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21CSC206P – Advanced Object-Oriented Programming

Project Review 2

# E-Shopping Cart


1. Sneha Das – RA2311027010023
2. Dhanvi Chaudhary – RA2311027010031

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# ABSTRACT


- The E-Shopping Mart project is an online shopping platform developed in Java, designed to provide a user-friendly interface for both customers and administrators. The system enables customers to browse products, manage their shopping carts and place orders.
- For administrators, the platform offers tools to manage product listings, categories and customer orders, ensuring efficient store management. Built using core Java principles and utilizing a relational database (such as MySQL) for data storage, the project implements Java Database Connectivity (JDBC) for seamless interaction between the application and the database.
- The system is developed as a desktop application using Java Swing or as a web-based platform with JSP/Servlets.
- This project demonstrates the practical application of Java for real-world e-commerce solutions and can be extended with additional features like real-time payment processing.

# OBJECTIVE

- The primary objective of the E-Shopping Cart mini project is to develop a simple, user-friendly online shopping system using Java that enables customers to browse products, manage their shopping cart, and place orders efficiently.

- The system aims to provide basic e-commerce functionalities such as product selection, cart management, and order processing.

- By utilizing core Java concepts, JDBC for database connectivity and Java Swing for a desktop application, this project demonstrates the practical application of Java in building small-scale, real-world e-commerce solutions.

# PROBLEM STATEMENT

- This Mini Project is based on E Shopping. We took up this topic because the offline system of shopping marts deals with a lot of inconveniences. This program prints the product, its details, add to cart option and the billing system. This project will make the shopping experience easier and faster with giving all the information about the product.

- Firstly, it (program) asks the users for login credentials if account exists or else asks the user to create a new account and saves the new account details in a SQL table named 'userid_pwd'. It then displays the Menu which consists the different categories of products such as Fresh Produce, Clothing, Home Appliances, Stationary, etc. Few of the categories are sub-categorised. The user can then choose their preferred category and select required products and add it to their cart which is then saved into the table named 'add_to_cart'. Further while checking out, it displays the final billing amount.

