

# Dr. B. R. Ambedkar National Institute of Technology Jalandhar



## Python Project Food Ordering System Computer Science and Engineering

**Group:** A1c

**Team Members:** Mohit Ranjan (23103095)  
Narayan (23103099)  
Nidhi Yadav (23103102)  
Nishant (23103104)

**Supervisor's Name:** Dr. Kusum Bharti

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# INTRODUCTION

In an era where digitalization has become the norm, the demand for efficient and user-friendly systems in various domains is ever-growing. One such domain is the food industry, where the convenience of ordering meals online has transformed the way people dine. With this in mind, our project aims to present a comprehensive solution - a Food Ordering System developed using Python.

## Statement of the problem:

The traditional methods of ordering food often involve long waiting times, miscommunication, and limited options. Additionally, managing orders and inventory manually can be tedious and error-prone for restaurant owners. To address these challenges, our project endeavours to create a digital platform that streamlines the ordering process for both customers and restaurant staff.

## Objectives of the project:

- 1. Efficiency:** To provide customers with a convenient and efficient platform to browse menus, place orders, and make payments seamlessly.
- 2. Accuracy:** To ensure accurate order processing and minimize errors in communication between customers and restaurants.
- 3. Automation:** To automate the process of order management and inventory tracking, reducing the workload for restaurant staff.
- 4. Enhanced User Experience:** To prioritize user experience by designing an intuitive interface and incorporating features such as order tracking and customization options.
- 5. Scalability:** To develop a system that can accommodate the needs of various types and sizes of restaurants, from small cafes to large franchises.

## Scope and limitations:

While our Food Ordering System aims to address many pain points in the current food ordering process, it's important to acknowledge its scope and limitations. The system will primarily focus on facilitating online ordering and management for customers and restaurant staff. However, it may not cover aspects such as food delivery logistics or real-time inventory synchronization with suppliers. Moreover, the system's functionality may be limited to the features implemented within the scope of this project, with potential room for future expansion and enhancement.

## Overview of the methodology/approach:

Our approach to developing the Food Ordering System involves a combination of software development methodologies and best practices. We have used various Python libraries and frameworks to ensure efficient development and robust functionality of the system.

# METHODOLOGY

## Description of Research Design:

To implement the Restaurant Order Management System, we follow a structured approach that involves:

1. **Requirements Gathering:** Understand the requirements of the system, including user interface, functionality, and data management.
2. **Design:** Design the graphical user interface (GUI) using Tkinter, plan the implementation flow, and define the data structures required for storing orders and menu items.
3. **Implementation:** Write the code based on the design, including functions for displaying the menu, adding items to the order, saving orders to files, and handling user interactions.
4. **Testing:** Test the system thoroughly to ensure all features work as expected, including adding items to orders, displaying order summaries, and saving orders correctly.

## Details about the Implementation Process along with Flowchart:

### 1. Initialization

- Import necessary modules (Tkinter, message box, ttk).
- Define the menu dictionary containing food items and their prices.

### 2. GUI Design

- Create the main Tkinter window.
- Define functions to display the menu, add items to the order, and handle user interactions.
- Design the GUI components including labels, list boxes, and buttons for displaying boxes.

### 3. Functionality Implementation

- Define functions to display the menu and add items to the order.
- Implement functionality to save orders to text files.
- Implement error handling for invalid inputs (e.g., invalid quantity).

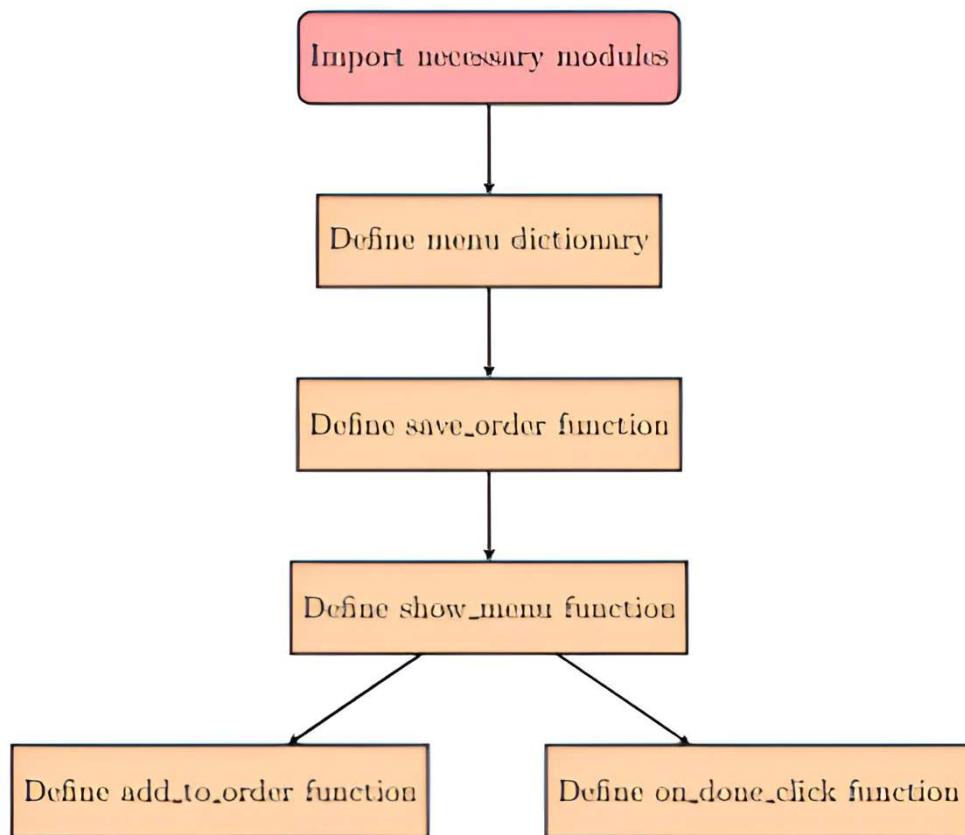
### 4. Integration

- Integrate all the components into the main application window.
- Ensure proper layout and functionality of GUI components.

