

FOOD ORDERING AND RESERVATION SYSTEM

PROJECT REPORT



GROUP MEMBERS

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PROJECT REPORT:

1) Introduction:

The project entails a restaurant's online website where a customer is allowed to order food and make reservations, the inspiration is taken from restaurants e-commerce websites plus the additional features of the supermarkets' e-commerce website. The system offers a host of features for both the user and the admin.

The major functions that the system must perform are:

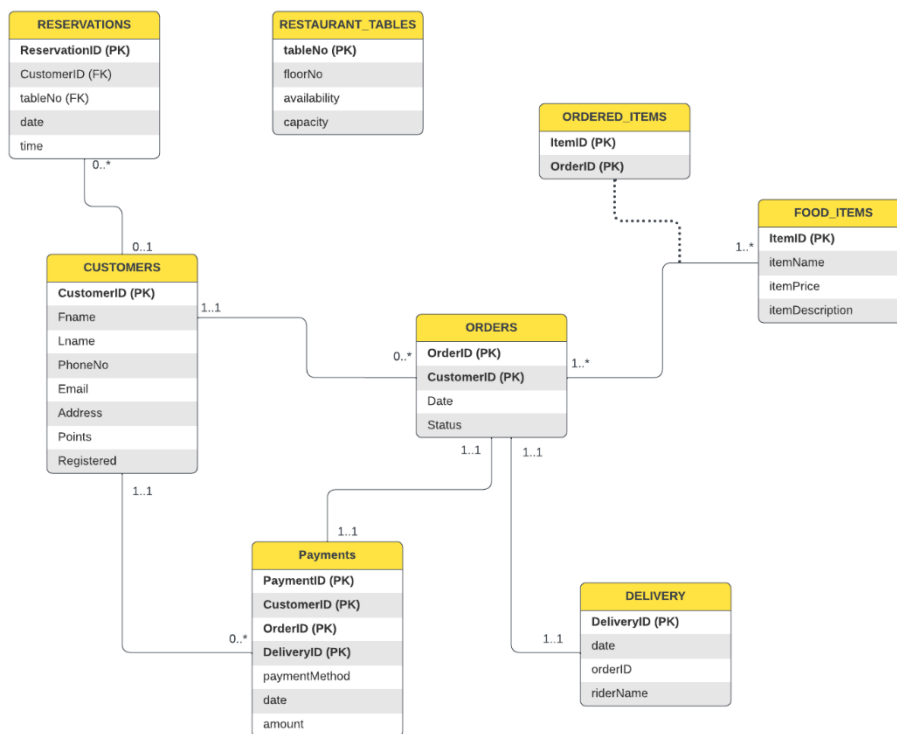
- Sign in (for customer and log in)
- Sign up for customer
- Inventory mgmt. for the admin
- Reservations approval for the admin
- Profits generated seen by the admin
- Ordered orders seen by the admin
- Reservation making by the customer
- Food ordered by the customer
- Feedback provided by the customer
- Bill generation

2) Frontend and Backend Technologies:

Frontend: HTML, CSS, JSP

Backend: JAVA, MySQL

3) System Design:



Entities: Customers, Reservations, Food Items, Orders, Payments

4) NORMALIZATION:

The table is already in 1NF

Food_Items is already in 3NF.

All attributes of Restaurant_Tables were in Reservations table but because of partial dependency on composite key of (ReservationID, TableNo) are now in there 2NF forms.

All the attributes of Orders, Customers, Delivery were in Payments table but because of partial dependency on Composite Key of (CustomerID, OrderID, PaymentID, DeliveryID) are now in there 2NF forms.

Functional Dependencies:

- 1) CustomerID -> Fname, Lname, PhoneNo, Email, Address, Points, Registered
- 2) OrderID, CustomerID -> Date, Status
- 3) ItemID -> itemName, itemPrice, itemDescription
- 4) CustomerID, OrderID, PaymentID, DeliveryID -> paymentMethod, date, amount
- 5) DeliveryID -> date, riderName
- 6) ReservationID -> CustomerID, tableNo, time, Date
- 7) tableNo -> floorNo, availability, capacity

2NF form:

CUSTOMERS

<u>CustomerID</u>	Fname	Lname	PhoneNo	Email	Address	Points	Registered
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ORDERS

