University of Information Technology and Sciences

Department of CSE

Project Report

of

E-Comeerce Management System

Project Title: E-Comeerce Management System

Course: Computer Science and Engineering

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1. Introduction

The E-Commerce Management System is a GUI-based desktop application developed in Java. It provides a streamlined way to manage customer and product data, place orders, and generate order summaries. The application is built with a focus on simplicity, usability, and interactive visual components using Java Swing for the graphical user interface.

2. Objectives

The primary objectives of the project are: To create a user-friendly application for managing e-commerce operations. To enable customers to input their personal and order information. To process orders and generate detailed summaries. To utilize core Java concepts such as OOP, event handling, and GUI programming.

3. Features

The E-Commerce Management System includes the following features:

1. Welcome Screen: Displays the project title and team members' information. A "Continue" button to proceed to the next stage.

2. Customer Information Form: Allows the input of customer details such as ID, Name, and Address.

3. Product Details Form: Enables the user to input product-related information including Product ID, Name, Price, and Quantity.

4. Order Summary:

Displays all customer and product information, including the calculated total price. Provides a "Close" button to exit the application.

5. System Architecture

The system follows a modular design with key components:

Main Class: Manages the workflow and GUI transitions.

Customer Class: Stores customer details (ID, name, and address).

Product Class: Stores product information (ID, name, price, and quantity).

Order Class: Combines customer and product details and generates a unique order ID.

