
Resolving deltas: 100% (6/6), done.
student_03_8e198ce40281@cloudshell:~/new (qwiklabs-gcp-01-57fea720598f)$ ls
Shop-For-Home-G11-Backend
student_03_8e198ce40281@cloudshell:~/new (qwiklabs-gcp-01-57fea720598f)$ cd Shop-For-Home-G11-Backend
student_03_8e198ce40281@cloudshell:~/new/Shop-For-Home-G11-Backend (qwiklabs-gcp-01-57fea720598f)$ chmod +x ./mvnw
student_03_8e198ce40281@cloudshell:~/new/Shop-For-Home-G11-Backend (qwiklabs-gcp-01-57fea720598f)$ ./mvnw package
[INFO] Scanning for projects...
[WARNING]
[WARNING] Some problems were encountered while building the effective model for Shop_For_Home_G11_File:Shop_For_Home_G11_File:jар:0.0.1-SNAPSHOT
[WARNING] 'dependencies.dependency.scope' for com.google.cloud:spring-cloud-gcp-dependencies:pom must be one of [provided, compile, runtime, test, system] but is 'import'
. @ line 84, column 19
[WARNING]
[WARNING] It is highly recommended to fix these problems because they threaten the stability of your build.
[WARNING]
[WARNING] For this reason, future Maven versions might no longer support building such malformed projects.
[WARNING]
[INFO] -----
[INFO] <--> Shop_For_Home_G11_File:Shop_For_Home_G11_File <-->
[INFO] Building Shop-For-Home-G11-File 0.0.1-SNAPSHOT
[INFO] -----
[INFO] [ jar ]
[INFO]
[INFO] --- maven-resources-plugin:3.2.0:resources (default-resources) @ Shop-For_Home_G11_File ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] Using 'UTF-8' encoding to copy filtered properties files.
[INFO] Copying 1 resource
```

```
[INFO] Copying 1 resource
[INFO] Copying 0 resource
[INFO]
[INFO] --- maven-compiler-plugin:3.8.1:compile (default-compile) @ Shop-For_Home_G11_File ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 53 source files to /home/student_03_8e198ce40281/new/Shop-For-Home-G11-Backend/target/classes
[INFO] /home/student_03_8e198ce40281/new/Shop-For-Home-G11-Backend/src/main/java/Shop-For_Home_G11_File/helper/CSVHelper.java: Some input files use or override a deprecated API.
[INFO] /home/student_03_8e198ce40281/new/Shop-For-Home-G11-Backend/src/main/java/Shop-For_Home_G11_File/helper/CSVHelper.java: Recompile with -Xlint:deprecation for details.
[INFO]
[INFO] --- maven-resources-plugin:3.2.0:testResources (default-testResources) @ Shop-For_Home_G11_File ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] Using 'UTF-8' encoding to copy filtered properties files.
[INFO] skip non existing resourceDirectory /home/student_03_8e198ce40281/new/Shop-For-Home-G11-Backend/src/test/resources
[INFO]
[INFO] --- maven-compiler-plugin:3.8.1:testCompile (default-testCompile) @ Shop-For_Home_G11_File ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 1 source file to /home/student_03_8e198ce40281/new/Shop-For-Home-G11-Backend/target/test-classes
[INFO]
[INFO] --- maven-surefire-plugin:2.19.1:test (default-test) @ Shop-For_Home_G11_File ---
[INFO]
[INFO] --- maven-jar-plugin:3.2.2:jar (default-jar) @ Shop-For_Home_G11_File ---
[INFO] Building jar: /home/student_03_8e198ce40281/new/Shop-For-Home-G11-Backend/target/Shop-For_Home_G11_File-0.0.1-SNAPSHOT.jar
[INFO]
[INFO] --- spring-boot-maven-plugin:2.6.9:repackage (repackage) @ Shop-For_Home_G11_File ---
[INFO] Replacing main artifact with repackaged archive
[INFO]
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 7.524 s
[INFO] Finished at: 2022-08-24T05:25:45Z
[INFO] -----
student_03_8e198ce40281@cloudshell:~/new/Shop-For-Home-G11-Backend (qwiklabs-gcp-01-57fea720598f)$
```

Lab: Creating a Stream X Creating a Stream X VM instances - C default-allow-ht... Cloud Shell Theia for Cloud S 34.134.1.253 X + - X

console.cloud.google.com/compute/instances?onCreate=true&project=qwiklabs-gcp-04-387aae3e196b&cloudshell=false Incognito (2)

Gmail YouTube Maps Translate New Tab New Tab Continuous deploy...

