

Java Coding Challenge

Order Management System

Output

As part of the coding challenge, I was mapped to develop an Order Management System in Java.

SQL Database Design

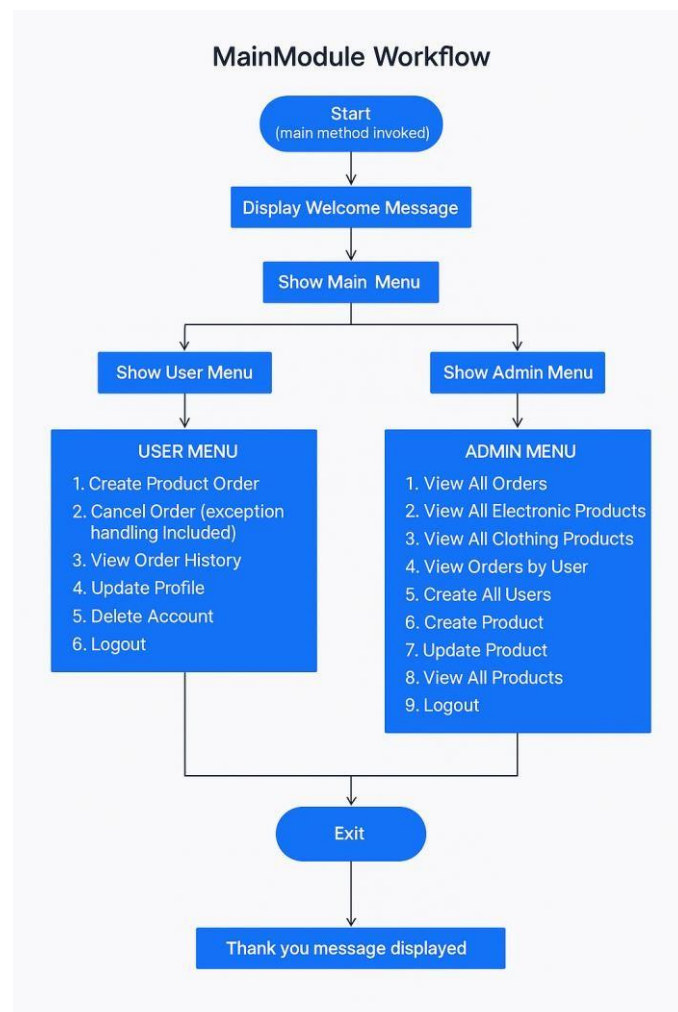
```
2 • CREATE DATABASE IF NOT EXISTS orderManagement;
3 • USE orderManagement;
4
5 -- User Table
6 • CREATE TABLE user (
7     user_id INT AUTO_INCREMENT PRIMARY KEY,
8     username VARCHAR(50) NOT NULL UNIQUE,
9     password VARCHAR(100) NOT NULL,
10    role VARCHAR(10) CHECK (role IN ('Admin', 'User'))
11 );
12
13 -- Product Table
14 • CREATE TABLE product (
15     product_id INT AUTO_INCREMENT PRIMARY KEY,
16     product_name VARCHAR(100) NOT NULL,
17     description TEXT,
18     price DOUBLE NOT NULL,
19     quantity_in_stock INT NOT NULL,
20     type VARCHAR(20) CHECK (type IN ('Electronics', 'Clothing'))
21 );
22
23 -- Electronics Table
24 • CREATE TABLE electronics (
25     product_id INT PRIMARY KEY,
26     brand VARCHAR(50),
27     warranty_period INT,
28     FOREIGN KEY (product_id) REFERENCES product(product_id) ON DELETE CASCADE
29 );
```

```

-- Clothing Table
CREATE TABLE clothing (
    product_id INT PRIMARY KEY,
    size VARCHAR(10),
    color VARCHAR(30),
    FOREIGN KEY (product_id) REFERENCES product(product_id) ON DELETE CASCADE
);

-- Orders Table
CREATE TABLE orders (
    order_id INT AUTO_INCREMENT PRIMARY KEY,
    user_id INT,
    product_id INT,
    quantity INT NOT NULL,
    total_amt DOUBLE NOT NULL,
    payment_mode VARCHAR(20) CHECK (payment_mode IN ('Cash', 'Card', 'UPI')),
    status VARCHAR(20) CHECK (status IN ('Placed', 'Cancelled', 'Delivered')) DEFAULT 'Placed',
    order_date TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
    FOREIGN KEY (user_id) REFERENCES user(user_id) ON DELETE CASCADE,
    FOREIGN KEY (product_id) REFERENCES product(product_id) ON DELETE CASCADE
);

