

PPS MINI- PROJECT

HOTEL MANAGEMENT

*ABSTRACT, ALGORITHM, FLOWCHART,
PROGRAM*

BATCH MATES

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ABSTRACT

The project aims to utilize the knowledge gained on C programming language and apply it on making a hotel billing system.

This topic utilizes the concepts taught like datatype, looping statements, conditional statements, pointer arrays and functions in an efficient manner and make a billing application. This program is used in many hotels to bill their customers. The user inputs the food items ordered by the customers and the quantity they requested for and generates a bill adding taxes too to the total amount.

The aim of this project is to use all the basic concepts we know to create a program that's effective and takes the least amount of time possible to run the code effectively.

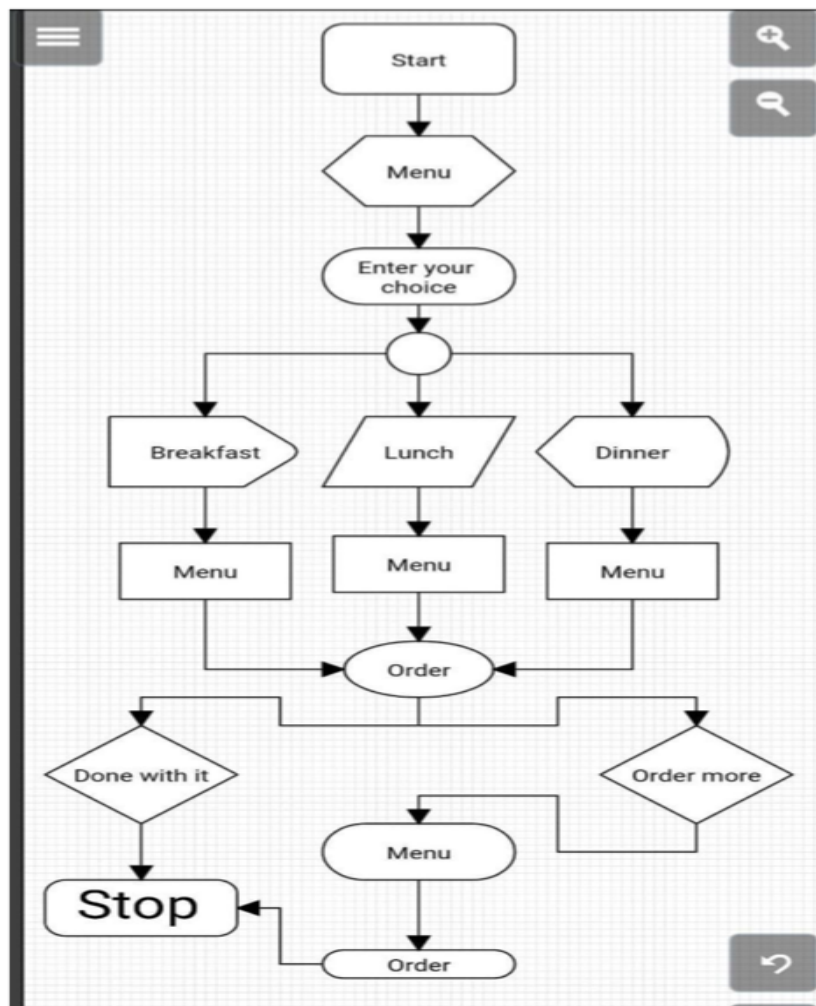
ALGORITHM

- Step 1- Start**
 - Step 2 - declare variables bfrate, lunchrate, dinnerrate, cgst, sgst, gst**
 - Step 3 - Input food cost**
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- . • Step 4 - Using conditional statements to choose the menu**
- . • Step 5 - getchar() the choice of the menu**
- . • Step 6 - Using if-else statement to choose the quantity of the food**
- . • Step 7 - adding cgst,sgst and gst to the amount**
- . • Step 8 - Using conditional statements for additional orders.**
- . • Step 9 - Repeat step 6, step 7, step 8 for lunch and dinner**
- . • Step 10 - using for statement to finalise the bill**

- • Step 11 - using switch-case to print the bill
- • Step 11-If num==0 then print 0
- • Step 12 - Stop

