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College of Informatics and Computing Sciences

FINAL PROJECT DOCUMENTATION

RESTAURANT FOOD ORDERING SYSTEM

CS121: ADVANCED COMPUTER PROGRAMMING

Submitted By:

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IT – 2106

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I. PROJECT OVERVIEW

- The purpose of Restaurant Food Ordering System is to make it easier for the customers and the restaurant service personnel to order food, simplify the process of browsing through menus, placing orders, generating receipts, and making donations to show social responsibility. This system is within the goal of improving customer service and joining the global campaign to end hunger as outlined in the SDG Zero Hunger.

- Define the system's boundaries, including what it will and will not cover.
    - **Included Features**:

    - Account Management: Users can create and log in to accounts.
    - Menu Browsing: The menu is divided into categories like main courses, appetizers, desserts, and drinks.
    - Order Placement: Customers can select and customize their orders.
    - Donation Feature: Customers can donate to support the SDG Zero Hunger.
    - Receipt Generation: The system generates a detailed receipt after order completion.

    - **Excluded Features**: The system does not provide payment processing and inventory management. This system is not designed for restaurant staff functionality such as organizing kitchen workflows.

    - **Target Users**: The system targets customers eating in restaurants who seek a convenient and quick way to order food while supporting meaningful social causes.

- State the specific, measurable outcomes the project aims to achieve. Use SMART criteria (Specific, Measurable, Achievable, Relevant, Time-bound).
  Specific: *Provide an easily accessible means for customers to order food and, if requested, donate additional funds to help fight hunger.*
  Measurable: *Allow users to place an order in under five minutes and promptly receive a receipt.*
  Achievable: *The system leverages Python's Tkinter module to create an easy-to-use interface.*
  Relevant: *It aligns with the restaurant's objectives of increasing customer pleasure and contributing to social concerns.*
  Time-bound: *The system should be operational and tested within one month of implementation.*

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II. PYTHON CONCEPTS AND LIBRARIES

Python Tkinter

Explanation:

The system was developed in Tkinter to give the graphical user interface or GUI of the system. Besides, users interact visually in it, because it is very simple and quite intuitive in the sense of traveling on top of the menu or setting an order, receipt visible with Tkinter buttons, labels, input fields, among other implementations in view to assure a good performance: for example, there is category selection through buttons and, if needed, a way to input for the user's logging in or registering.

MySQL

Explanation:

MySQL is used at work to handle the system database for information such as client records. It keeps the data well-organised so that it may be easily retrieved when needed. Also, MySQL collaborates with Python at the application level to conduct tasks such as generating new clients and determining whether a phone number is registered. The system uses the MySQL connector for Python to execute queries in real time. So that we can preserve accurate and up-to-date records for the program in general.

III. SUSTAINABLE DEVELOPMENT GOALS

This project supports Sustainable Development Goal 2: Zero Hunger. It aims to end hunger, improve nutrition, and promote food security. The system will have an optional feature for donations; customers can donate some money toward the hunger relief program. In this way, it brings awareness of the global hunger issue, but at the same time, it will also allow the customer to contribute to ending hunger while placing the order. By integrating this donation option, the project emphasizes social responsibility and encourages users to help address hunger in their communities and beyond.

IV. PROGRAM/SYSTEM INSTRUCTIONS

The following application can be run using Python 3.x, with Tkinter for the interface. You will also need MySQL running to manage the database. Save your project file as restaurant_app.py. First, ensure that MySQL database credentials such as username and password are correctly set in the code. When everything is ready, launch a terminal or command prompt and navigate to the location where your restaurant_app.py file is saved. To launch the program, type python restaurant_app.py and press Enter.

Users can register by providing their name, address, and phone number. Then they log in, browse the menu, and place their order. There is also an opportunity to donate to Zero Hunger. Finally, the system will provide a receipt containing information about the order and any donations made. This approach would not only improve customer service but also help to achieve the worldwide objective of Zero Hunger.