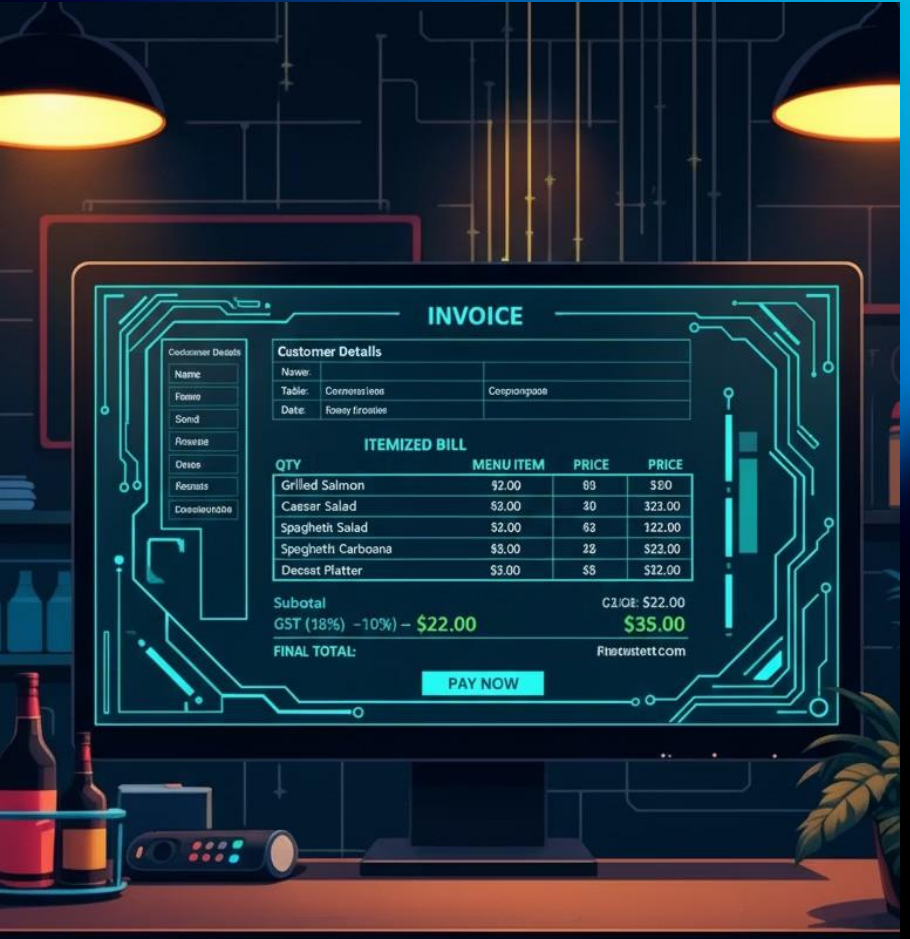


Project Number: 13
Restaurant Billing System

Presented by: Ankit Kumar

ERP-ID: 10211

Guided by: Naina Devi

Presentation Roadmap

This presentation will walk you through how I have made C-based Restaurant Billing System .

Introduction to the Project

Tools & Technology used

Code & working of project.

04

Key Advantages & Benefits

Real-World Applications

Features & Future Scope

Introduction to the System

Our Restaurant Billing System is a Command Line Interface (CLI) application designed to streamline and automate the core processes of a food service establishment.