FLOWCHART



PROGRAM

CODE

```
#include<stdio.h>
#include<stdlib.h>
int again;
int total=0;
float gst,cgst,sgst;
int bfrate[7][2]={ {0,30},
                   {1,35},
                   {2,40},
                   {3,20},
                   {4,15},
                   {5,20},
                   {6,30}
                  };
int lunchrate[7][2]={0,80},
                   {1,120},
                   {2,20},
                   {3,120},
                   {4,150},
                   {5,160},
                   {6,30}};
int dinner_rate[7][2]={0,65},
                   {1,50},
                   {2,70},
                   {3,80},
                   {4,65},
                   {5,110},
                   {6,50}};
int purchased[][3]={0,0},
                   {0,0},
                   {0,0},
                   {0,0},
                   {0,0},
                   {0,0}
                  };
int temp[][3]={0,0},
              {0,0},
```

```

        {0,0},
        {0,0},
        {0,0},
        {0,0},
        {0,0}
    };

void bfast(char bfmenu[][100]);
void lunch( char lunchmenu[][100]);
void dinner(char dinnermenu[][100]);
void main_menu();
void display();
void lunch_menucard();
void dinner_menu();
void display_bf_bill(char bfmenu[][100]);
void display_lunch_bill(char lunchmenu[][100]);
void display_dinner_bill(char dinnermenu[][100]);
void display_bfmenu();
void repeatbf(char bfmenu[][100]);
void repeatlunch(char lunchmenu[][100]);
void repeatdinner(char dinnermenu[][100]);
void display_total_words();
void main()
{
    char bfmenu[][100]={"toast","Idli-wada","Dosa","Upma","milk","tea","coffee"};
    char lunchmenu[][100]={"Veg Biryani","Special meal","Roti","Dal","Paneer Tikka","Veg
mix","Icecream"};
    char dinnermenu[][100]={"Fried rice","Spegatti","Burger"};
    char choice;
    do
    {
        enter:
        display();
        printf("Enter your choice here : ");
        scanf("%c", &choice);
        getchar();
        switch(choice)
        {
            case 'A':
            case 'a':printf("\nBreakfast\n");
                bfast(bfmenu);
                break;
            case 'B':
            case 'b':printf("\nLunch\n");
                lunch(lunchmenu);

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        break;
    case 'C':
    case 'c':printf("\nDinner\n");
        dinner(dinnermenu);
        break;
    default:printf("\nWrong choice entered Please enter the valid choice!!\n");
        goto enter;
    }
}while(choice!='d');
}
void display()
{
    printf("        Welcome to THE WESTIN.        \n ");
    printf("        +=====+        \n\n");
    printf(" && Please select the meal that you would like to purchase. && \n\n");
    printf("\t\t [A] Breakfast\n");
    printf("\t\t [B] Lunch\n");
    printf("\t\t [C] Dinner\n");
}
void display_bfmenu()
{
    printf("        Welcome to THE WESTIN.        \n ");
    printf("        +=====+        \n\n");
    printf("        $ Breakfast Menu $ \n\n");
    printf(" && Please select the food that you would like to purchase. && \n\n");
    printf("\t\t [0] Toast - Rs 30.00\n");
    printf("\t\t [1] Idli-Vada - Rs 35.00\n");
    printf("\t\t [2] Dosa - Rs 40.00\n");
    printf("\t\t [3] UPMA Rs 20.00\n");
    printf("\t\t [4] Milk- Rs 15.00\n");
    printf("\t\t [5] Tea - Rs 20.00\n");
    printf("\t\t [6] Coffee - Rs 30.00\n");
}

void bfast(char bfmenu[][100]) //Breakfast Menu Screen
{
    int choice = 0; //local variables
    int quantity = 0;
    int again = 0,amt=0;
    int code,i;
    display_bfmenu();
    printf("\nEnter the code:: ");
    scanf("%d", &code);
    getchar();

```

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printf("Total is %d\n\n",total);
if(code>=0&&code<=6)
{
    printf("\nEnter the quantity::");
    scanf("%d",&quantity);
    purchased[code][1]= quantity*bfrate[code][1];
    purchased[code][1]+ (quantity*bfrate[code][1]);
    total+=purchased[code][1];
    printf("Total is %d\n\n",total);
    gst=total*0.12;
    cgst=gst/2;
    sgst=cgst;
}
else
{
    printf("\nInvalid code entered, Please enter the code again!!!!\n\n");
    bfast(bfmenu);
}
repeatbf(bfmenu);
}
void repeatbf(char bfmenu[][100])
{
    printf("\nWould you like to buy anything else?\n[1] Yes , [2] No : "); // Allows user to choose
    whether to check-out or buy anything else.
    scanf("%d",&again);
    if (again == 1)
        bfast(bfmenu);
    else if (again == 2 )
    {
        display_bf_bill(bfmenu);
        exit(0);
    }
    else
    {
        printf("\n\n\t\tSorry Invalid Decision Entered\n");
        repeatbf(bfmenu);
    }
}
void display_bf_bill(char bfmenu[][100])
{
    int i;
    printf(" +~+~+ \n\n");
    printf("          THE WESTIN \n");
    printf("          BILLING INFORMATION \n");

```

