

TFB1013 STRUCTURED PROGRAMMING

SEMESTER MAY 2024

DR NOUREEN TALPUR

PROPOSALS GROUP 1

BURGER ORDERING SYSTEM

|  |  |  |
| --- | --- | --- |
| Student ID | Name | Course |
| 22010431 | Nadzira Binti Ramli | Information Technology |
| 22010182 | Nurul Fatihah Binti Rizwan | Information Technology |
| 22010151 | Tharsinaa A/P Gunalan | Information Technology |
| 22010178 | Nur Aisyah Aida Binti Jaafar | Information Technology |
| 22008944 | Sheldon Stephen | Information Technology |

Submission date : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Marks : \_\_\_\_\_\_\_\_/100

Contents

[**1.0 Introduction** 3](#_Toc168774918)

[**1.1 Background of study** 3](#_Toc168774919)

[**1.2 Objectives:** 3](#_Toc168774920)

[**2.0 Project Description** 4](#_Toc168774921)

[**2.1 System Functionalities** 4](#_Toc168774922)

[**3.0 Project Implementation** 5](#_Toc168774923)

[**4.0 Testing** 7](#_Toc168774924)

[**5.0 Conclusion** 9](#_Toc168774925)

[**6.0 Appendix** 10](#_Toc168774926)

# **1.0 Introduction**

## **1.1 Background of study**

Students frequently find themselves pressured for time between courses, extracurricular events, and study sessions in the hectic setting of a university campus. Dining alternatives must be quick, easy, and customized to fit the needs and tastes of the student body because there isn't much time for them. The university administration has started to design an online burger ordering system in response to this demand, with the goal of streamlining the eating experience for students.

Patty Patootie is a dynamic and emerging burger stall that is well-known for its delicious and unique burger selections. Situated in University Technology Petronas, Patty Patootie aims to serve the students. Our stall emphasizes quality, freshness, and innovation in its menu.

The existing burger stall that is in University Technology Petronas causes several challenges for students since it requires traditional dining options on campus which often involve long queues, especially during peak hours, leading to frustration and time wastage for students.

Additionally, the lack of customization options and limited variety in menu offerings fail to cater to the diverse tastes.

## **1.2 Objectives:**

Patty Patootie has objectives to target satisfaction for our students, which aims to develop an intuitive and user-friendly online burger ordering platform that simplifies the selection, customization and ordering process. By this ordering process and minimizing waiting times, the system will enhance student’s overall satisfaction with the speed and convenience of their dining experience. Additionally, offering a wide range of customization options and transparent communication about order status aims to cater to individual preferences and increase satisfaction.

# **2.0 Project Description**

## **2.1 System Functionalities**

The Patty Patootie Ordering System is designed to ensure a smooth and efficient customer experience. When a customer initiates an order, the system first displays a welcoming message or design to create a friendly and inviting atmosphere. A unique ordering number is automatically generated for each new order, aiding in tracking and identification. The system then prompts the customer to select the order type, either dine-in or takeaway, with an additional charge of RM1.50 for takeaway orders.

|  |  |  |
| --- | --- | --- |
|  | **Set** | **A lar carte** |
| Set A ( Beef Burger Set ) | RM13.00 | RM7.00 |
| Set B ( Double Beef Burger) | RM15.00 | RM10.00 |
| Set C (Fillet O Fish Burger) | RM 14.00 | RM 9.00 |
| Set D (Chicken Burger) | RM 12.50 | RM 6.00 |
| Set E (Vege Burger) | RM 10.00 | RM5.00 |
| Set F (Mushroom Burger) | RM 13.00 | RM 7.00 |
| Set G Breakfast Burger Set (Egg burger) | RM 7.50 | RM 3.50 |

Next, the system presents the menu, which includes a variety of meal sets and individual items. Customers can choose from sets that include a burger, soft drink, and fries, such as Set A (Beef Burger Set), Set B (Double Beef Burger Set), Set C (Fillet O Fish Burger Set), Set D (Chicken Burger Set), Set E (Vege Burger Set), Set F (Mushroom Burger Set), and Set G (Breakfast Burger Set with Egg Burger). Pricing is clearly displayed for both sets and ala carte items, with Set A priced at RM13.00 (set) and RM7.00 (ala carte), Set B at RM15.00 (set) and RM10.00 (ala carte), Set C at RM14.00 (set) and RM9.00 (ala carte), Set D at RM12.50 (set) and RM6.00 (ala carte), Set E at RM10.00 (set) and RM5.00 (ala carte), Set F at RM13.00 (set) and RM7.00 (ala carte), and Set G at RM7.50 (set) and RM3.50 (ala carte). Customers can also add extra items to their order, such as nuggets (6 pcs for RM8.00), wedges (RM7.00), and ice cream (RM3.00).