6. Tools and Technologies Used

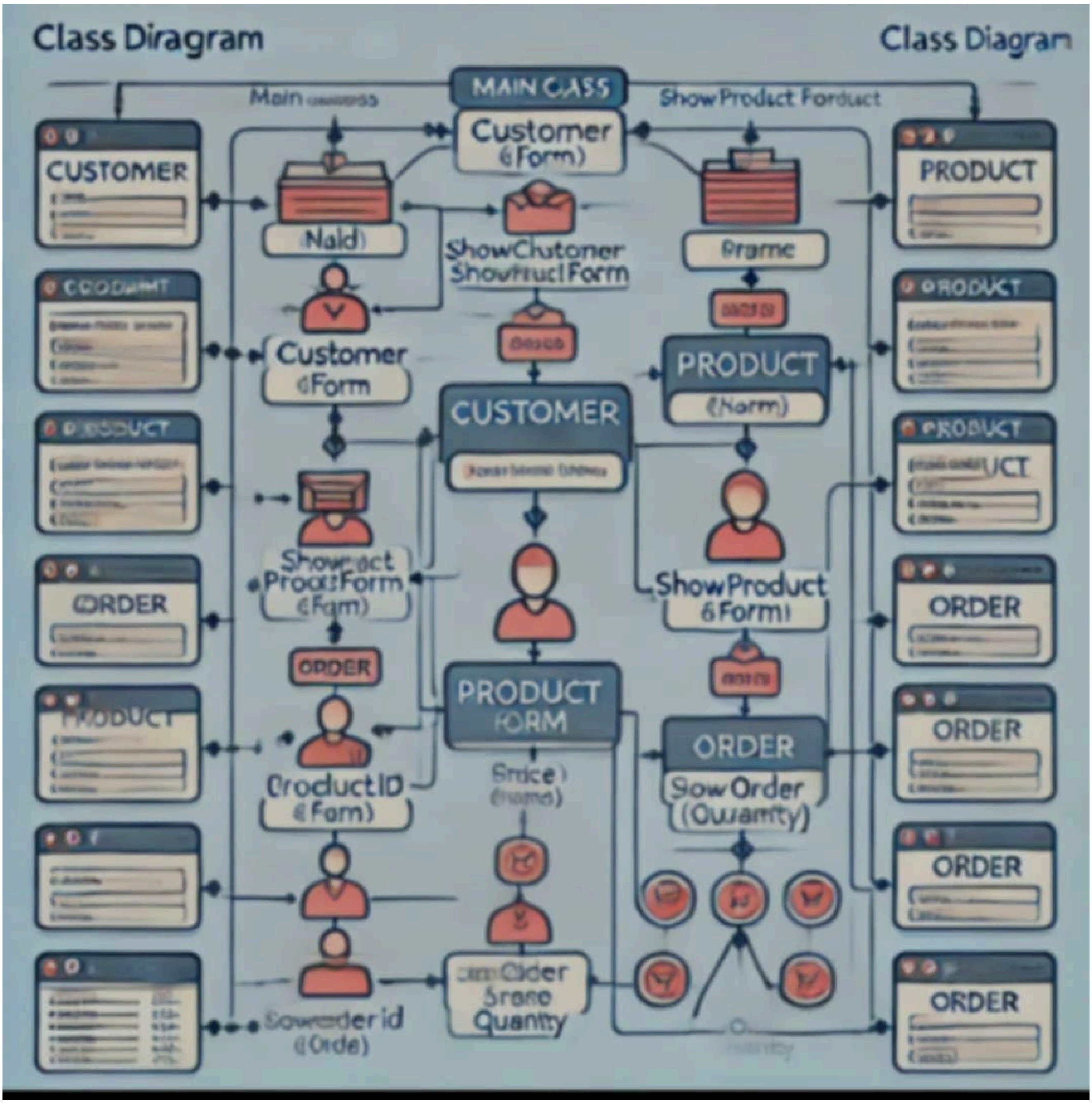
Programming Language: Java

Framework :Java Swing for GUI

IDE: IntelliJ IDEA / Eclipse / NetBeans (any preferred Java IDE)

Libraries: Java AWT and Swing for GUI components

DiaGram



Class Diragram
Class Diagram
MAIN CASS
CUSTOMER
PRODUCT
CUSTOMER
PRODUCT
ORDER
ORDER
ORDER
ORDER
ORDER
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ORDER
PRODUCT
FORM
Customer
ShowProduct
Quantity

Code

6.1 Main Class

Handles the GUI transitions between the Welcome Screen, Customer Form, Product Form, and Order Summary.

Implements event handling using ActionListener.

6.2 Customer Class

```
public class Customer {
        String customerID;
        String name;
        String address;

        public Customer(String customerID, String name, String address) {
            this.customerID =
                customerID;
                    this.name = name;
                    this.address = address;
                     }
                         }
```

6.3 Product Class

```
public class Product {
                    String productID;
                    String name;
                    double price;
                    int quantity;

public Product(String productID, String name, double price, int quantity) {

 this.productID = productID;
 this.name = name;
this.price = price;
 this.quantity = quantity;
 }
}
```

6.4 Order Class

```
public class Order {
        String orderId;
        Customer customer;
        Product product;

          public Order(Customer customer, Product product) {
                this.orderId = "ORD" + System.currentTimeMillis();
          this.customer = customer;
          this.product = product;
    }
}
```

Observations

7. Flow of the Application

1. Welcome Screen: Displays the project title and team members. A "Continue" button transitions the user to the customer information form.

