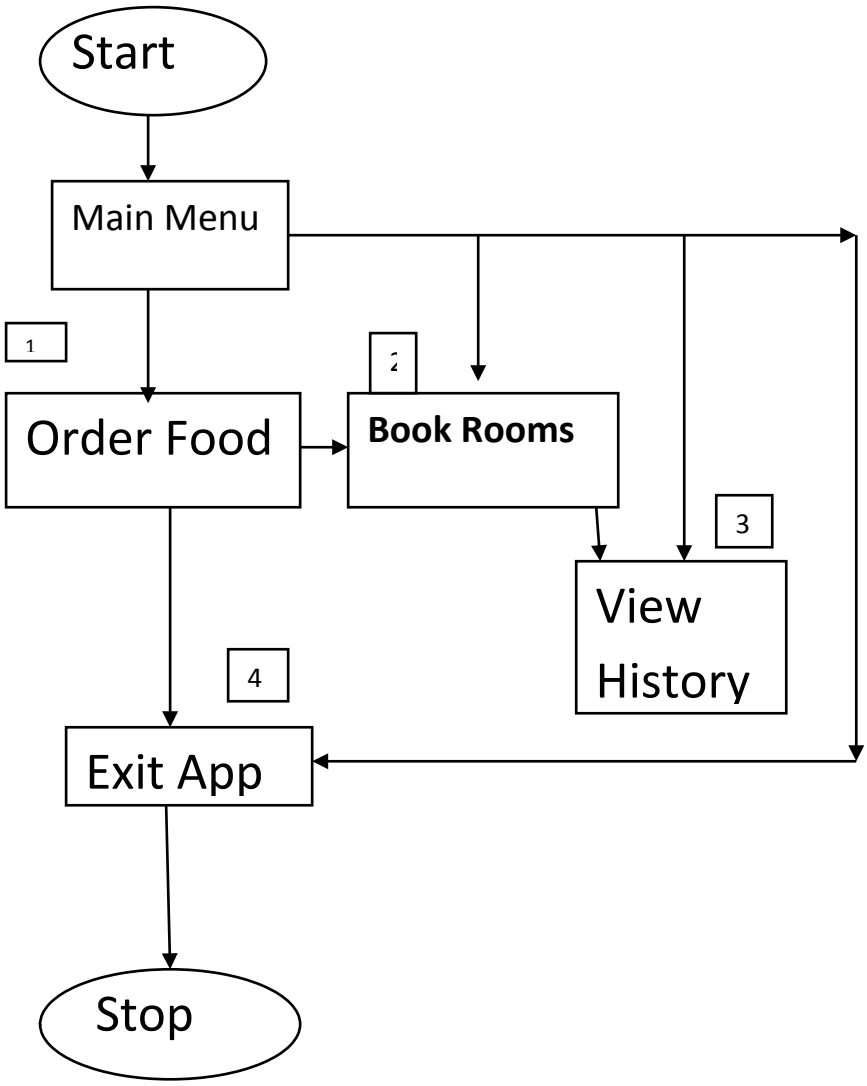
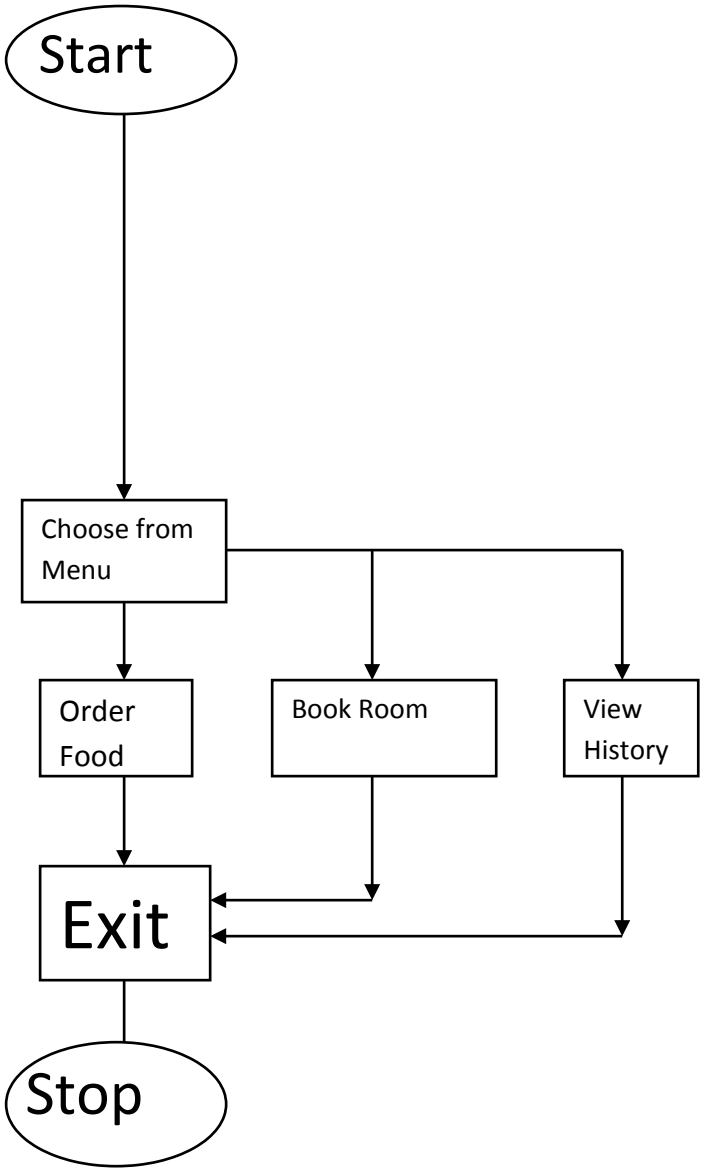
Algorithm


Start
Main Menu
1
Order Food
2
Book Rooms
3
View History
4
Exit App
Stop

Flowchart


Start
Choose from Menu
Order Food
Book Room
View History
Exit
Stop

Code

```
//GST Billing System


#include<stdio.h>
#include<conio.h>
#include<string.h>

int rac=1000,tac=10,aac=10;
int rnac=600,tnac=15,anac=15;
int rdlx=1200,tdlx=10,adlx=10;
int rsdlx=2000,tsdlx=5,asdlx=5;
int rgen=500,tgen=20,agen=20;

void show(void);
void book(void);
void check(void);
void con(void);
void cal(void);

void main()
{
        int order_food(void);
        void place_order(int );
        void view_history(void);
```

```
        void book_room(void);


        int ch1,bill;
        clrscr();
        printf("\t\t\tWelcome");
        printf("\n**********************************************");
        printf("\nWhat would you like to do :-\n1]Order Food\n2]Book a Room\n3]View
History\n");
        printf("\nYour Choice :- ");
        scanf("%d",&ch1);
        clrscr();
        switch(ch1)
        {
         case 1:bill = order_food();
                place_order(bill);
                break;
         case 2:book_room();
                break;
         case 3:view_history();
                break;
         default:printf("\nPlease select valid option and try again ....");
        }
        clrscr();
        printf("\n\n\n\t\t Thank You ...!!!");
        getch();
        exit();
```

```
}

int order_food()
{
        int soup(void);
        int snacks(void);
        int maincourse(void);
        int breads(void);
        int rice(void);
        int dessert(void);
        //void order(int);
        int ch2,amt=0,session=1;
        do{
        clrscr();
        printf("\t\t\tFood Menu\n");
        printf("\n*************************************************");
        printf("\nHave a look at menu :- ");
        printf("\n1]Soups\n2]Snacks\n3]Main
Course\n4]Breads\n5]Rice\n6]Desserts\n7]Place Order");
        printf("\n\nSelect your choice :- ");
        scanf("%d",&ch2);
        switch(ch2)
        {
         case 1:amt=amt+soup();
              break;
         case 2:amt=amt+snack();