```



Work Flow

Output :

User

```
===== Welcome to Order Management System =====
"Great service begins with great order!"

Main Menu
1. User
2. Admin
3. Exit
Enter your choice: 1

User Menu
1. Create Account
2. Login
3. Exit
Enter your choice: 1
Enter Username: Krish
Enter Password: 455
Enter Address: Chennai
User created successfully! Details:
User ID: 7, Username: Krish, Role: User, Address: Chennai

Now, please login using your credentials.

Enter your choice: 2
Enter Username: Krish
Enter Password: 455
Login Successful! Welcome, Krish

===== User Menu =====
1. Create Product Order
2. Cancel Order
3. View Order History
4. Update Profile
5. Delete Account
6. Logout
Enter your choice: 1

-----
| ID | Name      | Description      | Price  | Qty | Type      | Brand/Size |
-----
| 1  | T shirt   | Cotton T shirt   | 369.00 | 7   | Clothing   | M           |
| 2  | laptop    | HP pavilion      | 75000.00 | 7   | Electronics | HP          |
| 3  | Smart watch | Smart with with bt | 1000.00 | 8   | Electronics | Boat        |
| 4  | Saree     | Soft silk saree  | 1299.00 | 7   | Clothing   | L           |
-----

Enter Product ID to order: 3
Enter quantity: 2
Total Amount: ₹2000.0
Choose Payment Mode:
1. Cash
2. UPI
3. Card
Enter your choice: 1

Enter your choice: 1
✅ Order Placed Successfully!
Order Details:
Order ID   : 9
Product    : Smart watch (Electronics)
Brand      : Boat
Warranty   : 12 months
Quantity   : 2
Amount     : ₹2000.0
Payment    : Cash
Status     : Placed
```

```

3. View Order History
4. Update Profile
5. Delete Account
6. Logout
Enter your choice: 2
-----
| ID | Product      | Type      | Brand/Size | Warranty/Color | Qty | Am
-----
| 9  | Smart watch  | Electronics | Boat       | 12 months      | 2   | 2
-----
Enter Order ID to cancel: 9
Error: You are not authorized to cancel this order.

```

```

6. Logout
Enter your choice: 4
Do you want to update your password? (yes/no): yes
Enter new password: 852
Password updated successfully.
Do you want to update your address? (yes/no): no

===== User Menu =====

```

```

5. Delete Account
6. Logout
Enter your choice: 6
You have been logged out. Have a great day!

User Menu
1. Create Account
2. Login
3. Exit
Enter your choice: 3

```

Admin

```

Admin Menu
1. Create Account
2. Login
3. Exit
Enter your choice: 2
Enter Username: admin
Enter Password: 12345
Login Successful! Welcome, admin

===== Admin Menu =====
1. View All Orders
2. View All Electronic Products
3. View All Clothing Products
4. View Orders by User
5. View All Users
6. Create Product
7. Update Product
8. View All products
9. Logout
Enter your choice:

```

Enter your choice: 1

ID	Username	Product	Type	Brand	Warranty	Size	Color	Qty	Amount	Payment	Status	Order Date
1	Reshmika	T shirt	Clothing	-	-	M	Red	4	1596.00	Cash	Placed	2025-04-09 12:41:54.0
2	Reshmika	T shirt	Clothing	-	-	M	Red	2	798.00	UPI	Placed	2025-04-09 12:46:07.0
4	Nilla	T shirt	Clothing	-	-	M	Red	2	738.00	Cash	Placed	2025-04-09 13:38:21.0
8	Meera	T shirt	Clothing	-	-	M	Red	5	1845.00	Cash	Placed	2025-04-09 14:20:33.0
5	Nilla	Laptop	Electronics	HP	24 months	-	-	1	750000.00	UPI	Placed	2025-04-09 13:38:43.0
9	Krish	Smart watch	Electronics	Boat	12 months	-	-	2	2000.00	Cash	Placed	2025-04-09 15:22:53.0
6	Meera	Saree	Clothing	-	-	L	Maroon	5	6495.00	Cash	Placed	2025-04-09 14:19:27.0