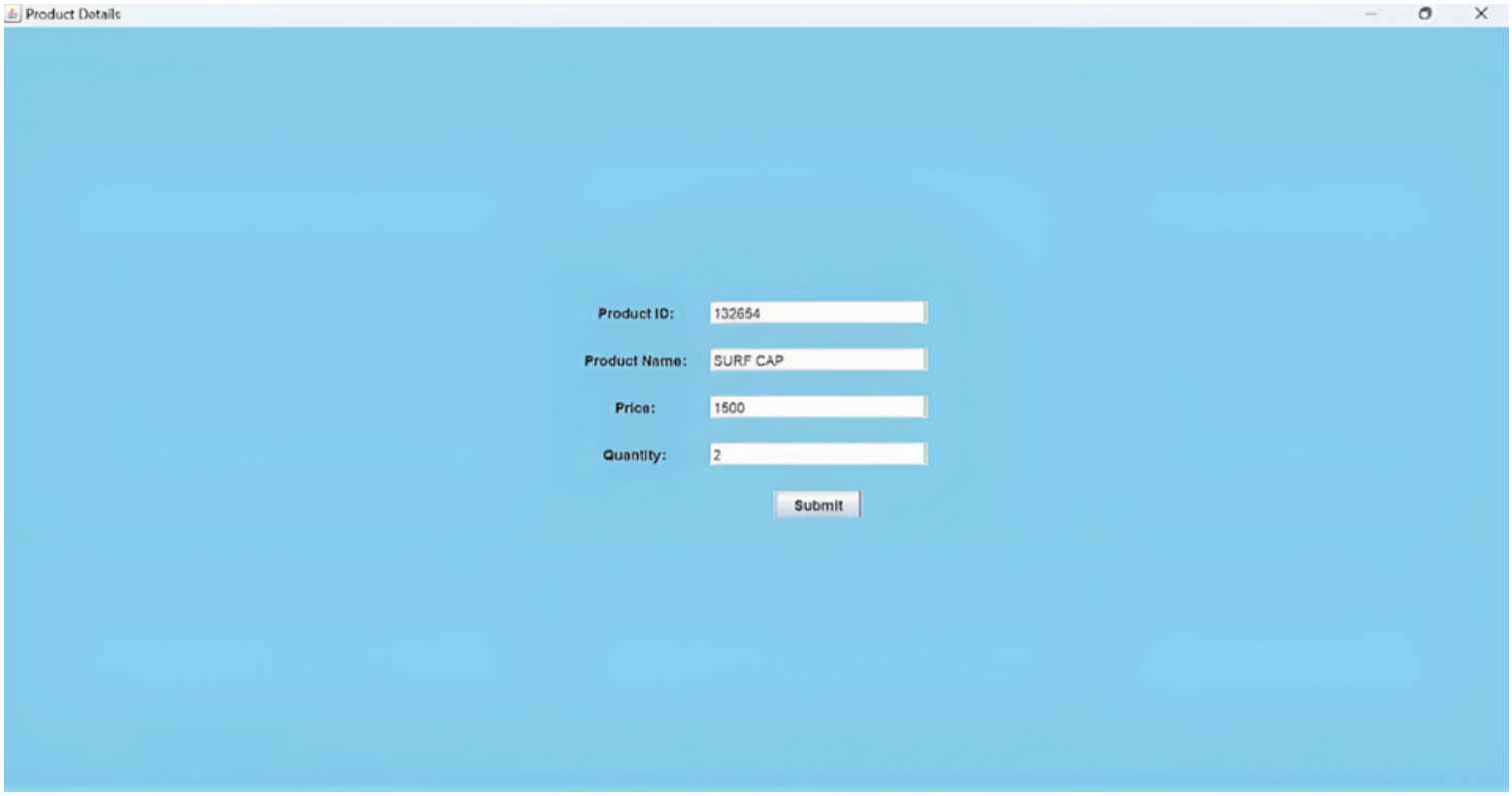
2. Customer Information Form: The user inputs customer details (ID, name, and address). Clicking "Next" saves the information and transitions to the product form.