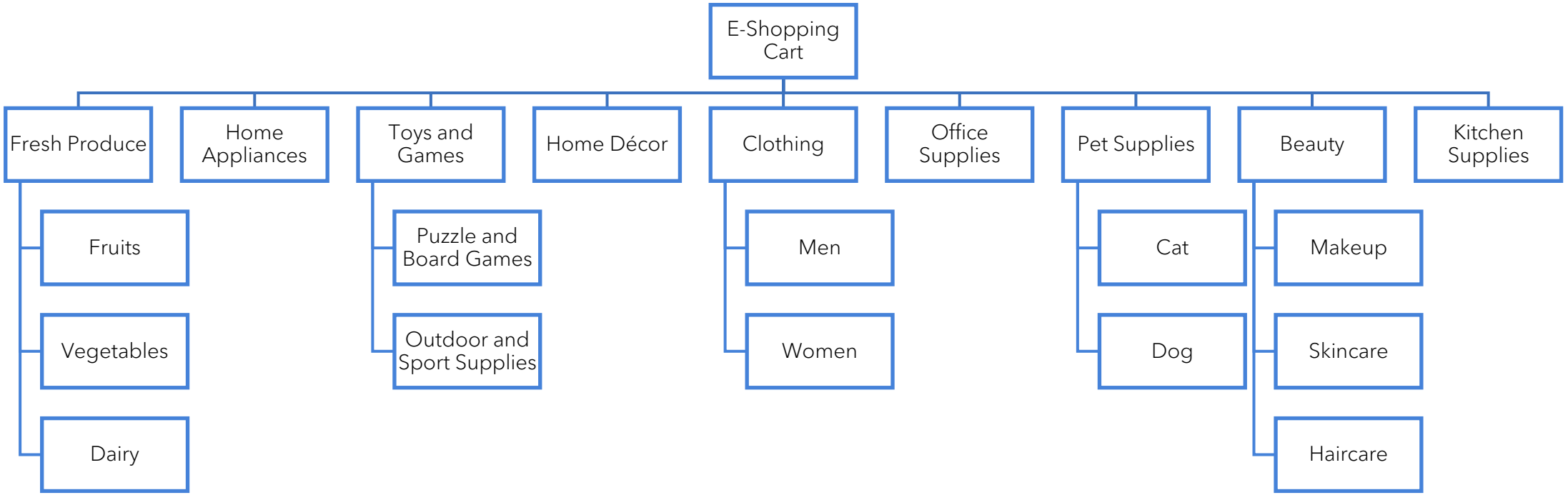
# SOFTWARE REQUIREMENTS

- Programming Language – Java

- Java Libraries -
  - Java Swing – for the graphical user interface(GUI)
  - Java Database Connectivity(JDBC) – for connecting the java application to the MySQL database.

- Database Tool – MySQL Workbench for managing and interacting with the MySQL database.