After the customer finalizes their selections, the system calculates the total cost by adding the prices of the selected items and applying a 6% service tax. This ensures the final price reflects the required tax. Finally, the system prints a receipt that includes all order details, the total amount, and the automatically generated date and time stamp, ensuring comprehensive record-keeping. This structured process guarantees a user-friendly ordering experience, clear pricing, and efficient order management at Patty Patootie.

**3.0 Project Implementation**

The code begins with the definition of three functions: displayWelcomeMessage(), displayMenu() , and displayDateTime() . The displayWelcomeMessage () function prints a welcome message for Patty Patootie Burger restaurant, creating a friendly introduction for the user. The displayMenu () function then prints the menu, including prices for both set meals and ala carte options, as well as additional items such as nuggets, wedges, and ice cream. The displayDateTime() function displays the current date and time in Malaysia time (UTC+8), ensuring that the receipt includes accurate timing information.

The program uses two structures to organize order and menu details. The order structure keeps track of the order type (dine-in or takeaway), the price associated with takeaway, and a boolean flag repeat for error checking. The menu structure stores details about the menu items, including the initial character, type (set or ala carte), frequency of orders, a boolean flag repeat for error checking, and the name of the menu item. These structures facilitate the organization and handling of user inputs throughout the program.

In the main() function, the program first calls displayWelcomeMessage() and displayMenu() to show the initial information to the user. Then, it uses a do-while loop to prompt the user to choose between dine-in or takeaway, checking for valid inputs ('D', 'd', 'T', or 't'). If an invalid input is entered, the loop repeats until a valid choice is made. The user is then asked to input the number of menu items they wish to order, which initiates a for loop that iterates for each item. Within this loop, another do-while loop prompts the user to select a menu item by its initial character and to choose between set or ala carte, again with error checking for valid inputs. The user is also asked to input the quantity for each item. These details are stored in arrays menureceipt and menupricereceipt.

Next, the program prompts the user for the number of extra items they would like to order. A similar for loop iterates for each extra item, asking the user to select an item by its initial character and input the quantity. The selected extra items and their prices are stored in arrays extrareceipt and extrapricereceipt.

After gathering all order details, the program calculates the total price by summing the prices of all ordered menu and extra items. If the order is for takeaway, an additional charge is added to the total. Finally, the receipt is displayed, showing the current date and time, ordered items with their respective prices, and the total amount due. This process ensures a comprehensive and user-friendly experience, complete with error checking and detailed output.

# **4.0 Sample Output**

**OUTPUT 1**

A screenshot of a computer

Description automatically generated

A screenshot of a computer screen

Description automatically generated

**A screenshot of a computer

Description automatically generatedOUTPUT 2**

# **5.0 Conclusion**

In conclusion, the development of the Patty Patootie online burger ordering system represents a significant step forward in enhancing the dining experience for students at Universiti Teknologi Petronas. By addressing the issues of long queues, lack of customization options, and limited menu variety, this system is poised to deliver a convenient, efficient, and satisfying solution for students' dining needs.

The implementation of the system, highlighted by its robust code structure and error-checking mechanisms, demonstrates a commitment to quality and user satisfaction. The use of well-defined functions and data structures facilitates smooth operation and efficient handling of user inputs, ensuring accurate order processing and comprehensive record-keeping.

Ultimately, the Patty Patootie online ordering system is more than just a technological advancement; it is a response to the dynamic and diverse needs of the student body. By minimizing waiting times, offering extensive customization, and maintaining high standards of service, the system significantly enhances the overall dining experience, fostering greater satisfaction and convenience for all students.

# **6.0 Appendix**





