

PROGRAMMING FUNDAMENTALS  
FINAL PROJECT

# MAA KA KHANA

RESTAURANT MANAGEMENT SYSTEM



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# Project Title

## Maa Ka Khana – Restaurant Management System in C

### Project Proposal



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## 1. Introduction

This project is a console-based restaurant management system developed using C language. The system is designed for a desi restaurant named *Maa Ka Khana*. It allows users to signup, login, view menu items, place food orders, and generate bills automatically. The project helps in reducing manual work and improves accuracy in billing.

## 2. Objective

The objective of this project is to develop a simple restaurant management system in C that automates order taking and bill generation using basic programming concepts such as functions, arrays, and file handling.

## 3. Problem Statement

Many small restaurants manage orders and billing manually, which can cause calculation errors, delays, and confusion during busy hours. Keeping records of customers and orders manually is inefficient and time-consuming.

This project provides a computerized solution to handle restaurant operations such as user authentication, menu display, order management, and bill calculation. By using a simple C-based system, the restaurant can reduce human errors, save time, and improve customer service without requiring expensive software.

## 4. Methodology

The project is implemented using the C programming language. User data is stored using file handling for signup and login purposes. Arrays are used to store menu items, prices, and quantities. The program is divided into multiple functions such as signup, login, menu display, order taking, and bill generation. A menu-driven approach is used to make the system user-friendly.

## 5. Project Scope

This project is limited to a console-based application for a single restaurant. It does not include graphical user interfaces, online ordering, mobile applications, or payment gateways. The system assumes fixed menu items and prices and supports one user interaction at a time.

In addition to the console-based program, extra work was carried out by designing user interface (UI) designs as sample layouts. These UI designs are not functionally connected to the program code and are created only for demonstration purposes. The designs can be used as a reference in the future if a complete graphical user interface is required. The UI design files have been uploaded to GitHub and can be reviewed there.

## 6. Feasibility Study

- i. **Risks Involved:** Possible risks include incorrect user input and file access errors. These risks are minimized by using proper input handling and structured programming.

- ii. **Resource Requirement:** A computer system with a C compiler, basic storage for files, and standard input/output devices is required to run this project.

## 7. Solution Application Areas

This system can be used in small restaurants, cafes, food stalls, and hotels.

## 8. Tools/Technology

- Programming Language: C
- Compiler: GCC / Turbo C
- Operating System: Windows / Linux
- Editor: VS Code / Dev-C++

## 9. Expertise of the Team Members

The team members have sufficient knowledge of C programming, including arrays, functions, loops, and file handling. All members have studied the relevant coursework and are equally interested in completing this project successfully.

## 10. Milestones

1. Requirement analysis
2. Program design
3. Implementation of signup and login system
4. Menu and order management
5. Bill generation
6. Testing and debugging
7. Final documentation

## 10. References

- YouTube programming tutorials related to C language.
- ChatGPT by OpenAI for understanding programming concepts and documentation support.

Here is Our GitHub repository link

<https://github.com/AryanAkbar45/MAA-Ka-Khana>