VISVESVARAYA TECHNOLOGICAL UNIVERSITY
BELGAUM -590018, KARNATAKA

HOBBY PROJECT REPORT ON

"RESTAURANT BILLING SYSTEM"

BACHELOR OF

ENGINEERING   IN

COMPUTER SCIENCE & ENGINEERING

Submitted by

Anushree.C (1EW20CS010)   **Darshini.D (1EW20CS037)**

Dhanush P Gowda (1EW20CS039)   **Dikshita (1EW20CS041)**

Under the guidance of

Mr. Jagadeesh B N

Assistant Professor,

Dept.of CSE.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

EAST WEST INSTITUTE OF TECHNOLOGY

BANGALORE -560091, KARNATAKA.

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EAST WEST INSTITUTE OF TECHNOLOGY-BENGALURU-560091.

(Affiliated to Visvesvaraya Technological University, Belgaum,

Karnataka) DEPARTMENT OF COMPUTER SCIENCE &

ENGINEERING

EAST WEST
INSTITUTE OF
TECHNOLOGY

CERTIFICATE

This is to certify that **ANUSHREE.C(1EW20CS010), DARSHINI.D(1EW20CS037), DHANUSH.P.GOWDA(1EW20CS039), DIKSHITA (1EW20CS041)** has satisfactorily submitted Hobby Project Report titled **"RESTAURANTBILLINGSYSTEM"** for **5th semester, Bachelor of Engineering in "COMPUTER SCIENCE & ENGINEERING"**, during the academic year 2022-2023.

_____   _____

Signature of the Coordinators   Signature of HOD

Mr.Jagadeesh B N/Mrs. Sowmyashree S   **Dr. Achyutha Prasad N**

(Assistant Professor,Dept.of CS&E)   (H.O.D,Dept.of CS&E)

DECLARATION

ANUSHREE.C(1EW20CS010), DARSHINI.D(1EW20CS037), DHANUSH.P.GOWDA (1EW20CS039), DIKSHITA(1EW20CS041) students of fifth semester Bachelor of Engineering in the Department of Computer Science and Engineering of East West Institute of Technology, Bangalore-560091,the hobby project entitled **"RESTAURANT BILLING SYSTEM"** has been carried out by us under the supervision of **Mr.Jagadeesh B N,** Assistant Professor, **Mrs. Sowmyashree S,** Assistant Professor, Department of Computer Science and Engineering, EWIT , Visvesvaraya Technological University during the academic year 2022-2023

Place:

Date:

ANUSHREE C (1EW20CS010)

DARSHINI.D (1EW20CS037)

DHANUSH.P.GOWDA (1EW20CS039)

DIKSHITA (1EW20CS041)

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ANUSHREE C (1EW20CS010)

DARSHINI.D (1EW20CS037)

DHANUSH.P.GOWDA (1EW20CS039)

DIKSHITA (1EW20CS041)

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<u>ABSTRACT</u>

The main goal of this project was to develop a billing system for a restaurant.This application is designed to administer its users and customers. RBS is a billing system ,made for the effective utilization of modern technology in the organization. It is an automated software that can handle a lot of information about menu and order. It is designed for the sole purpose of efficiency, speed and accuracy.

A billing system can be very useful within a business environment. Instead of making bills manually, calculating taxes or to sum up the total manually, it is very much time consuming and also may have some human errors like adding up the wrong total or adding wrong items in to the bill. When making a hand written bill the owner and customer both have to repeatedly check the total, items added, etc. It also sometimes results into a bad impression towards the restaurant from a customer. Ideally, user should be able to generate bill without any mistakes and quickly enabling them to fasten or improve their process. To overcome this problem, we have come up with this project, that is, Restaurant Billing System using Java.

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CHAPTER 1:

INTRODUCTION

➢ Restaurant billing system is a systematic system that manages billing in a restaurant.

➢ It is a software for managing and controlling the transactions in a restaurant.