Google Cloud qwiklabs-gcp-04-387aae3e196b Search Products, resources, docs ()

Compute Engine VM instances CREATE INSTANCE IMPORT VM OPERATIONS HELP ASSISTANT HIDE INFO PANEL LEARN

Virtual machines ^

VM instances INSTANCE SCHEDULES

VM instances are highly configurable virtual machines for running workloads on Google infrastructure. [Learn more](#)

Filter Enter property name or value

Status	Name ↑	Zone	Recommendations	In use	Connect
<input type="checkbox"/>	<input checked="" type="checkbox"/> capstone-1	us-central1-		SSH	<input type="button" value="⋮"/>

Related actions

Explore Actifio GO Back up your VMs and set up disaster recovery

28°C Rain to stop 17:10 23-08-2022

This screenshot shows the Google Cloud Compute Engine interface. On the left, a sidebar lists 'Virtual machines' under 'Compute Engine'. The main area displays a table of VM instances, with one instance named 'capstone-1' selected. A modal window titled 'Select an instance' is open, prompting the user to 'Please select at least one resource.' Below the table, a section titled 'Related actions' contains a button for 'Explore Actifio GO'.

Lab: Creating a Stream X Creating a Stream X Network interface default-allow-ht... Cloud Shell Theia for Cloud S 34.134.1.253 X + - X

console.cloud.google.com/networking/firewalls/details/default-allow-http?project=qwiklabs-gcp-04-387aae3e196b Incognito (2)

Gmail YouTube Maps Translate New Tab New Tab Continuous deploy...

Google Cloud qwiklabs-gcp-04-387aae3e196b Search Products, resources, docs ()

VPC network tcp:8080

Enforcement Enabled

Insights None

Bring your own IP Hit count monitoring

Firewall

Routes

VPC network peering

Shared VPC

Serverless VPC access

Packet mirroring

Applicable to instances

The following table shows only the VM instances that you have permission to view. It also does not show any App Engine flexible environment instances.

Filter Filter by instance name, project or subnetwork

Name ↑	Subnetwork	Internal IP ranges	External IP ranges	Tags	Service accounts	Project	
capstone-1	default	10.128.0.2	34.134.1.253		http-ser...	668730690760-compute@developer.gse...	qwiklabs-gcp-04-387aae3e196b

EQUIVALENT REST

Updating firewall rule "default-allow-http"...

28°C Rain to stop 17:09 23-08-2022

This screenshot shows the Google Cloud Network interface Firewall details page. It displays a table of VM instances associated with the 'default-allow-http' rule. One instance, 'capstone-1', is listed with its internal IP (10.128.0.2) and external IP (34.134.1.253). A progress bar at the bottom indicates the action 'Updating firewall rule "default-allow-http"...' is in progress.

## DIDISCOUNT MICROSERVICE:

Cloud Shell Editor

```
Welcome to Cloud Shell! Type "help" to get started.
To set your Cloud Platform project in this session use "gcloud config set project [PROJECT_ID]"
student_03_76f8b80b93b7@cloudshell:~$ gcloud config set project qwiklabs-gcp-04-fa9aee5dc94e
Updated property [core/project].
student_03_76f8b80b93b7@cloudshell:~$ cd capstone
student_03_76f8b80b93b7@cloudshell:~/capstone (qwiklabs-gcp-04-fa9aee5dc94e)$ cd Capstone-Project-G11
student_03_76f8b80b93b7@cloudshell:~/capstone/Capstone-Project-G11 (qwiklabs-gcp-04-fa9aee5dc94e)$ cd Backend_G11
student_03_76f8b80b93b7@cloudshell:~/capstone/Backend_G11 (qwiklabs-gcp-04-fa9aee5dc94e)$ cd Discount-MicroService
student_03_76f8b80b93b7@cloudshell:~/capstone/Backend_G11/Discount-MicroService (qwiklabs-gcp-04-fa9aee5dc94e)$ chmod +x ./mvnw
student_03_76f8b80b93b7@cloudshell:~/capstone/Backend_G11/Discount-MicroService (qwiklabs-gcp-04-fa9aee5dc94e)$ ./mvnw package
[INFO] Scanning for projects...