<u>OrderID</u>	customerID	Date	status
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FOOD_ITEMS

<u>ItemID</u>	itemName	itemPrice	itemDescription
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PAYMENTS

<u>paymentID</u>	<u>customerID</u>	<u>orderID</u>	<u>DeliveryID</u>	paymentMethod	Date	Amount	riderName
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RESERVATIONS

<u>ReservationID</u>	customerID	tableNo	time	Date
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RESTAURANT_TABLES

<u>tableNo</u>	floorNo	Availablilty	Capacity
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3NF Form:

Because of FD 5 we have a transitive dependency so the table payments will look like:

PAYMENTS

paymentID	customerID	orderID	DeliveryID	paymentMethod	Date	Amount
-----------	------------	---------	------------	---------------	------	--------

Delivery

DeliveryID	OrderID	riderName	Date
------------	---------	-----------	------

5) Triggers and Views:

Trigger:

```
CREATE DEFINER = CURRENT_USER TRIGGER `scdproject`.`food_items_BEFORE_INSERT` BEFORE
INSERT ON `food_items` FOR EACH ROW
```

```
BEGIN
```

```
UPDATE FOOD_ITEMS SET OLD_PRICE = old.ITEM_PRICE WHERE ITEM_PRICE = old.ITEM_PRICE;
```

```
END
```

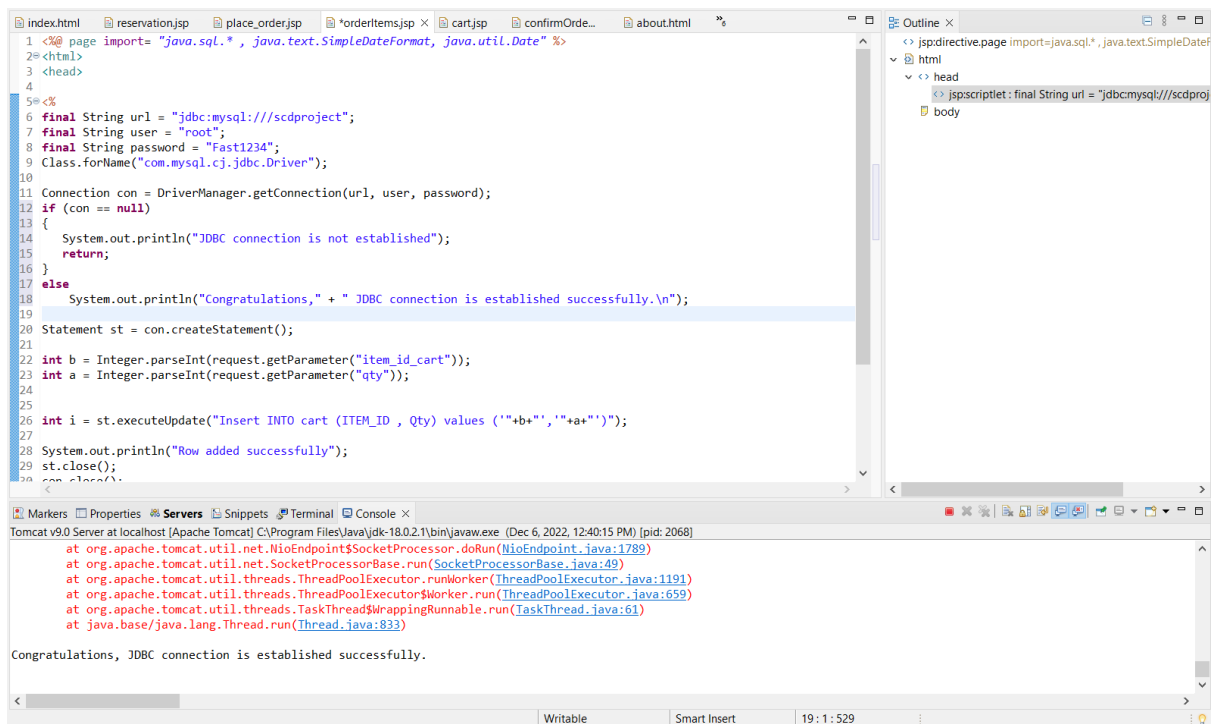
This trigger is used to save old price of menu items in case of accidental update or change.