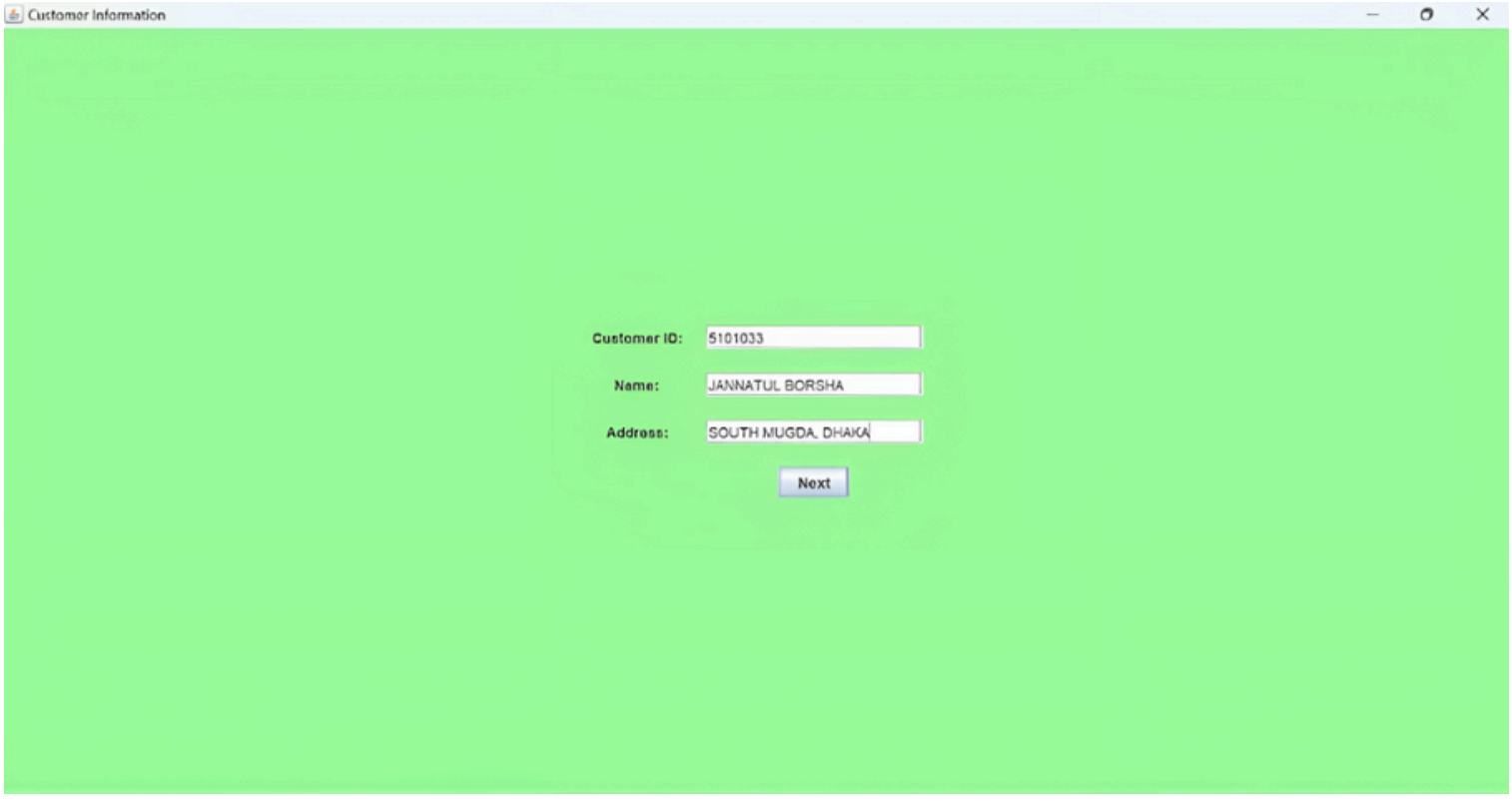
3. Product Details Form: The user enters product details (ID, name, price, and quantity). Clicking "Submit" saves the product data and displays the order summary.

