Programming Fundamental Lab Project

Candle Shop Online Ordering Portal

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Project Abstract

Introduction

The Candle Shop Online Ordering Portal is a console-based application developed using C++ that provides an interactive platform for customers to place customized orders for candles. The system allows users to select from various scented and non-scented candles, different wax types, and packaging options. It aims to enhance the online shopping experience by providing a simple yet efficient order management system.

Object-Oriented Programming (OOP)

The **Candle Shop Online Ordering Portal** is designed using **Object-Oriented Programming (OOP)** principles to ensure modularity and maintainability. The core features of OOP used in this system include:

Classes and Objects: The Candle class is used to represent candle orders, encapsulating attributes such as scent, wax type, packaging, and delivery address. Methods within the class handle the logic for order processing and displaying the order summary.

Encapsulation: The attributes for candle selection (scent, wax type, packaging) are encapsulated within the Candle class. This ensures that the data is securely managed and only accessed or modified through the class's methods.

Abstraction: The user interacts with a simplified interface, making selections for their candle order. The underlying complexities such as validation, cost calculation, and displaying the summary are abstracted into methods, making the system easy to use and extend.

Inheritance (Potential Future Expansion): The design allows for future enhancements, such as introducing new candle options or adding additional functionalities, using inheritance to extend the system's capabilities.

Void Functionality

The system uses **void functions** to perform operations that do not require a return value. These void functions are essential for managing various tasks, such as:

Input Validation: Functions validate the user's selection for candle type, scent, wax type, and packaging. If an invalid option is selected, the system prompts the user to re-enter their choice until valid input is provided.

Order Summary Display: After processing the order, the system generates and displays the order summary, including the candle

name, wax type, scent, packaging, delivery address, and a breakdown of the total cost.

Code Implementation

The system is implemented with several key functions and logic to handle the entire ordering process. The user interacts with a menu-driven interface to choose from different candle types, scents, and packaging. The system calculates the total cost of the order based on the selections made and displays the final summary.

Order Flow: After the user selects their preferred candle, scent, wax, and packaging, the system calculates the cost and displays the order summary.

Cost Calculation: The cost of the candle, packaging, and delivery is calculated and displayed to the user.

Conclusion

The Candle Shop Online Ordering Portal successfully demonstrates the use of C++ to create an interactive and efficient system for customizing and processing candle orders. By utilizing Object-Oriented Programming (OOP) principles and void functions, the system is highly modular, allowing for easy expansion and future enhancements. This application provides a solid foundation

for developing more complex online shopping platforms in the future.

Output

Wax Type Selection:

```
-_-_-_-_-_-_-_-_-_-_-_-_-_-_-_-_-_-_-_-_-_-_-
-                                            -
-          WELLCOME TO CANDLE BLISS :)       -
-_-_-_-_-_-_-_-_-_-_-_-_-_-_-_-_-_-_-_-_-_-_-

          -_-_-_-_-_-_-_-_-_-_-
          -                   -
          -    Select Wax Type -
          -_-_-_-_-_-_-_-_-_-_-_
          -                   -
          -   1. Paraffin wax  -
          -   2. Bees Wax      -
          -   3. Soy Wax       -
          -   4. Gel Wax       -
          -------------------------
4|
```

Scented or Not:

```
          -_-_-_-_-_-_-_-_-_-_-_-_
          -                      -
          -   Scented/Non-Scented   -
          -_-_-_-_-_-_-_-_-_-_-_-_
          -                      -
          -     1. Scented        -
          -     2. Non-Scented    -
          -------------------------
1|
```

Scent Selection:

```
        _-_-_-_-_-_-_-_-_-_-_
       _                     _
       -      Select Scent   -
       _-_-_-_-_-_-_-_-_-_-_-_
       _                     _
       -                     -
       -      1. Lavender    -
       -      2. Jasmine     -
       -      3. Vanilla     -
       -      4. Rose        -
       -----------------------
1|
```

Candle Selection:

```
        _-_-_-_-_-_-_-_-_-_-_-_-_-_-_-_-_-_-_-
       _                                     _
       -      Candles Available for Scent LAVENDER   -
       _-_-_-_-_-_-_-_-_-_-_-_-_-_-_-_-_-_-_-_
       _                                     _
       -      1. Peacefull Aura              -
       -      2. Lover's Light               -
       -      3. Mountain Mist               -
       -      4. Rose Radiant                -
       -      5. Sweet Embrace               -
       -      6. Desert Bloom                -
       ---------------------------------------
3|
```

Packaging Choice:

```
Do you want simple or gift packaging ??
gift|
```

Address Input:

```
Enter your address : hyderabad latifabad
```

Order and Bill summary :

```
--------------------------------
        ORDER SUMMARY
--------------------------------
 Candle Name       : Mountain Mist
 Wax Type          : Gel Wax
 Scent             : Lavender
 Packaging         : gift
 Delivery Address : hyderabad latifabad
--------------------------------
        BILL SUMMARY
--------------------------------
   Candle cost      |  Rs.1500
   Packaging        |  Rs.100
   Delivery Fee     |  Rs.200
   Total Cost       |  Rs.1800
Thank you for shopping with Candle Bliss! :)

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Process exited after 16.88 seconds with return value 0
Press any key to continue . . .
```