View:

```
CREATE VIEW [ADMIN CUSTOMER] AS  
SELECT FIRST_NAME, LAST_NAME, EMAIL  
FROM CUSTOMERS  
WHERE RESGISTERED = 1;
```

This view is created for the admin user so it can limit the information seen by admin such as password.

CONNECTION SCREENSHOT:



The screenshot displays an IDE window with a JSP file named `index.html` and a console window. The JSP code establishes a JDBC connection to a MySQL database and inserts data into a table named `cart`. The console output shows the connection being established successfully.

```
1 <%@ page import= "java.sql.* , java.text.SimpleDateFormat, java.util.Date" %>  
2 <html>  
3 <head>  
4  
5 <%  
6 final String url = "jdbc:mysql://scdproject";  
7 final String user = "root";  
8 final String password = "Fast1234";  
9 Class.forName("com.mysql.cj.jdbc.Driver");  
10  
11 Connection con = DriverManager.getConnection(url, user, password);  
12 if (con == null)  
13 {  
14     System.out.println("JDBC connection is not established");  
15     return;  
16 }  
17 else  
18     System.out.println("Congratulations," + " JDBC connection is established successfully.\n");  
19  
20 Statement st = con.createStatement();  
21  
22 int b = Integer.parseInt(request.getParameter("item_id_cart"));  
23 int a = Integer.parseInt(request.getParameter("qty"));  
24  
25 int i = st.executeUpdate("Insert INTO cart (ITEM_ID , Qty) values (" + b + " , " + a + ")");  
26  
27  
28 System.out.println("Row added successfully");  
29 st.close();  
30 %>
```

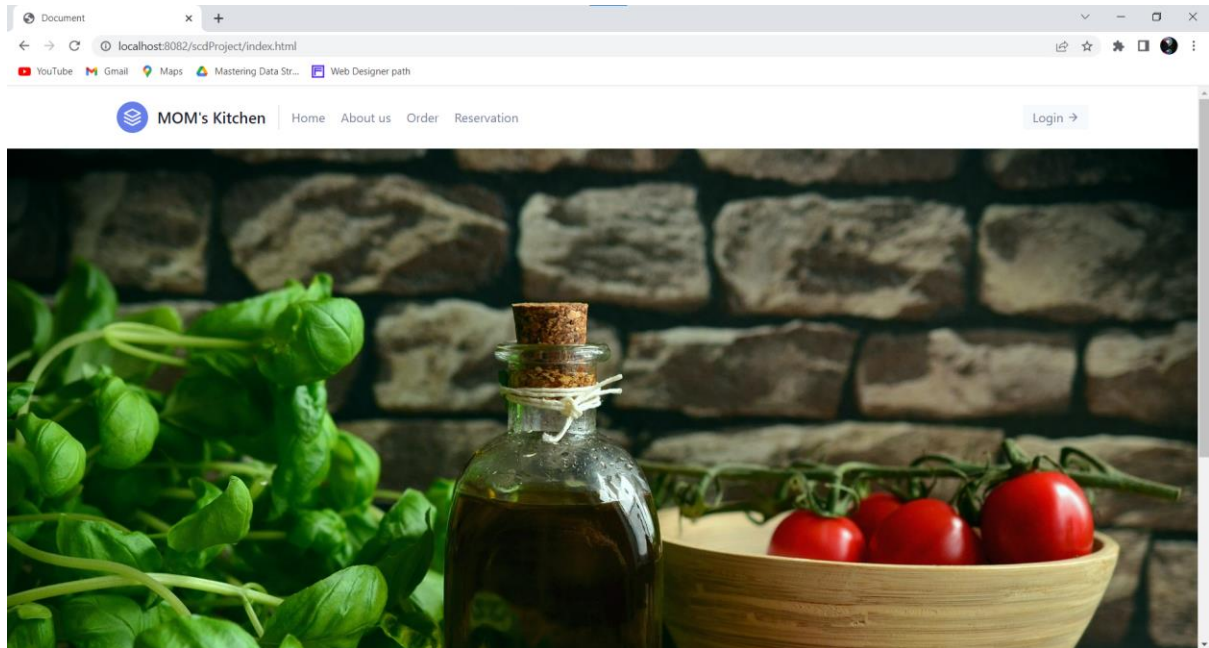
Tomcat v9.0 Server at localhost [Apache Tomcat] C:\Program Files\Java\jdk-18.0.2\bin\javaw.exe (Dec 6, 2022, 12:40:15 PM) [pid: 2068]

```
at org.apache.tomcat.util.net.NioEndpoint$SocketProcessor.doRun(NioEndpoint.java:1789)  
at org.apache.tomcat.util.net.SocketProcessorBase.run(SocketProcessorBase.java:49)  
at org.apache.tomcat.util.threads.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1191)  
at org.apache.tomcat.util.threads.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:659)  
at org.apache.tomcat.util.threads.TaskThread$WrappingRunnable.run(TaskThread.java:61)  
at java.base/java.lang.Thread.run(Thread.java:833)
```