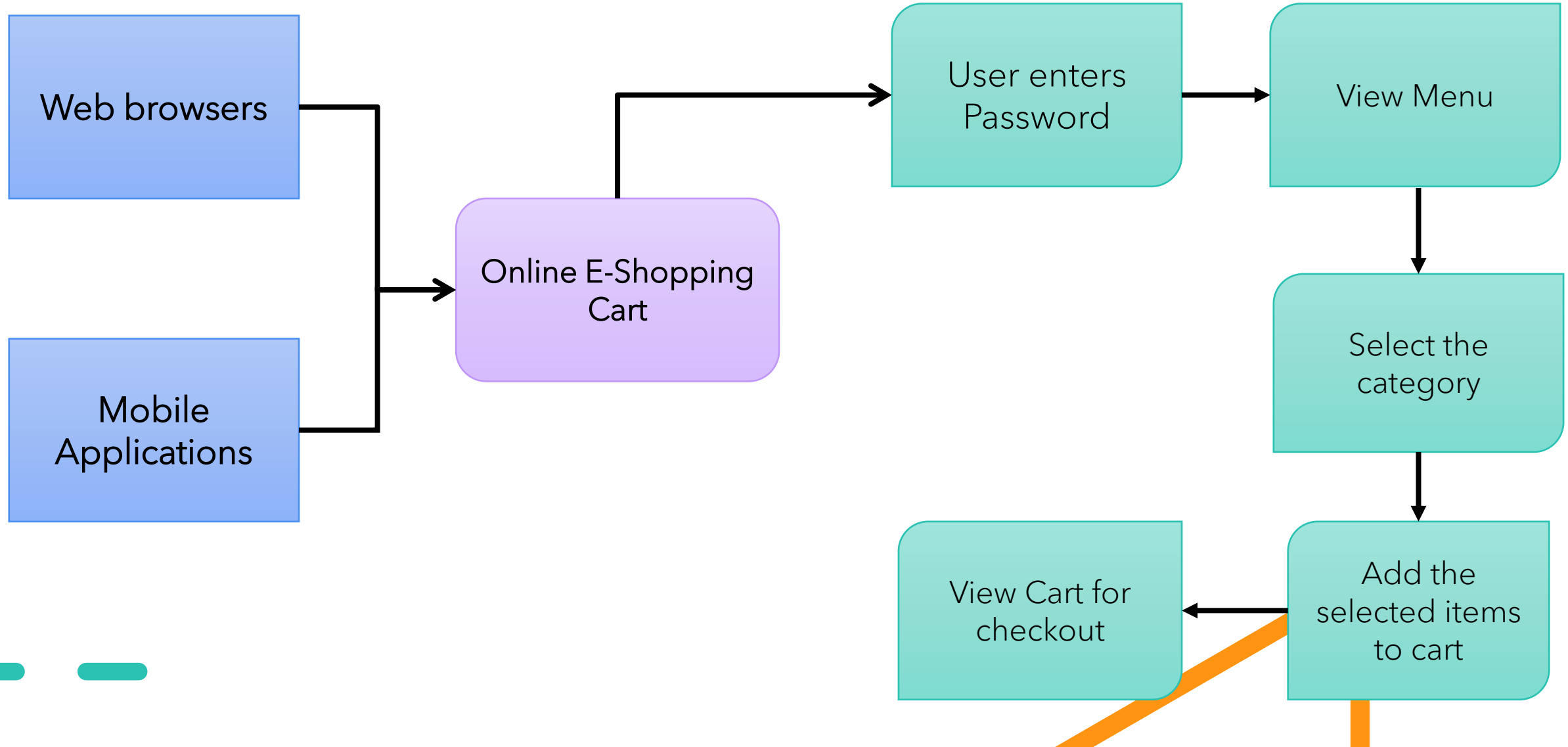
# DATABASE DESIGN



# GUI DESIGN

- The **GUI (Graphical User Interface)** used for this mini project "**E-Shopping Cart**" is Java Swing. It provides a user-friendly interface for functionalities such as login, product listing, shopping cart and order confirmation.
- Java Swing is a GUI toolkit and a part of Java Foundation Classes (JFC) that is used to create window-based applications.
- It is built on the top of AWT (Abstract Windowing Toolkit) API and entirely written in java.
- Unlike AWT, Java Swing provides platform-independent and lightweight components.
- The javax.swing package provides classes for java swing API such as JButton, JTextField,
- JTextArea, JRadioButton, JCheckbox, JMenu, JColorChooser etc.
- We will be using Java Swing components like JFrame, JPanel, JTable, JButton, and JTextField.

# ARCHITECTURE DIAGRAM



# CODE SNIPPET

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```java
import java.io.*;
import java.sql.*;
import java.util.Scanner;
import javax.swing.*;


public class EShoppingCart {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        Connection mycon = null;
        Statement stmt = null;

        try {
            // Establishing the connection
            mycon = DriverManager.getConnection("jdbc:mysql://localhost:3306/", "root", "sneha29");
            stmt = mycon.createStatement();

            System.out.println("********E-Shopping Cart*********");
            System.out.println("");
            System.out.println("---------- The place that fits your needs---------------");
            System.out.println("");
            System.out.println("******USER*******");
            System.out.println("");
            System.out.println("1.LOGIN");
            System.out.println("");
            System.out.println("2.CREATE ACCOUNT");
            System.out.print("Enter your choice: ");
            int choice = sc.nextInt();
            sc.nextLine(); // consume the newline

            if (choice == 1) {
                System.out.print("Enter Username: ");
                String username = sc.nextLine();
                System.out.print("Enter Password: ");
                String password = sc.nextLine();
```

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```
 7  public class EShoppingCart {
 9      public static void main(String[] args) {
14          try {
32              if (choice == 1) {
38                  String query = "SELECT * FROM userid_pwd WHERE User_id='" + username + "' AND Pwd='" + password + "'";
39                  ResultSet rs = stmt.executeQuery(query);
40
41                  if (rs.next()) {
42                      System.out.println("Login Successful");
43                  } else {
44                      System.out.println("Invalid Credentials");
45                      return;
46                  }
47              } else if (choice == 2) {
48                  System.out.println("To Create Your Account, Kindly Fill In The Details");
49                  System.out.print("Enter your Name: ");
50                  String name = sc.nextLine();
51                  System.out.print("Enter the Password: ");
52                  String password = sc.nextLine();
53                  System.out.print("Confirm your Password: ");
54                  String confirmPassword = sc.nextLine();
55
56                  if (!password.equals(confirmPassword)) {
57                      System.out.println("Passwords do not match!");
58                      return;
59                  }
60
61                  String insertQuery = "INSERT INTO userid_pwd (User_id, Pwd) VALUES ('" + name + "', '" + password + "')";
62                  stmt.executeUpdate(insertQuery);
63                  System.out.println("Account Created Successfully!");
64              } else {
65                  System.out.println("Wrong Choice");
66                  return;
67              }
68
69              System.out.println("------------------------------------------------------------");
70              System.out.println("");
71              System.out.println("**************M E N U****************");
```