➢ The customer will be able to view the menu in an electronic gadget and receive a bill invoice through that electronic gadget.

➢ This software allows a customer to choose a dish from the menu and bill along with GST will be calculated and displayed.

➢ This software is preferred because it reduces the paperwork.

➢ It is an automated software that can handle a lot of information about menu and order.

CHAPTER 2:

REQUIREMENT SPECIFICATION

In this section the various requirements that are essential for this project are specified. These requirements have to be fulfilled for successful execution of the project. The purpose, scope along with hardware and software requirements is given below:
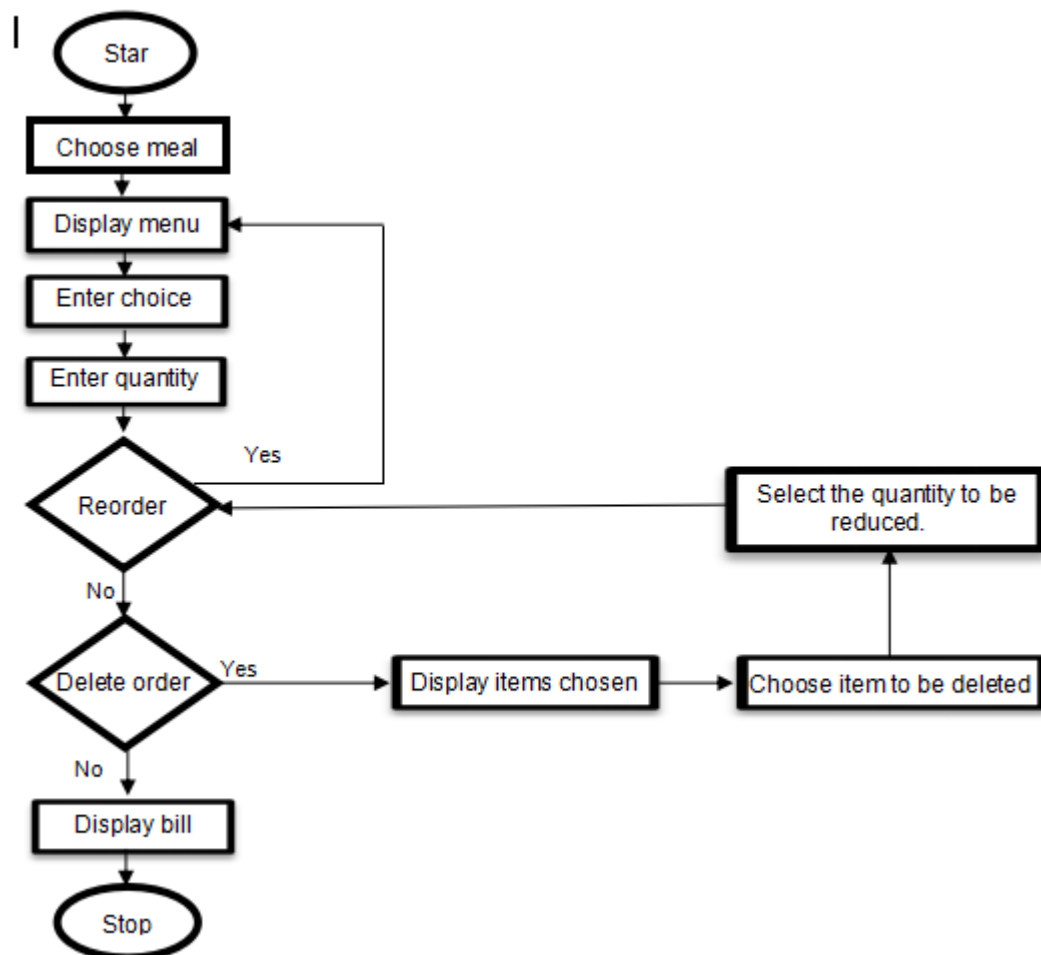
SYSTEM REQUIREMENTS