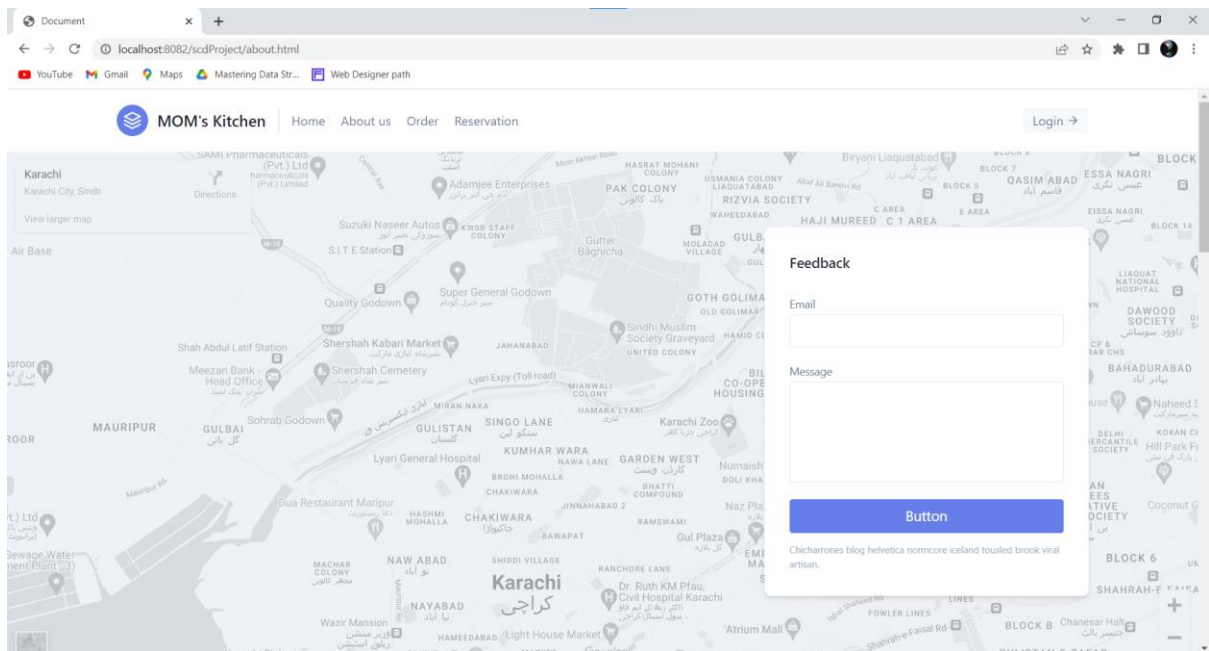
Congratulations, JDBC connection is established successfully.

SCREENSHOTS OF PROJECT:

Home Page:



About us:



Reservation:

The screenshot shows a web browser window with the address bar displaying 'localhost:8082/scdProject/reservation.jsp'. The browser's taskbar includes icons for YouTube, Gmail, Maps, Mastering Data Str..., and Web Designer path. The website header features the 'MOM's Kitchen' logo and navigation links for Home, About us, Order, and Reservation. A 'Login' link with a right-pointing arrow is located in the top right corner. The main content area contains a light blue box titled 'Reservation' with the following fields: 'Full Name', 'Email', 'Contact Number', and 'Number of Persons'. Below these fields are two date pickers: 'Select time: --:-- --' and 'Reservation Date: 12/05/2022'. A blue 'Submit Request' button is positioned below the date pickers. At the bottom of the box, a small note reads 'Reservations can't be canceled after 15 minutes before arrival'.