[INFO]
[INFO] -----> Discount-MicroService:Discount-MicroService <-----
[INFO] Building Discount-MicroService 0.0.1-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- maven-resources-plugin:3.2.0:resources (default-resources) @ Discount-MicroService ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] Using 'UTF-8' encoding to copy filtered properties files.
[INFO] Copying 1 resource
[INFO] Copying 0 resource
[INFO]
[INFO] --- maven-compiler-plugin:3.8.1:compile (default-compile) @ Discount-MicroService ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- maven-resources-plugin:3.2.0:testResources (default-testResources) @ Discount-MicroService ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] Using 'UTF-8' encoding to copy filtered properties files.
[INFO] skip non existing resourceDirectory /home/student_03_76f8b80b93b7/capstone/Capstone-Project-G11/Backend_G11/Discount-MicroService/src/test/resources
[INFO]
[INFO] --- maven-compiler-plugin:3.8.1:testCompile (default-testCompile) @ Discount-MicroService ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
```

29°C Rain to stop

Cloud Shell Editor

```
[INFO] Building Discount-MicroService 0.0.1-SNAPSHOT
[INFO] -----
[INFO] --- [ jar ] ---
[INFO] --- maven-resources-plugin:3.2.0:resources (default-resources) @ Discount-MicroService ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] Using 'UTF-8' encoding to copy filtered properties files.
[INFO] Copying 1 resource
[INFO] Copying 0 resource
[INFO]
[INFO] --- maven-compiler-plugin:3.8.1:compile (default-compile) @ Discount-MicroService ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- maven-resources-plugin:3.2.0:testResources (default-testResources) @ Discount-MicroService ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] Using 'UTF-8' encoding to copy filtered properties files.
[INFO] skip non existing resourceDirectory /home/student_03_76f8b80b93b7/capstone/Capstone-Project-G11/Backend_G11/Discount-MicroService/src/test/resources
[INFO]
[INFO] --- maven-compiler-plugin:3.8.1:testCompile (default-testCompile) @ Discount-MicroService ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 4.471 s
[INFO] Finished at: 2022-08-23T12:31:31Z
[INFO]
[INFO] student_03_76f8b80b93b7@cloudshell:~/capstone/Capstone-Project-G11/Backend_G11/Discount-MicroService (qwiklabs-gcp-04-fa9aee5dc94e)$
```

29°C Rain to stop

## **REPORT MICROSERVICE:**

```
[INFO] --- maven-compiler-plugin:3.8.1:compile (default-compile) @ Report-MicroService ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 6 source files to /home/student_03_76fb8b0b93b7/capstone/Capstone-Project-G11/Backend_G11/Report-MicroService/Report-MicroService/target/classes
[INFO]
[INFO] --- maven-resources-plugin:3.2.0:testResources (default-testResources) @ Report-MicroService ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] Using 'UTF-8' encoding to copy filtered properties files.
