

# *C++ PROJECT*

**Programming with  
C++**

By

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**GLOBAL INDIAN**

**INTERNATIONAL SCHOOL**

**COMPUTER SCIENCE PROJECT**  
**(IN C++ LANGUAGE)**  
**FOR THE YEAR 2013-14**

**Done By:**

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## **ACKNOWLEDGEMENTS**

First of all, I would like to thank my computer science teacher, Mrs. Ravneet ma'am for her guidance in the project. The suggestions given were undoubtedly helpful.

Secondly, I would like to offer my sincere appreciation to Global Indian International School, Singapore for giving me the platform to participate in this project work.

Third but not the least, this project would not have been a success without my parents whose love and constant support kept me motivated throughout.

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# **INTRODUCTION**

This project aims at developing a software that can be used at restaurants where orders can be taken and be worked upon.

It stores comments onto files and can be displayed when required.

This project is capable of placing orders, updating orders, deleting orders, viewing orders, viewing income, and viewing comments and moving on to the next day.

## **SYSTEM'S CAPABILITY**

<b>PROCESSOR</b>	Intel Core Duo @ 2.40 GHz
<b>HARD DISK DRIVE</b>	150 GB
<b>RAM</b>	2048 MB
<b>SYSTEM TYPE</b>	32-bit Operating System

# **PROGRAMMING TOOLS USED**

1. Object Oriented Program concepts –
  - a. Data Encapsulation (Classes)
  - b. Modularity

2. Class Objects

3. Arrays

4. Problem Solving

5. Text Files

## **PROBLEM DEFINITION**

This project aims at managing the accounts of a restaurant.

With its variety of user-friendly options it is extremely easy to manage orders.

The project useful as-

The accounts are managed with the help of a software, it enhances accuracy, flexibility, reliability and removes human error.

Also, it provides accurate information on modified orders, and deletion of orders.



# **FUNCTIONS INCLUDED**

## **1) BUILT-IN FUNCTIONS**

- clrscr()
- getch()
- delay()
- strcmp()
- strcpy()
- main()
- exit()
- textcolor()
- textbackground()

## **2) USER-DEFINED FUNCTIONS**

- displaymenu()
- initialise()
- displaybill(int)