```

```
                break;
        case 3:amt=amt+maincourse();
                break;
        case 4:amt=amt+bread();
                break;
        case 5:amt=amt+rice();
                break;
        case 6:amt=amt+dessert();
                break;
        case 7:if(!amt)
                {
                        printf("\nPlease select order first.");
                        getch();
                        amt=order_food();
                }
                session=0;
                break;
        default:printf("\nPlease select valid option and try again ....");
                getch();
                amt=order_food();
      }
      }while(session);
      return amt;
}
int soup()
{
```

```
        int ch3,rate,q=0 ;
        clrscr();
        printf("Soup options :-");
        printf("\n1]Tomato soup\t50/-\n2]Spinach soup\t60/-\n3]Manchau soup\t65/-
\n4]Sweetcorn soup\t70/-\n5]Vegclear soup\t60/-\n6]Go Back\n");
        printf("\n\nPlease select your choice :- ");
        scanf("%d",&ch3);
        if(ch3>0&&ch3<6)
        {
                printf("Enter quantity :- ");
                scanf("%d",&q);
        }
        switch(ch3)
        {
         case 1:rate=50;break;
         case 2:rate=60;break;
         case 3:rate=65;break;
         case 4:rate=70;break;
         case 5:rate=60;break;
         case 6:rate=0;break;
         default:printf("\nPlease select valid option and try again");
                getch();
                rate=soup();
        }
        return rate*q;
}
```

```
int snack()
{
	int ch3,rate,q=0;
	clrscr();
	printf("Snacks options :-");
	printf("\n1]Masala papad\t25/-\n2]Manchurian\t60/-\n3]Chana Chilly\t65/-
\n4]Paneer Chilly\t75/-\n5]Harabhara Kabab\t80/-\n6]Go Back\n");
	printf("\n\nPlease select your choice :- ");
	scanf("%d",&ch3);
	if(ch3>0&&ch3<6)
	{
		printf("Enter quantity :- ");
		scanf("%d",&q) ;
	}
	switch(ch3)
	{
	 case 1:rate=25;break;
	 case 2:rate=60;break;
	 case 3:rate=65;break;
	 case 4:rate=75;break;
	 case 5:rate=80;break;
	 case 6:rate=0;break;
	 default:printf("\nPlease select valid option and try again");
		getch();
		rate=snack();
	}
```

```
	return rate*q;
}