HARDWARE REQUIREMENTS:

- 1 GB ram or above
- Intel i3 processor or above
- Keyboard
- Mouse

SOFTWARE REQUIREMENTS:
- **IDE:** BlueJ 5.0.3
- **Version :** Java 8
- **Operating System:** Any OS

CHAPTER 3:

BLOCK DIAGRAM

Fig 3.1 Flowchart of Restaurant Billing System

CHAPTER 4:

DESCRIPTION OF
COMPONENTS/TECHNOLOGIES

Java is one of the most popular computer languages in the world. Java is an object-oriented, interpreted, robust, secure, architecture-neutral, portable, high-performance, the multi-threaded language of the computer. It is intended to allow developers of applications to "write once, run anywhere" (WORA), meaning code running on one platform does not need to be recompiled to run on another.

Java technology is a language of programming as well as a platform.

Java is a high level, robust, secured and object-oriented programming language. And any hardware or software environment in which a program runs is known as a platform. Since Java has its own runtime environment(JRE) and API, it is called a platform.

In the Java programming language, all source code is first written in plain text files ending with the .java extension. Those source files are then compiled into .class files by the java c compiler. A .class file does not contain code that is native to your processor; it instead contains byte codes— the machine language of the Java Virtual Machine 1 (Java VM). The java launcher tool then runs your application with an instance of the Java Virtual Machine.

Because the Java VM is available on many different operating systems, the same .class files are capable of running on Microsoft Windows, the Solar is™ Operating System (Solar is OS), Linux, or Mac OS.

ADVANTAGES:

- ✧ Less paper work.

- ✧ User friendly.

- ✧ Better customer service.

- ✧ Quick Bill.

- ✧ ERP system can be adoptable to any other system.

DISADVANTAGES:

- ✧ Payment through QR code is not possible.

CHAPTER 5:

IMPLEMENTATION

Source code:

Choice code:

```java
Bill b = new Bill();
 b.ename = ename;
 b.empid = empid;
 b.bino = i;
 System.out.print("Enter Customer Name : ");
 b.name = br.readLine();
 System.out.print("Enter Phone num : \t");
 b.num = sc.nextLong();
 b.display();
 boolean val = true;
 while(val){
    System.out.print("Enter your choice here : ");
    char choice = sc.next().charAt(0);
    switch(choice)
    {
      case 'A':
      case 'a':b.menu(0);
            val = false;
            break;
      case 'B':
      case 'b':b.menu(1);
            val = false;
            break;
      case 'C':
      case 'c':b.menu(2);
            val = false;
            break;
      default: System.out.println("Invalid Choice");
    }
  }
}
```

```java
    else if(choice == 2){
       break;
     }
      else{
       System.out.println("Invalid Choice");
     }
 }
```