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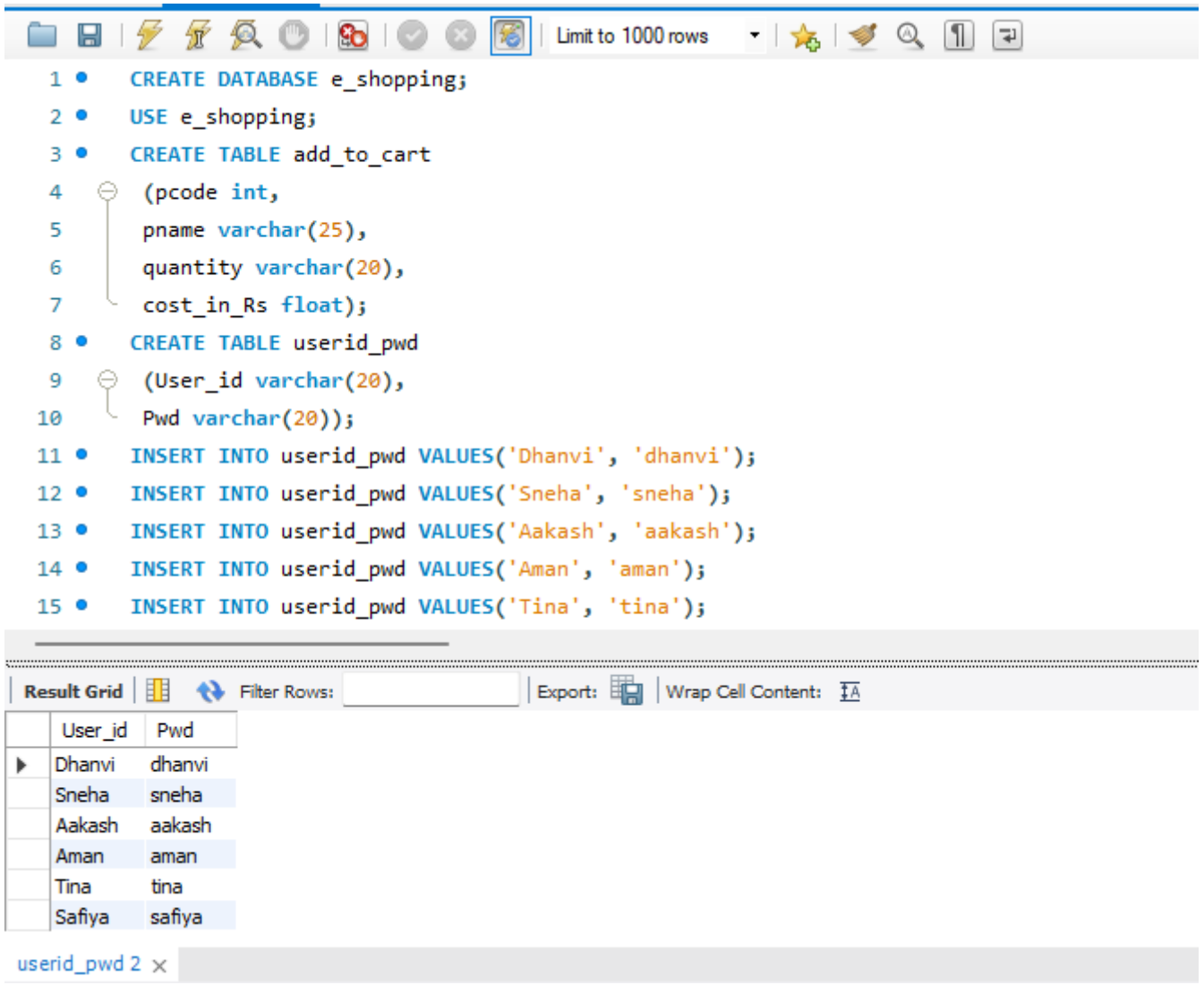
```
 7  public class EShoppingCart {
 9      public static void main(String[] args) {
14          try {
73              System.out.println("1. Fresh Produce");
74              System.out.println("2. Toys and Games");
75              System.out.println("3. CLothing");
76              System.out.println("4. Pet Supplies");
77              System.out.println("5. Beauty");
78              System.out.println("6. Home Decor");
79              System.out.println("7. Home Appliances");
80              System.out.println("8. Office Supplies");
81              System.out.println("9. Kitchen Supplies");
82
83              while (true) {
84                  System.out.print("Enter your choice: ");
85                  int ch = sc.nextInt();
86                  sc.nextLine(); // consume newline
87
88                  if (ch == 1) {
89                      System.out.println("***FRESH PRODUCE***");
90                      System.out.println("1. Fruits");
91                      System.out.println("2. Vegetables");
92                      System.out.print("Enter your choice for groceries: ");
93                      int groceryChoice = sc.nextInt();
94                      sc.nextLine(); // consume newline
95
96                      if (groceryChoice == 1) {
97                          System.out.println("FRUITS");
98                          String query = "SELECT * FROM fruits";
99                          ResultSet rs = stmt.executeQuery(query);
100                         while (rs.next()) {
101                             System.out.println(rs.getString("pname"));
102                         }
103
104                         String ans = "y";
105                         while (ans.equalsIgnoreCase("y")) {
106                             System.out.print("Enter Fruit Name: ");
107                             String fruitName = sc.nextLine();
```