int maincourse()
{
	int ch3,rate,q=0;
	clrscr();
	printf("Main Course options :-");
	printf("\n1]Paneer Butter Masala\t150/-\n2]Paneer Tikka Masala\t160/-\n3]Mix veg Kofta\t165/-\n4]Kaju Masala Curry\t170/-\n5]Dal Tadka\t120/-\n6]Go Back\n") ;
	printf("\n\nPlease select your choice :- ");
	scanf("%d",&ch3);
	if(ch3>0&&ch3<6)
	{
		printf("Enter quantity :- ");
		scanf("%d",&q) ;
	}
	switch(ch3)
	{
	 case 1:rate=150;break;
	 case 2:rate=160;break;
	 case 3:rate=165;break;
	 case 4:rate=170;break;
	 case 5:rate=120;break;
	 case 6:rate=0;break;
	 default:printf("\nPlease select valid option and try again");
		getch();
```

```
                rate=maincourse();
        }
        return rate*q;
}
int bread()
{
        int ch3,rate,q=0;
        clrscr();
        printf("Bread options :-");
        printf("\n1]Roti\t15/-\n2]Tandoori\t20/-\n3]Naan\t30/-\n4]Paratha\t25/-
\n5]Kulcha\t35/-\n6]Go Back\n");
        printf("\n\nPlease select your choice :- ");
        scanf("%d",&ch3);
        if(ch3>0&&ch3<6)
        {
                printf("Enter quantity :- ");
                scanf("%d",&q) ;
        }
        switch(ch3)
        {
         case 1:rate=15;break;
         case 2:rate=20;break;
         case 3:rate=30;break;
         case 4:rate=25;break;
         case 5:rate=35;break;
         case 6:rate=0;break;
```

```
        default:printf("\nPlease select valid option and try again");
                getch();
                rate=bread();
        }
        return rate*q;
}
int rice()
{
        int ch3,rate,q=0;
        clrscr();
        printf("Rice options :-");
        printf("\n1]Steam Rice\t70/-\n2]Jeera Rice\t80/-\n3]Dal Khichadi\t75/-\n4]Kasmiri Pulav\t90/-\n5]Dum Biryani\t100/-\n6]Go Back\n");
        printf("\n\nPlease select your choice :- ");
        scanf("%d",&ch3);
        if(ch3>0&&ch3<6)
        {
                printf("Enter quantity :- ");
                scanf("%d",&q) ;
        }
        switch(ch3)
        {
         case 1:rate=70;break;
         case 2:rate=80;break;
         case 3:rate=75;break;
         case 4:rate=90;break;
```

```
        case 5:rate=100;break;
        case 6:rate=0;break;