```

printf("\t\t ITEMS\t\tPrice(in Rs.)\n");
for(i=0;i<7;i++)
{
    if(purchased[i][1]!=0)
    {
        printf("\t\t%s\t\t",bfmenu[i]);
        printf("%d\n",purchased[i][1]);
        purchased[i][1];
    }
}
printf("\t\tGST=Rs.%0.2f\n",gst);
printf("\t\tC-GST=Rs.%0.2f\n",cgst);
printf("\t\tS-GST=Rs.%0.2f\n",sgst);
printf("\t\tTotal=Rs.%d\n",total);
display_total_words();
printf("\n\n +~~+      \n\n");
}

void display_lunch_bill(char lunchmenu[][100])
{
    int i;
    printf(" +~~+      \n\n");
    printf("          THE WESTIN          \n");
    printf("          BILLING INFORMATION      \n");
    printf("\t\t ITEMS\t\tPrice(in Rs.)\n");
    for(i=0;i<7;i++)
    {
        if(purchased[i][1]!=0)
        {
            printf("\t\t %s \t\t",lunchmenu[i]);
            printf("%d\n",purchased[i][1]);
        }
    }
    printf("\t\tGST=Rs.%0.2f\n",gst);
    printf("\t\tC-GST=Rs.%0.2f\n",cgst);
    printf("\t\tS-GST=Rs.%0.2f\n",sgst);
    printf("\t\tTotal=Rs.%d\n",total);
    display_total_words();
    printf("\n\n +~~+      \n\n");
}

void display_dinner_bill(char dinnermenu[][100])
{
    int i;
    printf(" +~~+      \n\n");

```



```

printf("                THE WESTIN                \n");
printf("                BILLING INFORMATION                \n");
printf("\t\t ITEMS\t\t\tPrice(in Rs.)\n");
for(i=0;i<7;i++)
{
    if(purchased[i][1]!=0)
    {
        printf("\t\t %s \t\t",dinnermenu[i]);
        printf("%d\n",purchased[i][1]);
    }

}

printf("\t\tGST=Rs.%0.2f\n",gst);
printf("\t\tC-GST=Rs.%0.2f\n",cgst);
printf("\t\tS-GST=Rs.%0.2f\n",sgst);
printf("\t\tTotal=Rs.%d\n\n",total);
display_total_words();
printf("\n\n +~~+      \n\n");
}

void lunch(char lunchmenu[][100]) // Lunch Screen Menu
{
    int choice = 0; //local variables
    int quantity = 0;
    int again = 0,amt=0;
    int code,i;
    lunch_menucard();
    printf("\nEnter the code:: ");
    scanf("%d", &code);
    getchar();
    if(code>=0&&code<=6)
    {
        printf("\nEnter the quantity::");
        scanf("%d",&quantity);
        // purchased[code][1]= purchased[code][1]+(quantity*lunchrate[code][1]);
        purchased[code][1]= quantity*lunchrate[code][1];
        total+=purchased[code][ 1];
        gst=total*0.12;
        cgst=gst/2;
        sgst=cgst;
    }
    else
    {
        printf("\nInvalid code entered, Please enter the code again!!!!\n\n");
        lunch(lunchmenu);
    }
}

```

```

    }
    repeatlunch(lunchmenu);
}

void dinner(char dinnermenu[][100]) // Dinner Menu Screen
{
    int choice = 0; //local variables
    int quantity = 0;
    int again = 0,amt=0;
    int code,i;
    dinner_menu();

    printf("\nEnter the code:: ");
    scanf("%d", &code);
    getchar();
    if(code>=0&&code<=6)
    {
        printf("\nEnter the quantity::");
        scanf("%d",&quantity);
        // purchased[code][1]= purchased[code][1]+(quantity*dinner_rate[code][1]);
        purchased[code][1]= quantity*dinner_rate[code][1];
        total+=purchased[code][1];
        gst=total*0.12;
        cgst=gst/2;
        sgst=cgst;
    }
    else
    {
        printf("\nInvalid code entered, Please enter the code again!!!!\n\n");
        dinner(dinnermenu);
    }
    repeatdinner(dinnermenu);
}