Document x +

localhost:8082/scdProject/reservation.jsp

YouTube Gmail Maps Mastering Data Str... Web Designer path

MOM's Kitchen Home About us Order Reservation Login →

Reservation

Full Name

Email

Contact Number

Number of Persons

Select time: --:-- --

Reservation Date: 12/05/2022

Submit Request

Reservations can't be canceled after 15 minutes before arrival

Sign in:

The screenshot shows a web browser window with the address bar displaying 'localhost:8082/scdProject/loginPage.jsp'. The browser's taskbar includes icons for YouTube, Gmail, Maps, Mastering Data Str..., and Web Designer path. The main content area has a light blue background and contains a sign-in/sign-up form. The form includes 'Email' and 'Password' input fields, a blue 'Sign in' button, and a blue 'Sign up' button.

Document x +

localhost:8082/scdProject/loginPage.jsp

YouTube Gmail Maps Mastering Data Str... Web Designer path

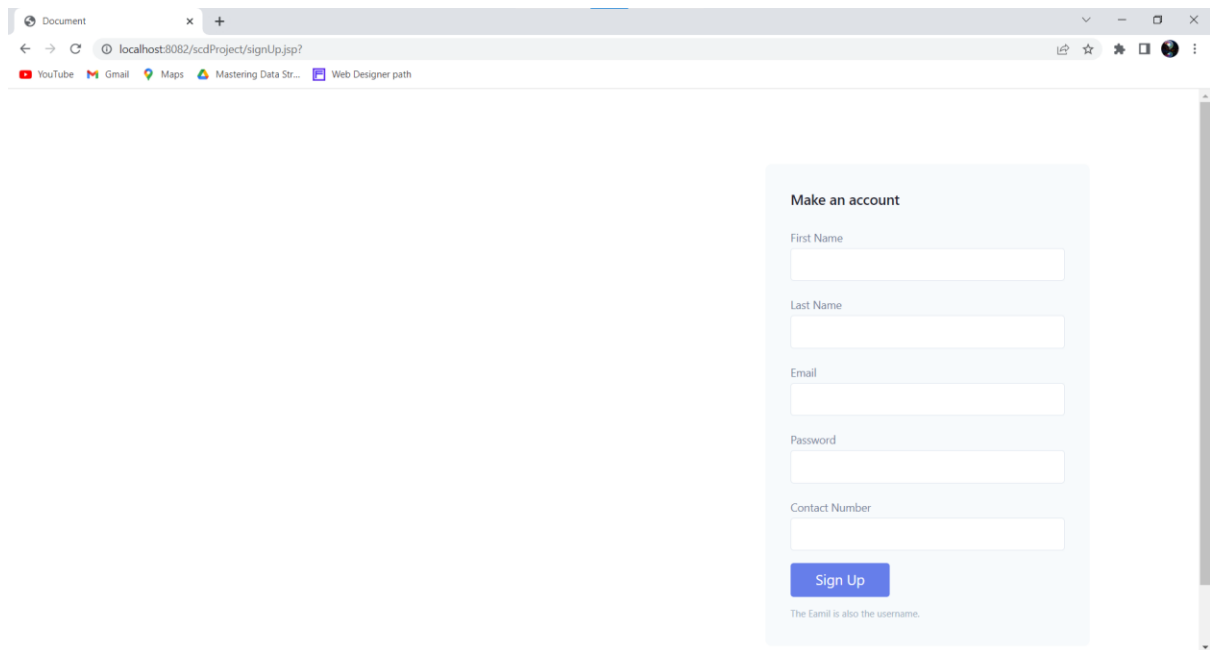
Email

Password

Sign in

Sign up

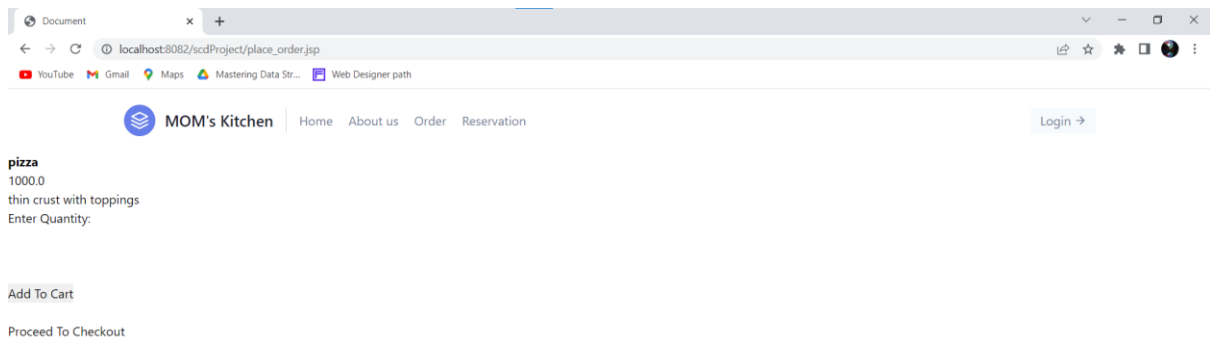
Sign up:



The screenshot shows a web browser window with the address bar displaying `localhost:8082/scdProject/signUp.jsp?`. The browser's taskbar includes icons for YouTube, Gmail, Maps, Mastering Data Str..., and Web Designer path. The main content area features a light blue box titled "Make an account" containing the following fields and elements:

- First Name:
- Last Name:
- Email:
- Password:
- Contact Number:
- [Sign Up](#) button
- Text below the button: "The Email is also the username."

Order:

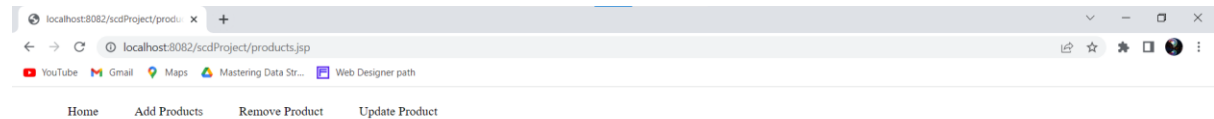
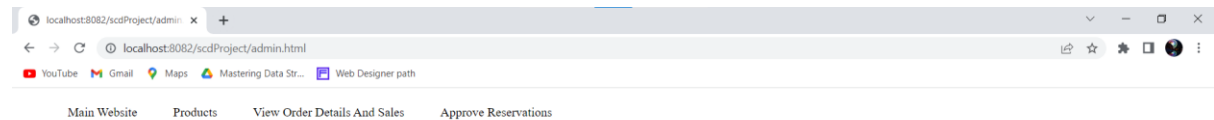