        default:printf("\nPlease select valid option and try again");
                getch();
                rate=rice();
        }
        return rate*q;
}
int dessert()
{
        int ch3,rate,q=0;
        clrscr();
        printf("Dessert options :-");
        printf("\n1]Gulab Jamun\t50/-\n2]Ras Malai\t60/-\n3]Ice Cream\t65/-\n4]Chocalate Pie\t70/-\n5]GST Special\t60/-\n6]Go Back\n");
        printf("\n\nPlease select your choice :- ");
        scanf("%d",&ch3);
        if(ch3>0&&ch3<6)
        {
                printf("Enter quantity :- ");
                scanf("%d",&q) ;
        }
        switch(ch3)
        {
        case 1:rate=50;break;
        case 2:rate=60;break;
```

```
            case 3:rate=65;break;
            case 4:rate=70;break;
            case 5:rate=60;break;
            case 6:rate=0;break;
            default:printf("\nPlease select valid option and try again");
                    getch();
                    rate=dessert();
           }
           return rate*q;
}
void place_order(int gross)
{
 int dbcheck(char *,char *);
 void dbentry(long,char *,char *,int,float);
 long gen_billno(void);
 void display(long,char *,char *,int, float);

 float oamt;
 long bill_no;
 int flag;
 char *name,*cnt;
 clrscr();
 fflush(stdin);
 bill_no=gen_billno();
 printf("Enter customer name :- ");
 gets(name);
```

```
 printf("Enter customer phone no :- ");
 gets(cnt);

 flag=dbcheck(name,cnt);
 if(flag==1)
 {
  printf("\nPremium Customer ...");
  gross = gross - (0.1 * gross);
 }
 oamt = gross + (0.06*gross) + (0.06*gross);
 display(bill_no,name,cnt,gross,oamt);
 dbentry(bill_no,name,cnt,gross,oamt);
 getch();
}

void display(long b,char *nm,char *ct,int t,float fin)
{
 clrscr();
 printf("The bill is as follows :- ");
 printf("\n_____________________________________________________________");
 printf("\nBill no \t\t\t:- %ld",b);
 printf("\nCustomer Name \t\t:- %s",nm);
 printf("\nCustomer contact \t\t:- %s",ct);
 printf("\nTotal order is %d",t);
 printf("\nSGST is 6%");
 printf("\nCGST is 6%");
```

```
 printf("\nPayable bill is %7.2f",fin);
 getch();
}

long gen_billno()
{
 long no;
 srand(time(0));
 no=rand();
 return no;
}
//rishabh part...
