



# UNIVERSITY OF MANAGEMENT AND TECHNOLOGY

## Object Oriented Programming (Theory)

### Project:

### Online Shopping System

### Project Report

#### Project Overview

The project is a console-based application implemented in C++. It features a basic user management system, allowing users to register, log in, manage a shopping cart, maintain a wishlist, and interact with a review system. The project includes various classes and functions to handle these features, ensuring a structured and modular approach to the problem.

D:\study\Semester\_2\OOP\project\FinalProjectCode\finalCode.exe

```
*****
**-----**
**          Welcome to Online Shopping System          **
**-----**
*****

1. Login
2. Signup
3. Admin Login
4. Exit
Enter your choice: _
```

## Key Features

### 1. User Management:

- Registration: Users can register by providing their name, email, password, address, and phone number. User details are saved to a file.
- Login: Users can log in using their email and password, which are verified against stored details.

### 2. Product Management:

- Add to Cart: Users can add products to their shopping cart.
- View Cart: Users can view the products in their cart.
- Remove from Cart: Users can remove products from their cart.
- Checkout: Users can view their bill and checkout.

```
D:\study\Semester_2\OOP\project\FinalProjectCode\finalCode.exe

Login successful.

Menu:
1. View all available products
2. Add product to cart
3. Remove product from cart
4. View cart
5. Show bill
6. Checkout
7. Add product to wishlist
8. View wishlist
9. Remove product from wishlist
10. Add product review
11. View product reviews
12. Customer support
13. Logout
Enter your choice: 1

Available Products:
Name: Shampoo, Code: P002, Price: $120, Quantity: 100
Name: Soap , Code: P001, Price: $75, Quantity: 100
Name: Cloth 2 piece, Code: P003, Price: $3969, Quantity: 30
Name: Shamoo, Code: P002, Price: $25, Quantity: 12
Name: shampp, Code: P004, Price: $15, Quantity: 15
Name: shampp, Code: p002, Price: $12, Quantity: 18
```

### 3. Wishlist:

- Add to Wishlist: Users can add products to their wishlist.
- View Wishlist: Users can view the products in their wishlist.
- Remove from Wishlist: Users can remove products from their wishlist.

```
Enter your choice: 8

Wishlist:
Shampoo - $12 x 2
```

### 4. Review System:

- Add Review: Users can add reviews for products.
- View Reviews: Users can view reviews for products.

```
Enter your choice: 11
Enter product code to view reviews: p002
Reviews for Shampoo:
1. It is a good product, You must use it.
```

### 5. Support:

- Users can contact support for help.

```
Enter your choice: 12
Contacting support...
Support Email: support@example.com
Support Phone: 123-456-7890
```

## Code Structure

The application is structured around several key classes:

- User: Manages user registration and login, and stores user details.
- Product: Represents a product with attributes such as name, code, price, and quantity.
- Cart: Manages the shopping cart, allowing users to add, view, and remove products.
- Wishlist: Manages the wishlist, allowing users to add, view, and remove products.
- Review: Handles the review system, allowing users to add and view reviews.

## Code Example

Here is a snippet of the user registration function:

```
class User {
private:
    int userId;
    string name;
    string email;
    string password;
    string address;
    string phoneNumber;
    bool checklogin;

    void saveUserToFile() {
        ofstream file("user.txt");
        if (file.is_open()) {
            file << userId << "\n" << name << "\n" << email << "\n" << password << "\n" << address << "\n";
            file.close();
        }
    }

    bool loadUserFromFile() {
        ifstream file("user.txt");
        if (file.is_open()) {
            file >> userId;
            file.ignore();
        }
    }
}
```

```

void registerUser() {
    cout << "\nEnter your details to Register:\n";
    cout << "Enter name: ";
    cin.ignore();
    getline(cin, name);
    cout << "Enter email: ";
    cin >> email;
    cout << "Enter Password: ";
    cin >> password;
    cout << "Enter your Address: ";
    cin.ignore();
    getline(cin, address);
    cout << "Enter your Phone Number: ";
    cin >> phoneNumber;
    userId = rand() % 10000;
    saveUserToFile();
    cout << "\nRegistration successful. Your User ID is: " << userId << "\n";
}

```

## Project Limitations

Despite its functionality, the project has some limitations:

### 1. Single User Interface:

- The current implementation does not support multiple users. The user details are stored in a single file (`user.txt`), which is overwritten every time a new user registers. This means that only one user can be registered at a time, and any previous user information is lost.

### 2. Security Concerns:

- User credentials are stored in plain text within a file, which poses a security risk. There is no encryption or secure storage mechanism for sensitive user information.

### 3. Limited Error Handling:

- The application has limited error handling and validation for user inputs. For example, it does not check for valid email formats or strong passwords.

### 4. User Experience:

- The application is purely console-based, which may not be user-friendly for all users. There is no graphical user interface (GUI) to enhance the user experience.

## **Conclusion**

The project successfully demonstrates the basic functionality of a user management and shopping system using C++. While it provides essential features such as user registration, login, shopping cart, wishlist, and review system, it has limitations including single-user support, security vulnerabilities, limited error handling. To enhance its practical utility, future improvements should focus on multi-user support, secure data storage, better input validation, and a user-friendly graphical interface. These upgrades will make the application more robust, secure, and scalable for real-world use.