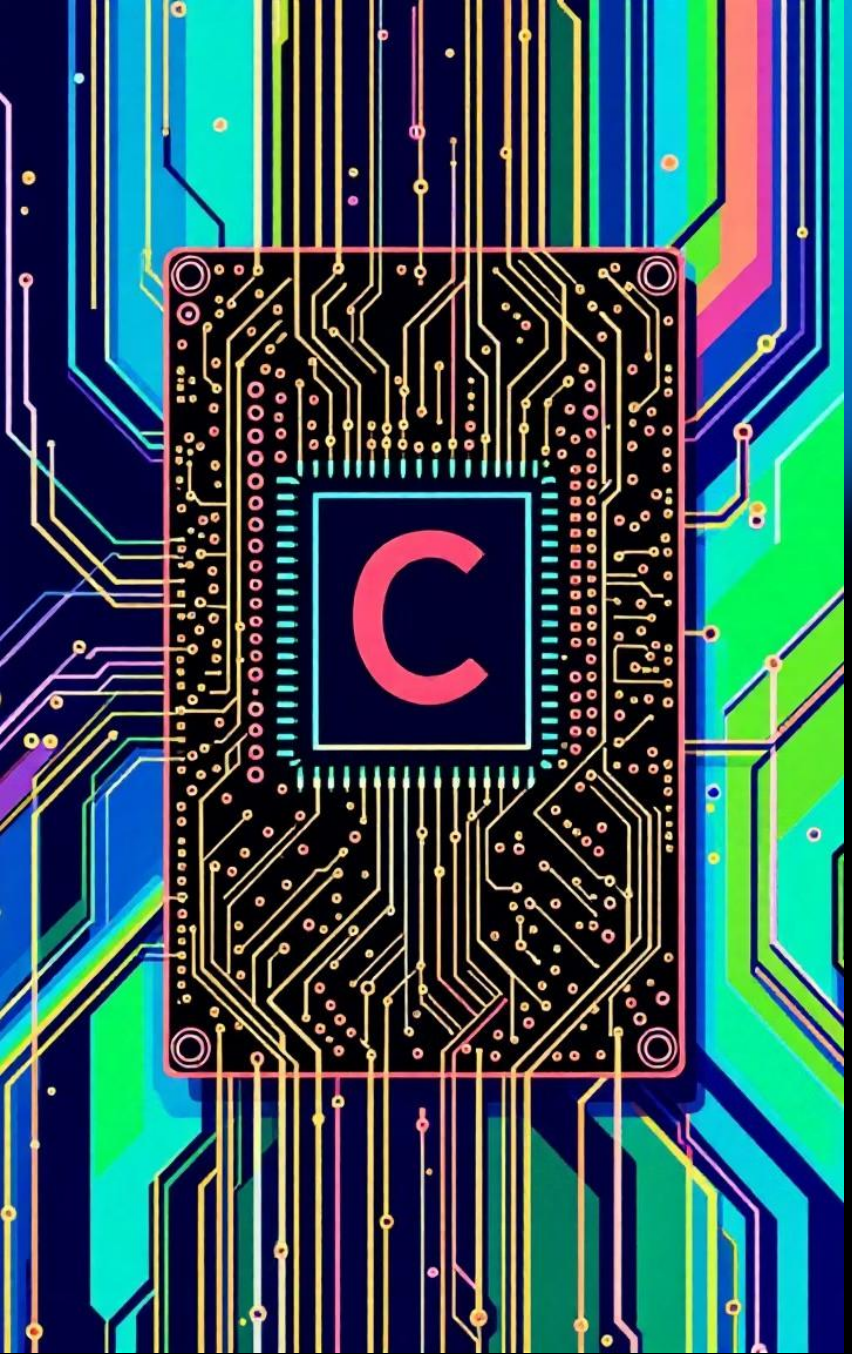
Automated Order & Billing

Designed to simplify the ordering and payment workflow, reducing manual effort and potential errors.

Core Functionalities

- Interactive Menu Display
- Efficient Order Processing
- Automated Bill Generation

This system aims to improve operational efficiency and customer satisfaction through a seamless transactional experience.



Tools & Technology Stack

The system is built using foundational programming concepts and accessible development tools, making it robust and easy to understand.

C Language

The entire application is developed in C, leveraging standard libraries like `<stdio.h>` for input/output operations, demonstrating strong procedural programming principles.

Visual Studio Code

VS Code served as the primary Integrated Development Environment (IDE), offering a lightweight yet powerful platform for coding and debugging.

GCC Compiler (MinGW)

MinGW's GCC compiler was used to compile the C source code, ensuring compatibility and efficient execution on Windows environments.

The implementation relies on fundamental C programming structures such as loops, conditional statements, and variables for logical flow and data handling.

Source code (VS code)

Resturant_billing.c > main()

```c
#include <stdio.h>
int main() {
    char name[10], mobile[12];
    int choice, quantity;
    float total = 0, gst, discount = 0, finalTotal;

    int price[5] = {10, 120, 99, 189, 20};
    int qty[5] = {0, 0, 0, 0, 0};

    printf("Welcome to Our Restaurant!\n");

    printf("Enter Customer Name: ");
    scanf("%s", name);

    printf("Enter Mobile Number: ");
    scanf("%s", mobile);

    printf("\n--- MENU ---\n");
    printf("1. Samosa               - Rs 10\n");
    printf("2. Pav Bhaji            - Rs 120\n");
    printf("3. Masala Dosa          - Rs 99\n");
    printf("4. Pizza (Veg Paradise)- Rs 189\n");
    printf("5. Thums-up             - Rs 20\n");
    printf("0. Finish & Print Bill\n");

    while (1) {
        printf("\nEnter Item Number: ");
        scanf("%d", &choice);

        if (choice == 0)
            break;
```