void dbentry(long bn,char *n,char *c,int tb,float famt)
{
 FILE *fp;
 char *filename="billh.txt";
 fp=fopen(filename,"a");
 fprintf(fp,"%ld %s %s %d %7.2f\n",bn,n,c,tb,famt);
 fclose(fp);
}

int dbcheck(char *a,char *b)
{
 FILE *fps;
 char *fname="billh.txt";
 char *l;
```

```
 char ch,bno[10],cnm[20],cct[11],bamt[10],tamt[10];
 int fvalue=0;
 fps=fopen(fname,"r");
 while((fscanf(fps,"%s %s %s %s %s",bno,cnm,cct,bamt,tamt))!=EOF)
 {
  if(strcmp(a,cnm)==0 && strcmp(b,cct)==0)
  {
          fvalue=1;
          break;
  }
  else
          fvalue=0;
 }
 return fvalue;
}

void view_history()
{
 void history_no();
 void history_name();
 void history_all();

 int chc;

 clrscr();
 printf("\n\n\t\tHistory Panel");
```

```
 printf("\n************************************************************");
 printf("\n\nView bill History:-\n1]By Bill no\n2]By Customer name\n3]Overall
History\n4]Go back");
 printf("\nSelect your choice :- ");
 scanf("%d",&chc);
 switch(chc)
 {
  case 1:history_no();
            break;
  case 2:history_name();
            break;
  case 3:history_all();
            break;
  case 4:main();
            break;
  default :printf("Invalid option selected ....");
 }
 getch();
}

void history_no()
{
 FILE *fph;
 char *no;
 char *fname="billh.txt";
 char ch,bno[10],cnm[20],cct[11],bamt[10],tamt[10];
```

```
int fvalue=0;
fflush(stdin);



printf("\nEnter the bill no :- ");
gets(no);


fph=fopen(fname,"r");


while((fscanf(fph,"%s %s %s %s %s",bno,cnm,cct,bamt,tamt))!=EOF)
{
 if(strcmp(no,bno)==0)
 {
        printf("\nThe bill is as follows :- ");
        printf("\nBill no :- %s",bno);
        printf("\nCustomer name :- %s",cnm);
        printf("\nContact no :- %s",cct);
        printf("\nTotal bill :- %s",bamt);
        printf("\nPayable bill :- %s",tamt);
        fvalue=1;
        break;
 }
 else
        fvalue=0;
}
if(fvalue==0)
```

```
        printf("\n\n No Record Found ....");
 getch();
}

void history_name()
{
 FILE *fph;
 char *nm;
 char *fname="billh.txt";
 char ch,bno[10],cnm[20],cct[11],bamt[10],tamt[10];
 int fvalue=0;
 fflush(stdin);

 printf("\nEnter the Customer name:- ");
 gets(nm);

 fph=fopen(fname,"r");
 printf("\nBill no\tCustName\tContactNo\tAmt\tPaid");
 while((fscanf(fph,"%s %s %s %s %s",bno,cnm,cct,bamt,tamt))!=EOF)
 {
  if(strcmp(nm,cnm)==0)
  {
        printf("\n%s\t%s\t%s\t%s\t%s",bno,cnm,cct,bamt,tamt);
        fvalue++;
  }
 }
```

```
 if(fvalue==0)
          printf("\n\n No Record Found ....");
 getch();
}

void history_all()
{
 FILE *fph;
 char *no;
 char *fname="billh.txt";
 char ch,bno[10],cnm[20],cct[11],bamt[10],tamt[10];
 int fvalue=0;
 fflush(stdin);

 printf("\nPress enter to see all history... ");
 getch();

 fph=fopen(fname,"r");
 printf("\nBill no\tCustName\tContactNo\tAmt\tPaid");
 while((fscanf(fph,"%s %s %s %s %s",bno,cnm,cct,bamt,tamt))!=EOF)
 {
  printf("\n%s\t%s\t%s\t%s\t%s",bno,cnm,cct,bamt,tamt);
  fvalue++;
 }
 if(fvalue==0)
          printf("\nNo Records found ...");
```

```
 else
        printf("\n%d records displayed.",fvalue);
 getch();
}
//pratemesh n rajiv part...