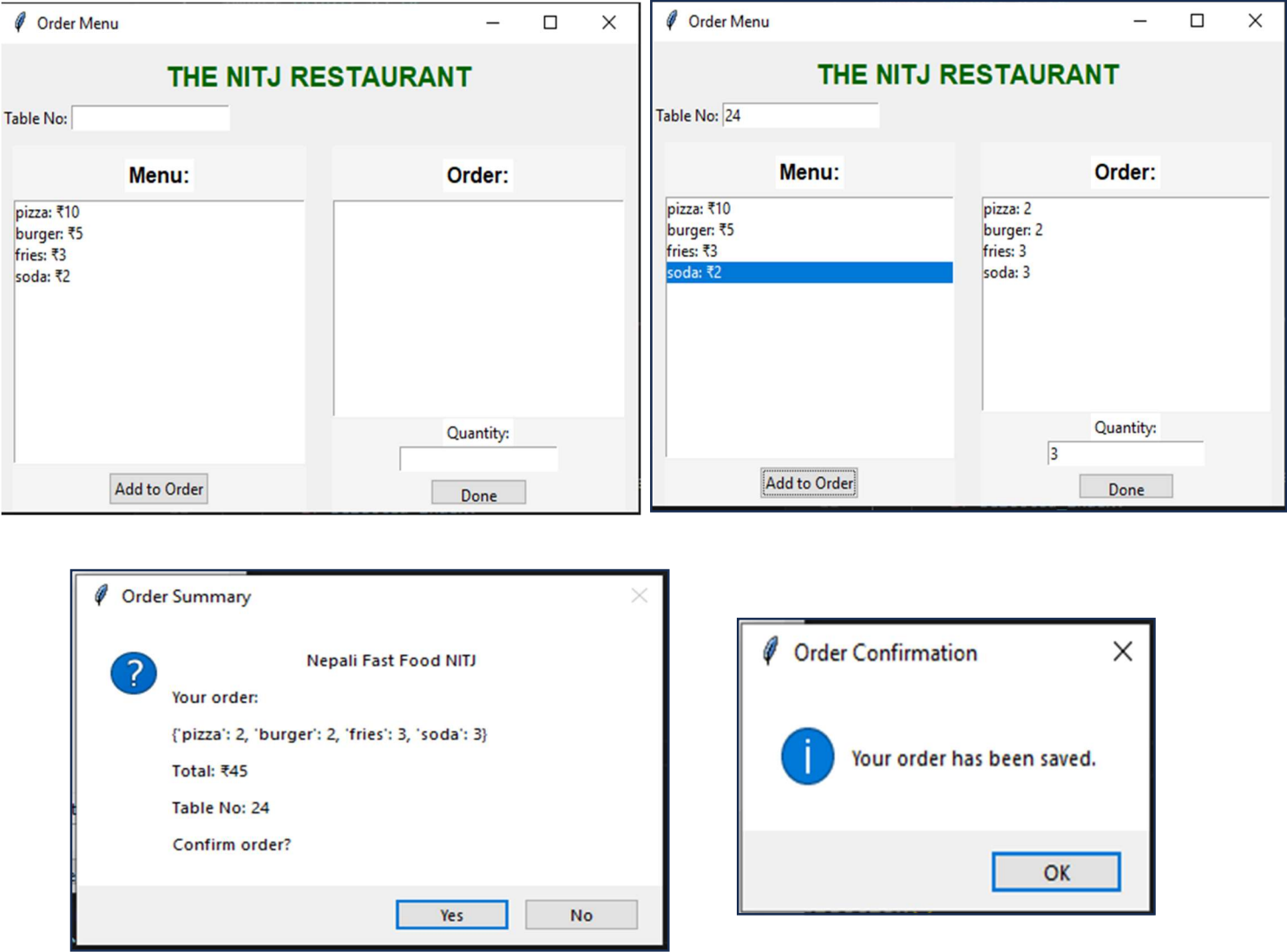
### 5. Testing and Debugging

- Test the application by running it and interacting with the GUI.
- Verify that all features work correctly, including adding items, displaying order summaries.
- Debug any issues encountered during testing.

# FLOWCHART



# OUTCOME



## Excel File created in folder

|                 |                  |                      |      |
|-----------------|------------------|----------------------|------|
| MAIN_CODE       | 29-04-2024 22:32 | Python Source File   | 5 KB |
| orders_table_24 | 29-04-2024 22:39 | Microsoft Excel W... | 5 KB |

Order Saved In Excel File



|   | A      | B        | C |
|---|--------|----------|---|
| 1 | Item   | Quantity |   |
| 2 | pizza  | 2        |   |
| 3 | burger | 2        |   |
| 4 | fries  | 3        |   |
| 5 | soda   | 3        |   |
| 6 |        |          |   |
| 7 |        |          |   |

# REFERENCES

- 1.W3 Schools
- 2.Python Docs
3. GeeksForGeeks
4. Apna College



**THANK  
YOU**