Source code (VS code)

```
31          if (choice == 0)
32              break;
33
34          if (choice < 1 || choice > 5) {
35              printf("Invalid Item!\n");
36              continue;
37          }
38
39          printf("Enter Quantity: ");
40          scanf("%d", &quantity);
41
42          if (quantity <= 0) {
43              printf("Invalid quantity!\n");
44              continue;
45          }
46
47          qty[choice - 1] += quantity;
48          total += price[choice - 1] * quantity;
49      }
50
51      gst = total * 0.18;
52      if (total >= 500)
53          discount = total * 0.30;
54
55      finalTotal = total + gst - discount;
56
57      printf("\n==============================");
58      printf("\n       ATES Services         ");
59      printf("\n==============================");
```

Source code (VS code)

```
60      printf("\nCustomer: %s", name);
61      printf("\nMobile:   %s", mobile);
62
63      printf("\n-----------------------------");
64      printf("\nItem                    Qty  Amount");
65      printf("\n-----------------------------");
66
67      if (qty[0] > 0)
68          printf("\nSamosa                  %d   Rs %d", qty[0], qty[0] * price[0]);
69      if (qty[1] > 0)
70          printf("\nPav Bhaji               %d   Rs %d", qty[1], qty[1] * price[1]);
71      if (qty[2] > 0)
72          printf("\nMasala Dosa             %d   Rs %d", qty[2], qty[2] * price[2]);
73      if (qty[3] > 0)
74          printf("\nPizza (Veg Paradise)    %d   Rs %d", qty[3], qty[3] * price[3]);
75      if (qty[4] > 0)
76          printf("\nThums-up                %d   Rs %d", qty[4], qty[4] * price[4]);
77
78      printf("\n-----------------------------");
79      printf("\nSub-Total:   Rs %.2f", total);
80      printf("\nGST (18%%):    Rs %.2f", gst);
81      printf("\nDiscount:    Rs %.2f", discount);
82      printf("\n-----------------------------");
83      printf("\nGRAND TOTAL: Rs %.2f", finalTotal);
84      printf("\n=============================");
85      printf("\nThank you! Visit Again.\n");
86
87      return 0;
88  }
```

Order & Bill

```
Welcome to Our Restaurant!
Enter Customer Name: Ankit
Enter Mobile Number: 9234425704

--- MENU ---
1. Samosa                 - Rs 10
2. Pav Bhaji              - Rs 120
3. Masala Dosa            - Rs 99
4. Pizza (Veg Paradise)- Rs 189
5. Thums-up               - Rs 20
0. Finish & Print Bill

Enter Item Number: 4
Enter Quantity: 1

Enter Item Number: 5
Enter Quantity: 1

Enter Item Number: 0
```

```
==============================
       ATES Services
==============================
Customer: Ankit
Mobile:   9234425704
------------------------------
Item                    Qty  Amount
------------------------------
Pizza (Veg Paradise)    1   Rs 189
Thums-up                1   Rs 20
------------------------------
Sub-Total:    Rs 209.00
GST (18%):    Rs 37.62
Discount:     Rs 0.00
------------------------------
GRAND TOTAL: Rs 246.62
==============================
Thank you! Visit Again.
```

Real-World Applications

The flexibility and efficiency of this system make it ideal for a variety of food service environments seeking to modernize their operations.





- **Fast Food Chains:** Rapid order processing for high-volume transactions.
- **Cafes:** Seamless billing for quick service and diverse menu items.
- **Canteens:** Efficient management of daily meals for large populations.
- **Small Restaurants:** Cost-effective solution for independent eateries.
- **Takeaway Counters:** Streamlined billing for off-premise consumption.

Features & Future Scope

While currently functional, our system has a clear roadmap for expansion, incorporating advanced features for enhanced utility and integration.

Current Features

Formatted Bill Generation

The system generates a clear, formatted bill including all ordered items, prices, taxes, and applied discounts.

Customer Details Capture

Records essential customer information such as name and mobile number for personalized service or loyalty programs.

Future Enhancements

File Handling for Sales Records

Implement persistent storage to save daily sales data, enabling reporting and historical analysis.

Database Integration (SQL)

Integrate with a relational database for robust inventory management, real-time menu updates, and advanced analytics.

Graphical User Interface (GUI)

Develop a modern GUI to enhance user interaction, making the system more intuitive and visually appealing for diverse users.

Thank You!

I hope to get good Marks.

Feel free to ask any questions.

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