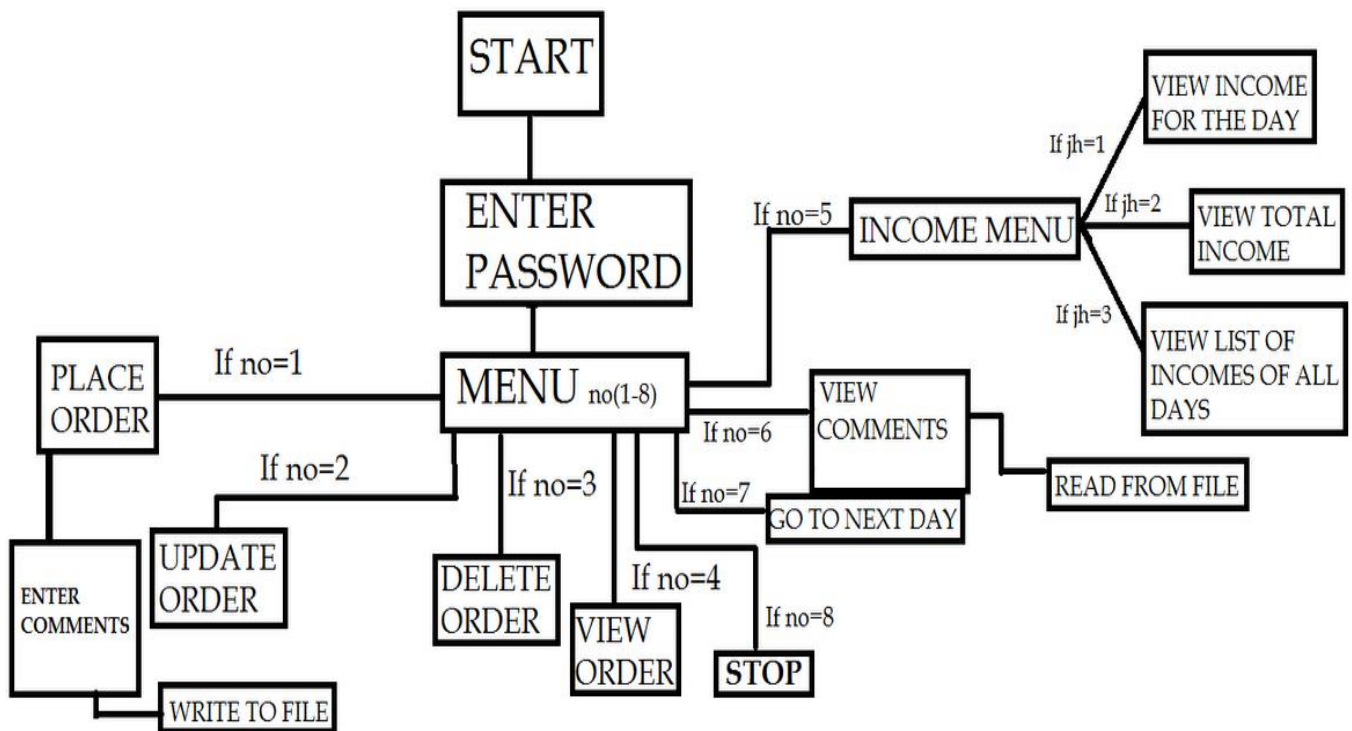
## **HEADER FILES INCLUDED**

- <iostream.h>
- <conio.h>
- <stdio.h>
- <process.h>
- <string.h>
- <fstream.h>
- <dos.h>

## **ALGORITHM**

- Enter Password
- Display Main Menu
- Select Option 1 to 8
- If Option=1, Place an Order, enter comments into file.
- If Option=2, Update the Order
- If Option=3, Delete the Order
- If Option=4, View the Order
- If Option=5, Open Income Menu
  - a) If option=1, View Income for the day
  - b) If option=2, View Total Income for all days
  - c) If option=3, View list of all Incomes per day along with maximum and minimum Income
- If Option=6, Read Comments from Text File
- If Option=7, Go to Next Day
- If Option=8, Exit

# FLOWCHART



## **PROGRAM CODE**

```
/* ----Restaurant Billing System----
```

```
    -B.M.Keerthi Chandra  XII A
```

```
*/
```

```
#include<iostream.h>
```

```
#include<conio.h>
```

```
#include<stdio.h>
```

```
#include<process.h>
```

```
#include<string.h>
```

```
#include<fstream.h>    //For handling files
```

```
#include<dos.h>        //For delay()
```

```
int no_days=0;
```

```
class menuitem //Implements OOP
```

```
{
```

```
public:
```

```
int price;
```

```
char info[100];
```

```
}item[6];
```

```
class customer
```

```
{
```

```
public:
```

```
int cost[6];
```

```
int quantity[6];
```

```
int total;
```

```
}cust[100];      // Max. 100 Customers  
Expected
```

```
int days[30]={0};
```

```
int check=0;
```

```
void displaymenu()
```

```
{
```

```
clrscr();
```

```
textcolor(BLACK);
```

```
cprintf("\n
```

```
_____Menu_____
```

```
_____");
```

```
cout<<"\n\n\n ";
```

```
cout<<"\n  --Item Number--  -----  ";
```

```
cout<<"\n          I.Main Course\n ";
```

```
cout<<"\n      1.          Samosa";
```

```
cout<<"\n      2.          Paper Thosai";
```

```

cout<<"\n      3.      Sambhar Vadaï";

cout<<"\n\n      II.Drinks\n";

cout<<"\n      4.      Masala Tea";

cout<<"\n      5.      Chennai Filter
Coffee";

cout<<"\n      6.      Coconut Water";

}

```

```

void initialise()
{

```

```

    item[0].price=12;

    strcpy(item[0].info,"# Sizzling hot
potatoes and peas deep fried to perfection
and\n enclosed in golden coat of maida.");

```



```
item[1].price=25;
```

```
strcpy(item[1].info,"# Freshly made thosai  
with a touch of pure ghee.");
```

```
item[2].price=20;
```

```
strcpy(item[2].info,"# Hot vadais dipped  
in freshly prepared Sambhar.");
```

```
item[3].price=7;
```

```
strcpy(item[3].info,"# Hot tea to tantilize  
your senses.");
```

```
item[4].price=10;
```

```
strcpy(item[4].info,"# The best coffee
made from the heart of Chennai.");
```

```
item[5].price=5;
```

```
strcpy(item[5].info,"# Fresh cocunut  
water will bring you back to reality");
```