Bill generation code :

```java
   void bill(int c)
   {
     gst=total*0.09;
     cgst=gst/2;
     sgst=cgst;
     System.out.println(" +~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~+        \n\n");
     System.out.println("               abc RESTAURANT                \n");
     System.out.println("       opp,MVR hospital,\n MK road, Ulhasnagar-5610047.    \n");
     System.out.println("               phone:080-2213597           \n");
     System.out.println("   +~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~+       \n\n");
     curtime();
     System.out.println("Customer name: "+name);
     System.out.println("Customer number: "+num);
     System.out.println("               BILLING INFORMATION            \n");
     System.out.println("\t\t ITEMS\t\t\tPrice(in Rs.)\n");
     String menu[];
     switch(c)
     {
           case 0: menu = bfmenu;
                     break;
         case 1: menu = lunchmenu;
                   break;
         default:  menu = dinnermenu;
     }
   for(int i=0;i<7;i++)
   {
     if(purchased[i][1]!=0)
     {
           System.out.print("\t\t "+menu[i]+"\t\t\t");
           System.out.println(purchased[i][1]);
     }
    }
  //System.out.printf(" \t\tGST=Rs.%.2f\n",gst);
```

```java
        System.out.printf(" \t\tC-GST=Rs.%.2f\n",cgst);

    System.out.printf(" \t\tS-GST=Rs.%.2f\n",sgst);
    System.out.printf(" \t\tTotal=Rs.%.2f\n",total);
    grandtotal=total+gst;
    System.out.printf(" \t\tGrand total=Rs.%.2f\n",grandtotal);
    display_grandtotal_words(grandtotal);
    change(grandtotal);
    System.out.println("EMPLOYEE NAME: "+ename+"\nEMPLOYEE ID: "+empid+
            "\nBILL NO: "+bino);
    System.out.println("\n\n                    THANK YOU                  \n");
    System.out.println("                    VISIT AGAIN                  \n");
    System.out.println("\n\n  +~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~+  \n\n");
    }
    void change(double numrec){
    Scanner sc=new Scanner(System.in);
    System.out.print("Choose Payment mode :\t 1. CARD\t 2.CASH\n");
    int chos= sc.nextInt();
    if(chos==2){
        System.out.print("Amount Received : ");
        double n = sc.nextDouble();
        if(n>numrec){
            System.out.println("Amount To give Back : Rs."+(int)(n-numrec));
        }
        else{
            System.out.println("Still receive : Rs."+(int)(numrec-n));
        }
    }
        else{
                return;
        }
    }
}
```

Delete order code:

```java
{
        Scanner sc = new Scanner(System.in);
        String menu[];
        switch(c)
        {
                case 0: menu = bfmenu;
                        break;
                case 1: menu = lunchmenu;
                        break;
                default: menu = dinnermenu;
        }
```

```
System.out.println("Want to delete some order\n [1] YES [2] NO");
int d = sc.nextInt();
if(d == 1)
{
   System.out.println("Enter ordered to be removed");
   for(int i=0;i<7;i++)
     if(purchased[i][1]!=0)
        System.out.println(i+" "+menu[i]);
   System.out.print("Enter the choice : ");
   int ch = sc.nextInt();
   System.out.print("Enter the Quantity :");
   int quat = sc.nextInt();
   if(ch>=0&&ch<7)
   {
     total = total - purchased[ch][1];
     purchased[ch][1] = quat * (rate[ch][1]);
     purchased[ch][2] = quat;
     total += purchased[ch][1];
   }
   return;
}
else if(d == 2)
   return;
else
{
   System.out.println("Invalid choice");
}
```

CHAPTER 6:

SNAPSHOTS

6.1HOME PAGE

```
ENTER EMPLOYEE NAME : John
Enter Employee id : 1101
SELECT THE OPTIONS
1.ORDER
2.EXIT
1
Enter Customer Name : Joseph
Enter Phone num :        9876543210
                Welcome to abc Restaurant.

                   opp,MVR hospital,
              MK road, Ulhasnagar-5610047.

                   phone:080-2213597


        +=============================+


   && Please select the meal that you would like to purchase. &&



                    [A] Breakfast

                    [B] Lunch

                    [C] Dinner

Enter your choice here :
```

Fig 6.1.1 Meal choice

```
                 Welcome to abc Restaurant.

                    opp,MVR hospital,
               MK road, Ulhasnagar-5610047.

                    phone:080-2213597


          +=============================+


                 $  Breakfast Menu  $


   && Please select the food that you would like to purchase. &&


               [0] Toast - Rs 30.00

               [1] Idli-Vada - Rs 35.00

               [2] Dosa - Rs 40.00

               [3] UPMA Rs 20.00

               [4] Milk- Rs 15.00

               [5] Tea - Rs 20.00

               [6] Coffee - Rs 30.00
```