void book_room()
{
        int     input;
        clrscr();

printf("================================================================\n");
        printf("1.for booking\n");
        printf("2.for checkout\n");
        printf("3.for Exit\n");

printf("================================================================\n");
        printf("Enter your choice\n");
        scanf("%d",&input);

        switch (input)
        {
                case 1:{
                        book();
                        break;
                        }
                case 2:{
                        check();
```

```
                        break;
                        }
                case 3://main();
                        exit(0);
                        break;
        }
        getch();
}

void show()
{

printf("=========================================================================
=====\n");
        printf("TYPE          ||      RATE      ||     TOTAL    ||     AVAILABLE  ");
        printf("\n");
        printf("-------------------------------------------------------------------------\n");
        printf("AC            ||      %d      ||     %d      ||%8d\n",rac,tac,aac);
        printf("NON AC        ||      %d      ||     %d      ||%8d\n",rnac,tnac,anac);
        printf("DELUX         ||      %d      ||     %d      ||%8d\n",rdlx,tdlx,adlx);
        printf("SUPER DELUX   ||      %d      ||     %d      ||%8d\n",rsdlx,tsdlx,asdlx);
        printf("GENRAL        ||      %d      ||     %d      ||%8d\n",rgen,tgen,agen);

printf("=========================================================================
=====\n");
}
```

```
void book()
{
        int opt,a;
        clrscr();

printf("================================================================\n");
        printf("NOW YOU ARE IN BOOKIng SECTION \n");

printf("================================================================\n");
        printf("1. A/C room booking \n");
        printf("2. NON A/C room booking \n");
        printf("3. DELUX room booking \n");
        printf("4. SUPER DELUX room booking \n");
        printf("5. GENRAL room booking \n");

printf("================================================================\n");

        printf("PLEASE ENTER YOUR CHOICE \n");
        scanf("%d",&opt);
        switch (opt)
        {
                case 1:{printf("HOW MANY ROOMS YOU WANT TO BOOK?\n");
                    scanf("%d",&a);
                    if(a<=aac)
                    {
                        printf("============================\n");
```

```
        printf("rooma alloted to you\n");
        printf("============================\n");
        aac=aac-a;
        con();
    }
    else
    {
        printf("============================\n");
        printf("sorry room is not available\n");
        printf("============================\n");
        con();
    }
    break;
    }
case 2:{printf("HOW MANY ROOMS YOU WANT TO BOOK?\n");
    scanf("%d",&a);
    if(a<=anac)
    {
        printf("============================\n");
        printf("rooma alloted to you\n");
        anac=anac-a;
        printf("============================\n");
        con();
    }
    else
    {
```

```
        printf("============================\n");
        printf("sorry room is not available\n");
        printf("============================\n");
        con();
    }
    break;
    }
case 3:{printf("HOW MANY ROOMS YOU WANT TO BOOK?\n");
    scanf("%d",&a);
    if(a<=adlx)
    {
        printf("============================\n");
        printf("rooma alloted to you\n");
        adlx=adlx-a;
        printf("============================\n");
        con();
    }
    else
    {
        printf("============================\n");
        printf("sorry room is not available\n");
        printf("============================\n");
        con();
    }
    break;
    }
```

```
case 4:{printf("HOW MANY ROOMS YOU WANT TO BOOK?\n");
    scanf("%d",&a);
    if(a<=asdlx)
    {
        printf("============================\n");
        printf("rooma alloted to you\n");
        asdlx=asdlx-a;
        printf("============================\n");
        con();
    }
    else
    {
        printf("============================\n");
        printf("sorry room is not available\n");
        printf("============================\n");
        con();
    }
    break;
    }
case 5:{printf("HOW MANY ROOMS YOU WANT TO BOOK?\n");
    scanf("%d",&a);
    if(a<=agen)
    {
        printf("============================\n");
        printf("rooma alloted to you\n");
        agen=agen-a;
```

```
                printf("============================\n");
                con();
            }
            else
            {
                printf("============================\n");
                printf("sorry room is not available\n");
                printf("============================\n");
                con();
            }
            break;
            }
        }
}
void check()
{
        int ch,ans;


printf("================================================================\n");
        printf("YOUR NOW IN CHECKOUT ROOM  \n");

printf("================================================================\n");
        printf("1. A/C room CHECKOUT \n");
        printf("2. NON A/C room CHECKOUT \n");
        printf("3. DELUX room CHECKOUT \n");
        printf("4. SUPER DELUX room CHECKOUT \n");
```

```
        printf("5. GENRAL room CHECKOUT \n");

printf("================================================================\n");

        printf("PLEASE ENTER YOUR CHOICE \n");
        scanf("%d",&ch);

        switch (ch)
        {
                case
1:printf("================================================================\n");
                        printf("HOW MANY ROOMS YOU WANT TO CHECKOUT?\n");