$$\}$$

```
void displaybill(int n)
```

$$\{$$

```
clrscr();
```

```
cout<<"\n Order Number: "<<n;
```

```
cout<<"\n\n\n\n          ---BILL---
```

```
\n\n\n";    //Add name of restaurant, add
address
```

```
n++;  
  
    cout<<"  --FOOD ITEM--          --  
QUANTITY-- \n";
```

```
    if (cust[n-1].quantity[0] > 0)  
        cout<<"\n\n Samosa  
"<<cust[n-1].quantity[0];
```

```
    if (cust[n-1].quantity[1] > 0)  
        cout<<"\n\n Paper Thosai  
"<<cust[n-1].quantity[1];
```

```
    if (cust[n-1].quantity[2] > 0)  
        cout<<"\n\n Sambhar Vadai  
"<<cust[n-1].quantity[2];
```

```
    if (cust[n-1].quantity[3] > 0)
```

```
    cout<<"\n\n Masala Tea  
"<<cust[n-1].quantity[3];
```

```
    if (cust[n-1].quantity[4] > 0)  
        cout<<"\n\n Chennai Filter Coffee  
"<<cust[n-1].quantity[4];
```

```
    if (cust[n-1].quantity[5] > 0)  
        cout<<"\n\n Cocunut Water  
"<<cust[n-1].quantity[5];
```

```
    cout<<"\n\n\n\n\n TOTAL= Rs."<<cust[n-  
1].total;  
}
```

```
void main()  
{
```

```
clrscr();
```

```
textbackground(WHITE);
```

```
clrscr();
```

```
int count=0;
```

```
textcolor(BLUE);
```

[illegible]

```
printf("
~~~~~
\n\n");
```

```
textcolor(BROWN);
```

```
char x[7];
```

```
char y[100]="gandhi";
```

```
cout<<endl;
```

```

cprintf("\n\n\n Enter Password: ");
for(int t=0;t<6;t++)
{
    x[t]=getch();
    cprintf("*");
}
x[6]='\0';

cout<<"\n\n";
cprintf(" Verifying.....");
delay(1000);

if(strcmp(x,y)==0)
{
    textcolor(BLACK);
    cprintf("\n\n\n ACSESS
GRANTED!");

```

```
getch();
```

```
clrscr();
```

prgbeg:

```
char choice;
```

```
int income;
```

```
textcolor(BLACK);
```

```
cprintf("_____  
_____GANGOTHRI_____  
_____");
```

```
cout<<"          -----Your Purely
Vegetarian Restaurant----- \n ";
```

```
cout<<"\n\n Day "<<no_days+1;
cout<<"\n          1.Place Order";
cout<<"\n\n          2.Update Order";
cout<<"\n\n          3.Delete Order";
cout<<"\n\n          4.View Order";
cout<<"\n\n          5.Income";
cout<<"\n\n          6.View
Customer Comments";
cout<<"\n\n          7.Next Day";
cout<<"\n\n          8.Exit";
```

```
int no;
cout<<"\n\n Enter choice: ";
cin>>no;
```



```
switch(no)
{
case 1:
    initialise();

    start:
    displaymenu();
    count++;

    for(int k=0;k<6;k++) // OR
quantity[6]={0};
    {
    cust[count].quantity[k]=0;
    }
```

```
        cout<<"\n\n Your order number is: "<<
count;

        cust[count].total=0;


        order:


        textbackground(WHITE);


        int choice2;

        cout<<"\n Please place your order by
selecting the food item number:";

        cin>>choice2;

        int l=0;

        int asl=0;

        switch(choice2)
        {
```

case 1:

```
    cout<<endl<<item[0].info;
    cout<<"\n\nPrice per item:
Rs"<<item[0].price;
    cout<<"\nEnter quantity: ";
    cin>>l;

    cust[count].cost[0]=item[0].price *
l;
    cust[count].quantity[0]+=l;

    break;
```

case 2:

```
    cout<<endl<<item[1].info;  
    cout<<"\n\nPrice per item:  
Rs"<<item[1].price;
```

```
    cout<<"\nEnter quantity: ";  
    cin>>l;  
    cust[count].cost[1]=item[1].price *  
l;  
    cust[count].quantity[1]+=l;  
  
    break;
```

case 3:

```
    cout<<endl<<item[2].info;  
    cout<<"\n\nPrice per item:  
Rs"<<item[2].price;
```

```
cout<<"\nEnter quantity: ";  
cin>>l;
```

```
    cust[count].cost[2]=item[2].price *  
l;  
    cust[count].quantity[2]+=1;  
    break;
```

case 4:

```
    cout<<endl<<item[3].info;  
    cout<<"\n\nPrice per item:  
Rs"<<item[3].price;  
    cout<<"\nEnter quantity: ";  
    cin>>l;
```

```
    cust[count].cost[3]=item[3].price *  
1;  
  
    cust[count].quantity[3]+=1;  
    break;
```

case 5:

```
    cout<<endl<<item[4].info;  
    cout<<"\n\nPrice per item:  
Rs"<<item[4].price;  
  
    cout<<"\nEnter quantity: ";  
    cin>>l;
```

```
    cust[count].cost[4]=item[4].price *  
1;  
  
    cust[count].quantity[4]+=1;  
    break;
```

case 6:

```
        cout<<endl<<item[5].info;
        cout<<"\n\nPrice per item:
Rs"<<item[5].price;
        cout<<"\nEnter quantity: ";
        cin>>l;

        cust[count].cost[5]=item[5].price *
l;

        cust[count].quantity[5]+=l;
        break;

    }

char option;
```

```
cout<<"\nWould you like to order  
another food item? (y:Yes  Other  
Character:No)";
```

```
cin>>option;
```

```
if(option=='y')  
{
```

```
    as1=cust[count].total;
```

```
    cust[count].total=0;
```

```
    int i;
```

```
        for(i=0;i<6;i++)                //To  
calculate total price of food
```

```
{
```

```
    cust[count].total+=cust[count].cost[i];
```



```

    }

    for(i=0;i<6;i++)                                //To
calculate total price of food
    {
        cust[count].cost[i]=0;
    }

    as1+=cust[count].total;
    cust[count].total=as1;
    clrscr();
    displaymenu();
    goto order;
}

as1=cust[count].total;

```

```
cust[count].total=0;
```

```
int ki;
```

```
for(ki=0;ki<6;ki++) //To  
calculate total price of food  
{  
    cust[count].total+=cust[count].cost[ki];  
}
```

```
for(int bi=0;bi<6;bi++)  
//To calculate total price of food  
{  
    cust[count].cost[bi]=0;  
}
```

```
as1+=cust[count].total;  
cust[count].total=as1;
```

```
clrscr();  
cout<<"\n\n\n\n";  
ofstream myfile;
```

```
myfile.open("newfile.txt",ios::app|ios::in);  
//Opening a new file
```

```
char comment[50];
```

```
cout<<"\n Dear Customer,please leave  
your thoughts about our restaraunt:";  
gets(comment);
```

```
cout<<"\n Writing into file.....";  
delay(750);
```

```
cout<<"\n\n Comments written into  
file!";
```

```
myfile<<"\n Day "<<no_days+1;  
myfile<<"\n\n Customer "<<count<<"  
Comment: "<<comment<<endl<<endl;  
//Writing into File
```

```
char choice3;  
  
cout<<"\n\n Any more orders to be  
placed? (y:Yes Other Character:No)";  
  
cin>>choice3;
```

```
if(choice3=='y')
```

goto start;

break;

case 2:

clrscr();

ord:

cout<<" Enter the order number: ";

cin>>count;

displaymenu();

int choice6;

```
cout<<"\n Please place your order by  
selecting the food item number:";
```

```
cin>>choice6;
```

```
int f=0;
```

```
int as=0;
```

```
switch(choice6)
```

```
{
```

```
case 1:
```

```
cout<<endl<<item[0].info;
```

```
cout<<"\n\nPrice per item:  
Rs"<<item[0].price;
```

```
cout<<"\nEnter quantity: ";  
cin>>f;
```

```
cust[count].cost[0]=item[0].price *  
f;
```

```
cust[count].quantity[0]+=f;
```

```
break;
```

case 2:

```
cout<<endl<<item[1].info;
```

```
cout<<"\n\nPrice per item:  
Rs"<<item[1].price;
```

```
cout<<"\nEnter quantity: ";  
cin>>f;
```

```
    cust[count].cost[1]=item[1].price *  
f;
```

```
    cust[count].quantity[1]+=f;
```

```
    break;
```

```
case 3:
```

```
    cout<<endl<<item[2].info;
```

```
    cout<<"\n\nPrice per item:  
Rs"<<item[2].price;
```

```
    cout<<"\nEnter quantity: ";
```



```
cin>>f;
```

```
    cust[count].cost[2]=item[2].price *  
f;
```

```
    cust[count].quantity[2]+=f;
```

```
    break;
```

```
case 4:
```

```
    cout<<endl<<item[3].info;
```

```
    cout<<"\n\nPrice per item:  
Rs"<<item[3].price;
```

```
    cout<<"\nEnter quantity: ";
```

```
    cin>>f;
```

```
        cust[count].cost[3]=item[3].price *  
f;  
  
        cust[count].quantity[3]+=f;  
  
        break;
```

case 5:

```
        cout<<endl<<item[4].info;  
        cout<<"\n\nPrice per item:  
Rs"<<item[4].price;
```

```
        cout<<"\nEnter quantity: ";  
        cin>>f;
```

```
        cust[count].cost[4]=item[4].price *  
f;  
  
        cust[count].quantity[4]+=f;
```

```
break;
```

```
case 6:
```

```
cout<<endl<<item[5].info;
```

```
cout<<"\n\nPrice per item:  
Rs"<<item[5].price;
```

```
cout<<"\nEnter quantity: ";
```

```
cin>>f;
```

```
cust[count].cost[5]=item[5].price *  
f;
```

```
cust[count].quantity[5]+=f;
```

```
break;
```

```
}
```

```
char opt;
```

```
cout<<"\n Would you like to order  
another food item? (y:Yes Other  
Character:No)";
```

```
cin>>opt;
```

```
if(opt=='y')
```

```
{
```

```
clrscr();
```

```
goto ord;
```

```
}
```

```
as=cust[count].total;
```

```
cust[count].total=0;
```

```
int ij;
```

```
for(ij=0;ij<6;ij++) //To
```

```
calculate total price of food
```

```
{
```

```
cust[count].total+=cust[count].cost[ij];
```

```
}
```

```
for(int ip=0;ip<6;ip++)
```

```
//To calculate total price of food
```

```
{
```

```
cust[count].cost[ip]=0;
```

```
}
```

```
as+=cust[count].total;
```

```
cust[count].total=as;
```

```
break;
```

case 3:

```
clrscr();
```

```
int x;
```

```
cout<<"\n Enter the order number to  
delete: ";
```

```
cin>>x;
```

```
income=income-cust[x].total;
```

```
for(int b=0;b<6;b++)
```

```
{
```

```
    cust[x].quantity[b]=0;
```

```
    cust[x].cost[b]=0;
```

```
}
```

```
cust[x].total=0;
```

```
cout<<"\n\n Order "<<x<<" Deleted.";
```

```
break;
```

```
case 4:
```

```
clrscr();
```

```
char choice5;  
int choice4;  
  
do  
{  
    cout<<"\n\n Enter the order number  
whose bill you wish you view: ";  
    cin>>choice4;  
  
    displaybill(choice4);  
  
    getch();  
    clrscr();  
  
    cout<<"\n Would you like view  
another order's bill? (y:Yes Other  
Character:no)";
```



```
cin>>choice5;
```

```
}while(choice5=='y');
```

```
break;
```

```
case 5:
```

```
income=0;
```

```
for(int j=0;j<10;j++)
```

```
income+=cust[j].total;
```

```
clrscr();
```

```
cout<<"\n\n\n\n";
```

```
cout<<"\n\n  
the day.";
```

1.View Income for

```
cout<<"\n\n
```

2.Total Income.";

```
cout<<"\n\n  
for all Days.";
```

3.View Income

```
int jh;
```

```
cout<<"\n\n  Enter the option: ";
```

```
cin>>jh;
```

```
switch(jh)
```

```
{
```

```
case 1:
```

```
clrscr();
```

```
cout<<"\n\n\n\n\n\n\n\n\n\nIncome for the day is Rs."<<income;
```

```
break;
```

case 2:

```
clrscr();
```

```
days[no_days]=income;
```

```
int u=0;           //To store total
```

income

```
for(int q=0;q<=no_days;q++)
```

```
u+=days[q];
```

[illegible]

```
break;
```

case 3:

```
clrscr();
```

```
cout<<"\n\n\n";
```

```
days[no_days]=income;
```

```
for(int k1=0;k1<=no_days;k1++)
```

```
cout<<"\n\n      Day "<<k1+1<<"
Income: Rs."<<days[k1]<<endl;
```

```
    days[no_days]=income;
    int large=days[0];
    int dfg=0;

    for(int lpp=1;lpp<=no_days;lpp++)
    {

        if(days[lpp]>large)
        {
            large=days[lpp];
            dfg=lpp;
        }