[INFO] skip non existing resourceDirectory /home/student_03_76fb8b0b93b7/capstone/Capstone-Project-G11/Backend_G11/Report-MicroService/Report-MicroService/src/test/resources
[INFO]
[INFO] --- maven-compiler-plugin:3.8.1:testCompile (default-testCompile) @ Report-MicroService ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 1 source file to /home/student_03_76fb8b0b93b7/capstone/Capstone-Project-G11/Backend_G11/Report-MicroService/Report-MicroService/target/test-classes
[INFO]
[INFO] --- maven-surefire-plugin:2.19.1:test (default-test) @ Report-MicroService ---
[INFO]
[INFO] --- maven-jar-plugin:3.2.2:jar (default-jar) @ Report-MicroService ---
[INFO] Building jar: /home/student_03_76fb8b0b93b7/capstone/Capstone-Project-G11/Backend_G11/Report-MicroService/Report-MicroService/target/Report-MicroService-0.0.1-SNAPSHOT.jar
[INFO]
[INFO] --- spring-boot-maven-plugin:2.6.9:repackage (repackage) @ Report-MicroService ---
[INFO] Replacing main artifact with repackaged archive
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 12.431 s
[INFO] Finished at: 2022-08-28T12:34:58Z
[INFO] -----
student_03_76fb8b0b93b7@cloudshell:~/capstone/Capstone-Project-G11/Backend_G11/Report-MicroService/Report-MicroService (qwiklabs-gcp-04-fa9aee5dc94e)$ cd target
student_03_76fb8b0b93b7@cloudshell:~/capstone/Capstone-Project-G11/Backend_G11/Report-MicroService/Report-MicroService/target (qwiklabs-gcp-04-fa9aee5dc94e)$ nohup java -jar springapp1-0.0.1-SNAPSHOT.war >
[1] 1930
nohup: ignoring input and appending output to 'nohup.out'
student_03_76fb8b0b93b7@cloudshell:~/capstone/Capstone-Project-G11/Backend_G11/Report-MicroService/Report-MicroService/target (qwiklabs-gcp-04-fa9aee5dc94e)$
```

## VM INSTANCE OF BOTH REPORT AND DISCOUNT MICROSERVICES:

The screenshot shows the Google Cloud Compute Engine interface for a VM instance named "capstone-g11-discount". The instance is based on the "debian-11-bullseye-v20220822" image, has 10 GB of memory, and is using a "Balanced persistent disk" type. It is connected to a "nic0" network interface. The instance is currently running.

**Virtual machines**

Name	Image	Interface type	Size (GB)	Device name	Type	Architecture	Encryption	Mode	W
capstone-g11-discount	debian-11-bullseye-v20220822	SCSI	10	capstone-g11-discount	Balanced persistent	x86/64	Google-managed	Boot, read/write	Del

**Local disks**  
None

**Additional disks**  
None

**Security and access**

**Shielded VM**

29°C Rain to stop

Cloud Shell Report-MicroService Cloud Shell

Lab: Creating a stream Creating a Streaming capstone-g11-discount Cloud Shell Report-MicroService Cloud Shell

console.cloud.google.com/compute/instancesDetail/zones/us-central1-a/instances/capstone-g11-discount?authuser=0&project=qwiklabs-gcp-04-fa9aee5dc94e

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EDIT RESET CREATE MACHINE IMAGE OPERATIONS HELP ASSISTANT LEARN

The screenshot shows the Google Cloud VPC network interface details for the "nic0" interface of the "capstone-g11-discount" VM. The interface is associated with the "default" subnet and has an external IP address of 35.188.223.60. It is part of the "default" firewall and routes.

**VPC network**

**Network interface details**

Name	Network	Subnetwork	Primary internal IP address	Alias IP ranges	External IP address	Network Service Tier
nic0	default	default	10.128.0.2	-	35.188.223.60	Premium

**VM instance details**

Name	Zone	Network tags	Service account	IP forwarding
capstone-g11-discount	us-central1-a	http-server, https-server	611169518217-compute@developer.gserviceaccount.com	Off

**Firewall and routes details**

**FIREWALLS**

Name	Enforcement order	Type	Deployment scope	Rule priority	Targets	Source	Destination	Protocols and ports
185229783278	1	Hierarchical firewall policy	Global	-	-	-	-	-

29°C Rain to stop

Cloud Shell Report-MicroService Cloud Shell

Lab: Creating a stream Creating a Streaming Network interface details Cloud Shell Report-MicroService Cloud Shell

console.cloud.google.com/networking/networkinterfaces/zones/us-central1-a/instances/capstone-g11-discount?networkInterface=nic0&project=qwiklabs-gcp-04-fa9aee5dc94e

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## **CONCLUSION :**

E-Commerce has undeniably become an important part of our society. The successful companies of the future will be those that take E-Commerce seriously, dedicating sufficient resources to its development. E-Commerce is not an IT issue but a whole business undertaking. Companies that use it as a reason for completely re-designing their business processes are likely to reap the greatest benefits. Moreover, E-Commerce is a helpful technology that gives the consumer access to businesses and companies all over the world.



Thank you