The screenshot shows a web browser window with the address bar displaying `localhost:8082/scdProject/place_order.jsp`. The browser's taskbar includes icons for YouTube, Gmail, Maps, Mastering Data Str..., and Web Designer path. The main content area displays the "MOM's Kitchen" logo and navigation links: Home, About us, Order, and Reservation. A "Login →" button is located in the top right corner. The order details are as follows:

- pizza**
- 1000.0
- thin crust with toppings
- Enter Quantity:

Below the order details, there are two buttons: "Add To Cart" and "Proceed To Checkout".

Admin Features:



Enter Product Name:

Enter Product Description:

Enter Product Price:

Item ID	Item Name	Price	Description
1	pizza	1000.0	thin crust with toppings

localhost:8082/scdProject/remov... x +

localhost:8082/scdProject/removeProduct.jsp

YouTube Gmail Maps Mastering Data Str... Web Designer path

Home Add Products Remove Product Update Product

Enter Product ID:

Item ID	Item Name	Price	Description
1	pizza	1000.0	thin crust with toppings

localhost:8082/scdProject/upda... x +

localhost:8082/scdProject/updateProduct.jsp

YouTube Gmail Maps Mastering Data Str... Web Designer path

Home Add Products Remove Product Update Product

Enter Product ID:

Enter Product Name:

Enter Product Description:

Enter Product Price:

Item ID	Item Name	Price	Description
1	pizza	1000.0	thin crust with toppings

Order Details

Enter ID

Total Sales Are of : 0

Order ID	Order Date	Order Status	Item Id	Item Name	Customer Id	Delivery Id	Payment Id	Payment Method	Order Price
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Approve Reservations

1 | Saeed Kamran | saeed@gmail.com | 03251515111 | 2022-12-06 | 19:45 |