    }
```

```
cout<<"\n\n\n\n The Maximum  
Income is Rs."<<large<<" earned on Day  
"<<dfg+1;
```

```
int small=days[0];
```

```
int man=0;
```

```
for(int k2=1;k2<=no_days;k2++)
```

```
{
```

```
    if(days[k2]<small)
```

```
    {
```

```
        small=days[k2];
```

```
        man=k2;
```

```
    }
```

```
}
```

```
        cout<<"\n\n    The Minimum Income  
is Rs."<<small<<" earned on Day  
"<<man+1;
```

```
    }
```

```
    break;
```

```
case 6:
```

```
    clrscr();
```

```
    textbackground(WHITE);
```

```
    ifstream fin;
```

```
    fin.open("newfile.txt",ios::in|ios::app);
```

```
fin.seekg(0);
```

```
char line[80];
```

```
while(fin)
```

```
{    fin.getline(line,80);
```

```
    cprintf(line);
```

```
    cout<<endl;
```

```
}
```

```
break;
```

```
case 7:
```

```
//Next Day
```

```
count=0;
```



```
income=0;
```

```
for(int q=0;q<10;q++)  
income+=cust[q].total;
```

```
days[no_days]=income;  
income=0;  
no_days++;
```

```
for(int t=0;t<=no_days;t++)  
{  
cust[t].total=0;  
}
```

```
for(int r=0;r<10;r++)    //Customers  
{
```

```
                for(int f=0;f<6;f++)    //Menu
Items
                {
                    cust[r].quantity[f]=0;
                    cust[r].cost[f]=0;
                }
            }
```

```
myfile<<"\n\n NEXT DAY \n\n";
```

```
fin.close();
```

```
break;
```

```
case 8:
```

```
clrscr();
```

```
cout<<"\n\n\n\n    Thank You.\nGoodbye! ";
```

```
myfile.close();
```

```
getch();
```

```
exit(0);
```

```
}
```

```
cout<<"\n\n Press any key to go back to  
main menu. ";
```

```
getch();
```

```
clrscr();

goto prgbeg;

}

else
{
    textcolor(RED);

    printf("\n\n Incorrect Password.\n\n
    Goodbye.");

    getch();

    exit(0);

}

}
```

# PROGRAM OUTPUT

```
-----RESTAURANT BILLING SYSTEM-----
Enter Password: *****
Verifying.....
ACCESS GRANTED!
```

```
GANGOTHRIL
-----Your Purely Vegetarian Restaurant-----

Day 1
1.Place Order
2.Update Order
3.Delete Order
4.View Order
5.Income
6.View Customer Comments
7.Next Day
8.Exit

Enter choice: _
```

```

--Item Number--      -----
      I.Main Course

      1.              Samosa
      2.              Paper Thosai
      3.              Sambhar Vadai

      II.Drinks

      4.              Masala Tea
      5.              Chennai Filter Coffee
      6.              Coconut Water

Your order number is: 1
Please place your order by selecting the food item number:1

# Sizzling hot potatoes and peas deep fried to perfection and
  enclosed in golden coat of maida.

Price per item: Rs12
Enter quantity: 2

```

```

Dear Customer,please leave your thoughts about our restaraunt:Good.

Writing into file.....

      Comments written into file!

Any more orders to be placed? (y:Yes  Other Character:No)_

```

```

Order Number: 2

      ---BILL---

      --FOOD ITEM--      --QUANTITY--

Samosa                      1
Paper Thosai                2

TOTAL= Rs.62_

```

```
1.View Income for the day.  
2.Total Income.  
3.View list of Incomes for all Days.  
Enter the option:
```

```
Income for the day is Rs.40  
Press any key to go back to main menu.
```

```
Total income: Rs.228  
Press any key to go back to main menu.
```

Day 1 Income: Rs.86

Day 2 Income: Rs.102

Day 3 Income: Rs.40

The Maximum Income is Rs.102 earned on Day 2

The Minimum Income is Rs.40 earned on Day 3

Press any key to go back to main menu.

Day 1

Customer 1 Comment: Good.

Day 2

Customer 1 Comment: Bad.

Day 2

Customer 2 Comment: Satisfactory.

Day 3

Customer 1 Comment: Fantastic!

Press any key to go back to main menu.

Thank You .  
Goodbye! \_



# **BIBLIOGRAPHY**

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