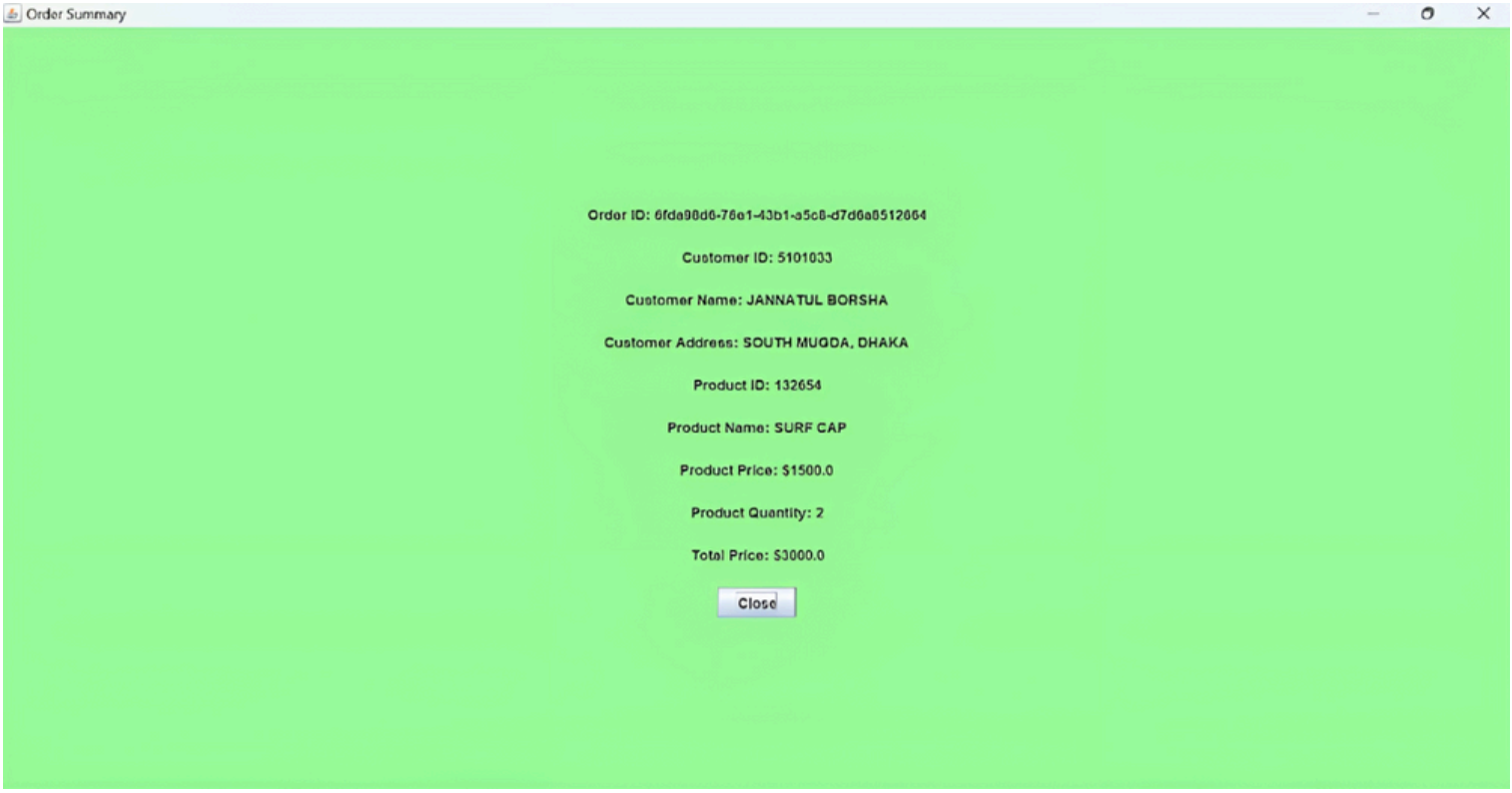
4. Order Summary: Displays customer and product details along with the calculated total price. The "Close" button exits the application.

8. Key Screenshots

- (Include screenshots of the Welcome Screen, Customer Form,
- Product Form, and Order Summary here if presenting the report in a
- document.)







9. Advantages

User-Friendly Interface: Easy to navigate and visually appealing forms.

Modular Design: Simplifies code maintenance and enhances scalability.

Error-Free Data Handling: Ensures seamless data flow between components.

Dynamic Order ID Generation: Unique order IDs for tracking purposes.

10. Future Enhancements

Add a database integration to store customer and product data persistently.

Include authentication features for secure access.

Implement a search functionality for orders.

Enhance the GUI with modern frameworks like JavaFX.

Add validation for user inputs (e.g., ensuring non-empty fields, valid price and quantity).

11. Conclusion

The E-Commerce Management System demonstrates how Java Swing can be used to develop interactive desktop applications. By combining strong object-oriented programming principles with user-friendly design, this project successfully fulfills its objectives, providing a strong foundation for future improvements.

References

Java Swing Documentation: https://docs.oracle.com/javase/tutorial/uiswing/

Oracle Java Tutorials: https://docs.oracle.com/javase/tutorial/