void lunch_menucard()
{
    printf("          Welcome to THE WESTIN.      \n ");
    printf("          +=====+          \n\n");
    printf("          $ Lunch Menu $ \n\n");
    printf(" && Please select the food that you would like to purchase. && \n\n");
    printf("\t\t [0] Veg Biryani - Rs 80.00\n");
    printf("\t\t [1] Special Meal- Rs 120.00\n");
    printf("\t\t [2] Roti - Rs 20.00\n");
    printf("\t\t [3] Dal tadka - Rs 120.00\n");
    printf("\t\t [4] Paneer Tikka - Rs 150.00\n");
    printf("\t\t [5] Veg Mix - Rs 160.00\n");
}

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    printf("\t\t [6] Ice cream - Rs 30.00\n");
    printf("Enter your choice here : ");
}
void dinner_menu()
{
    printf("          Welcome to THE WESTIN.          \n ");
    printf("          +=====+          \n\n");
    printf("          $ Dinner Menu $ \n\n");
    printf("  && Please select the food that you would like to purchase. && \n\n");
    printf("\t\t [0] Fried Rice - Rs 65.00\n");
    printf("\t\t [1] Spagetti- Rs50\n");
    printf("\t\t [2] Burger - Rs 70.00\n");
    printf("\t\t [3] Pasta - Rs 80.00\n");
    printf("\t\t [4] Noodles - Rs 65.00\n");
    printf("\t\t [5] Paratha - Rs 110.00\n");
    printf("\t\t [6] Fruit Salad - Rs 50.00\n");
}
void repeatlunch(char lunchmenu[][100])
{
    printf("\nWould you like to buy anything else?\n[1] Yes , [2] No : "); // Allows user to choose
    whether to check-out or buy anything else.
    scanf("%d",&again);
    if (again == 1)
        lunch(lunchmenu);
    else if (again == 2 )
    {
        display_lunch_bill(lunchmenu);
        exit(0);
    }
    else
    {
        printf("\n\n\t\tSorry Invalid Decision Entered\n");
        repeatlunch(lunchmenu);
    }
}
void repeatdinner(char dinnermenu[][100])
{
    printf("\nWould you like to buy anything else?\n[1] Yes , [2] No : "); // Allows user to choose
    whether to check-out or buy anything else.
    scanf("%d",&again);
    if (again == 1)
    {
        dinner(dinnermenu);
    }
}

```

```

}
else if (again == 2 )
{
    display_dinner_bill(dinnermenu);
    exit(0);
}
else
{
    printf("\n\n\tSorry Invalid Decision Entered\n");
    repeatdinner(dinnermenu);
}
}
void display_total_words()
{
    int num=0,digits=0,temp=0;
    while(total != 0)
    {
        num=(num * 10)+(total % 10);
        total/= 10;
        digits++;
    }
    printf("\nNo of digits::%d\n",digits);
    printf("All the taxes are inclusive of the price printed ");
    while(num!= 0)
    {
        temp++;
        switch(num%10)
        {
            case 0:
                printf("Zero ");
                break;
            case 1:
                printf("One ");
                break;
            case 2:
                printf("Two ");
                break;
            case 3:
                printf("Three ");
                break;
            case 4:
                printf("Four ");
                break;
            case 5:

```

```

        printf("Five ");
        break;
    case 6:
        printf("Six ");
        break;
    case 7:
        printf("Seven ");
        break;
    case 8:
        printf("Eight ");
        break;
    case 9:
        printf("Nine ");
        break;
    }
    num = num / 10;
}
if(num==0&&digits!=temp)
    printf(" Zero ");
return;
}

```

DEMO

Welcome to THE WESTIN.

+=====+

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

[A] Breakfast

[B] Lunch

[C] Dinner

Enter your choice here : B

Lunch

Welcome to THE WESTIN.

+=====+

\$ 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 your choice here :

Enter the code:: 4

Enter the quantity::2

Would you like to buy anything else?

[1] Yes , [2] No : 2

+~~+

THE WESTIN

BILLING INFORMATION

ITEMS	Price(in Rs.)
-------	---------------

Paneer Tikka	300
--------------	-----

GST=Rs.36.00

C-GST=Rs.18.00

S-GST=Rs.18.00

Total=Rs.300

No of digits::3

All the taxes are inclusive of the price printed Three Zero

+~~+