Fig. 6.1.2 Breakfast menu

```
                    [0] Toast - Rs 30.00

                    [1] Idli-Vada - Rs 35.00

                    [2] Dosa - Rs 40.00

                    [3] UPMA Rs 20.00

                    [4] Milk- Rs 15.00

                    [5] Tea - Rs 20.00

                    [6] Coffee - Rs 30.00

Enter the Code :        5

Enter the quantity :    2
Total is        145.0
Would you like to order more
 [1] YES [2] NO
2
Want to delete some order
 [1] YES [2] NO
1
Enter ordered to be removed
0 Toast
1 Idli-wada
2 Dosa
5 Tea
Enter the choice : 5
Enter the Quantity :1
+~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~+
```

Fig. 6.1.3 Placing Order

```
                        abc RESTAURANT

                        opp,MVR hospital,
                 MK road, Ulhasnagar-5610047.

                       phone:080-2213597


     +~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~+


29/12/2022 12:59:09
Customer name: Joseph
Customer number: 9876543210
                      BILLING INFORMATION


              ITEMS                    Price(in Rs.)

              Toast                    30
              Idli-wada                        35
              Dosa                     40
              Tea                      20
            C-GST=Rs.5.63
            S-GST=Rs.5.63
            Total=Rs.125.00
            Grand total=Rs.136.25
No of Digits :: 3
One Hundred and Thirty Six Rupees only
```

Fig. 6.1.4 Breakfast Bill

```
Choose Payment mode :    1. CARD        2.CASH
2
Amount Received : 200
Amount To give Back : Rs.63
EMPLOYEE NAME : John
EMPLOYEE ID : 1101
BILL NO : 1000


                    THANK YOU

                    VISIT AGAIN



+~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~+
```

Fig. 6.1.5 Payment Mode

```
Enter your choice here : b
              Welcome to abc Restaurant.

                  opp,MVR hospital,
            MK road, Ulhasnagar-5610047.

                  phone:080-2213597

        +=============================+


                 $  Lunch Menu  $


  && Please select the food that you would like to purchase. &&


             [0] Veg Biryani - Rs 80.00

             [1] Special Meal- Rs 120.00

             [2] Roti - Rs 20.00

             [3] Dal tadka - Rs 120.00

             [4] Paneer Tikka - Rs 150.00

             [5] Veg Mix - Rs 160.00

             [6] Ice cream - Rs 30.00

Enter the Code :
```

Fig. 6.1.6 Lunch menu

```
Enter your choice here : c
                Welcome to abc Restaurant.

                    opp,MVR hospital,
            MK road, Ulhasnagar-5610047.

                    phone:080-2213597


        +=============================+


                $  Dinner Menu  $


  && Please select the food that you would like to purchase. &&


                [0] Fried Rice - Rs 65.00

                [1] Spagetti- Rs50

                [2] Burger - Rs 70.00

                [3] Pasta - Rs 80.00

                [4] Noodles - Rs 65.00

                [5] Paratha - Rs 110.00

                [6] Fruit Salad - Rs 50.00

Enter the Code :
```

Fig. 6.1.7 Dinner menu

CHAPTER 7:

APPLICATIONS

1. Mainly supportive to restaurants.

2. As it's an ERP system its adoptable to any other system.

3. A billing system ensures the elimination of excessive manual intervention, and this also applies to the performance reports to keep track of the business' growth.

4. Billing systems help in automating the time-consuming process like invoice generation and other accounting documentation.

CHAPTER 8:

CONCLUSION

The urge for digital management system is increasing day by day, so the restaurant billing system is a perfect solution for this. "Restaurant billing system" project is computerized to reduce human errors and to increase the efficiency.Through this the flexibility of day today works in the restaurant is made simpler. The main focus of this project was to reduce human efforts and errors,and it's been achieved.

CHAPTER 9:

REFERENCES

[1]https://github.com/yashshah2/The-Restaurant-Billing-System/commit/282c1081702db7a4675351d3cdb78574520950a2