7. Logout

Enter your choice: 2

ID	Name	Description	Price	Stock	Brand	Warranty(Mo)
2	laptop	HP pavilon	750000.00	7	HP	24
3	Smart watch	Smart with with bt	1000.00	6	Boat	12

==== Admin Menu =====

1. View All Orders

Enter your choice: 3

ID	Name	Description	Price	Stock	Size	Color
1	T shirt	Cotton T shirt	369.00	7	M	Red
4	Saree	Soft silk saree	1299.00	7	L	Maroon

==== Admin Menu =====

9. Logout

Enter your choice: 4

Enter username to view their orders: Nilla

ID	Product	Type	Brand	Warranty	Size	Color	Qty	Amount	Status	Order Date
4	T shirt	Clothing	-	-	M	Red	2	738.00	Placed	2025-04-09 13:38:21.0
5	laptop	Electronics	HP	24 months	-	-	1	750000.00	Placed	2025-04-09 13:38:43.0

==== Admin Menu =====

7. Logout

Enter your choice: 5

ID	Username	Role	Address
1	Reshmika	user	null
4	Nilla	User	Madurai
6	Meera	User	Chennai
7	Krish	User	Chennai

==== Admin Menu =====

1. View All Orders

2. View All Electronic Products

3. View All Clothing Products

9. Logout

Enter your choice: 8

ID	Name	Description	Price	Qty	Type	Brand/Size	Warranty/Color
1	T shirt	Cotton T shirt	369.00	7	Clothing	M	Red
2	laptop	HP pavilon	750000.00	7	Electronics	HP	24 months
3	Smart watch	Smart with with bt	1000.00	6	Electronics	Boat	12 months
4	Saree	Soft silk saree	1299.00	7	Clothing	L	Maroon

===== Admin Menu =====

1. View All Orders

6. Create Product

7. Update Product

8. View All products

9. Logout

Enter your choice: 6

Enter Product Name: Earpods

Enter Description: Bluetooth earpods with noise reduction

Enter Price: 1499

Enter Quantity in Stock: 10

Select Product Type:

1. Electronics

2. Clothing

Enter your choice: 1

Enter Brand: Boat

Enter Warranty Period (in months): 12

Electronics Product Created Successfully!

Product ID: 5

Name: Earpods

Description: Bluetooth earpods with noise reduction

Price: 1499.0

Quantity: 10

Type: Electronics

Brand: Boat

Warranty: 12 months

7. Update Product

8. View All products

9. Logout

Enter your choice: 7

ID	Name	Description	Price	Qty	Type	Brand/Size	Warranty/Color
1	T shirt	Cotton T shirt	369.00	7	Clothing	M	Red
2	laptop	HP pavilon	750000.00	7	Electronics	HP	24 months
3	Smart watch	Smart with with bt	1000.00	6	Electronics	Boat	12 months
4	Saree	Soft silk saree	1299.00	7	Clothing	L	Maroon
5	Earpods	Bluetooth earpods with noise reduction	1499.00	10	Electronics	Boat	12 months

Enter Product ID to update: 2

Enter 'null' to skip updating that field.

Enter new product name (Current: laptop):

Enter new description (Current: HP pavilon):

Enter new price (Current: 750000.0): 70000

Enter new stock quantity (Current: 7):

Product updated successfully.

Conclusion:

In this module, I have successfully implemented the core structure and functionality of the Order Management System. All the assigned tasks and functionalities were completed, including separate login flows for users and admins, detailed menu navigation, and interaction with service layers for handling products, users, and orders. Proper exception handling and user-friendly prompts were also integrated to enhance the overall user experience. This module serves as the backbone of the system, ensuring smooth control flow between the user interface and the processing logic.