C: > Users > sneha > OneDrive > Desktop > Sem 3 > AOOP > shoppingcart.java

```
 7    public class EShoppingCart {
 9        public static void main(String[] args) {
14            try {
83                while (true) {
88                    if (ch == 1) {
102                       }
103
104                       String ans = "y";
105                       while (ans.equalsIgnoreCase("y")) {
106                           System.out.print("Enter Fruit Name: ");
107                           String fruitName = sc.nextLine();
108                           String cartQuery = "INSERT INTO add_to_cart SELECT * FROM fruits WHERE pname='" + fruitName + "'";
109                           stmt.executeUpdate(cartQuery);
110                           System.out.println("Items successfully added to cart!");
111                           System.out.print("Want to select more items? (y/n): ");
112                           ans = sc.nextLine();
113                       }
114                   } else if (groceryChoice == 2) {
115                       System.out.println("VEGETABLES");
116                       String query = "SELECT * FROM vegetables";
117                       ResultSet rs = stmt.executeQuery(query);
118                       while (rs.next()) {
119                           System.out.println(rs.getString("pname"));
120                       }
121
122                       String ans = "y";
123                       while (ans.equalsIgnoreCase("y")) {
124                           System.out.print("Enter Vegetable Name: ");
125                           String vegName = sc.nextLine();
126                           String cartQuery = "INSERT INTO add_to_cart SELECT * FROM vegetables WHERE pname='" + vegName + "'";
127                           stmt.executeUpdate(cartQuery);
128                           System.out.println("Items successfully added to cart!");
129                           System.out.print("Want to select more items? (y/n): ");
130                           ans = sc.nextLine();
131                       }
132                   } else {
133                       System.out.println("Wrong Choice");
```



```
CREATE DATABASE e_shopping;
USE e_shopping;
CREATE TABLE add_to_cart
 (pcode int,
 pname varchar(25),
 quantity varchar(20),
 cost_in_Rs float);
CREATE TABLE userid_pwd
 (User_id varchar(20),
 Pwd varchar(20));
INSERT INTO userid_pwd VALUES('Dhanvi', 'dhanvi');
INSERT INTO userid_pwd VALUES('Sneha', 'sneha');
INSERT INTO userid_pwd VALUES('Aakash', 'aakash');
INSERT INTO userid_pwd VALUES('Aman', 'aman');
INSERT INTO userid_pwd VALUES('Tina', 'tina');
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

| User_id | Pwd |
|---|---|
| Dhanvi | dhanvi |
| Sneha | sneha |
| Aakash | aakash |
| Aman | aman |
| Tina | tina |
| Safiya | safiya |

userid_pwd 2

# THANKS!!