printf("================================================================\n");
                        scanf("%d",&ans);
                        if(ans>(tac-aac))
                        {

printf("================================================================\n");
                         printf("ROOM NUMBER WHICH IS YOU ENTER IS NOT CORRECT.\n");

printf("================================================================\n");
                         show();
                         cal();
                        }
                        else
                        {
```

```
                        aac=aac+ans;

printf("================================================================\n");
                        printf(" YOU ARE SUCCESSEFULLY CHECKOUT!!!!\n");

printf("================================================================\n");
                        show();
                        cal();
                       }
                case
2:printf("================================================================\n");
                       printf("HOW MANY ROOMS YOU WANT TO CHECKOUT?\n");


printf("================================================================\n");
                       scanf("%d",&ans);
                       //show();
                       if(ans>(tnac-anac))
                       {

printf("================================================================\n");
                        printf("ROOM NUMBER WHICH IS YOU ENTER IS NOT CORRECT.\n");

printf("================================================================\n");
                        show();
                        cal();
                       }
                       else
                       {
```

```
                        anac=anac+ans;

printf("================================================================\n");
                        printf(" YOU ARE SUCCESSEFULLY CHECKOUT!!!!\n");

printf("================================================================\n");
                        show();
                        cal();
                       }
                case
3:printf("================================================================\n");
                       printf("HOW MANY ROOMS YOU WANT TO CHECKOUT?\n");


printf("================================================================\n");
                       scanf("%d",&ans);
                       //show();
                       if(ans>(tdlx-adlx))
                       {

printf("================================================================\n");
                        printf("ROOM NUMBER WHICH IS YOU ENTER IS NOT CORRECT.\n");

printf("================================================================\n");
                        show();
                        cal();
                       }
                       else
                       {
```

```
                        adlx=adlx+ans;

printf("================================================================\n");
                        printf(" YOU ARE SUCCESSEFULLY CHECKOUT!!!!\n");

printf("================================================================\n");
                        show();
                        cal();
                       }
                case
4:printf("================================================================\n");
                       printf("HOW MANY ROOMS YOU WANT TO CHECKOUT?\n");


printf("================================================================\n");
                       scanf("%d",&ans);
                       //show();
                       if(ans>(tsdlx-asdlx))
                       {

printf("================================================================\n");
                        printf("ROOM NUMBER WHICH IS YOU ENTER IS NOT CORRECT.\n");

printf("================================================================\n");
                        show();
                        cal();
                       }
                       else
                       {
```

```
                    asdlx=asdlx+ans;

printf("================================================================\n");
                    printf(" YOU ARE SUCCESSEFULLY CHECKOUT!!!!\n");

printf("================================================================\n");
                    show();
                    cal();
                   }
               case
5:printf("================================================================\n");
                   printf("HOW MANY ROOMS YOU WANT TO CHECKOUT?\n");


printf("================================================================\n");
                   scanf("%d",&ans);
                   //show();
                   if(ans>(tgen-agen))
                   {

printf("================================================================\n");
                    printf("ROOM NUMBER WHICH IS YOU ENTER IS NOT CORRECT.\n");

printf("================================================================\n");
                    show();
                    cal();
                   }
                   else
                   {
```

```
                        agen=agen+ans;

printf("================================================================\n");
                        printf(" YOU ARE SUCCESSEFULLY CHECKOUT!!!!\n");

printf("================================================================\n");
                        show();
                        cal();
                       }
        }
}

void con()
{
        int x;
        show();
        printf("=============================================\n");
        printf("DO YOU WANT TO CONTIUE \n");
        printf("1. for yes \n");
        printf("2.for no\n");

        printf("=============================================\n");
        scanf("%d",&x);

        if(x==1)
        {
         book();
```

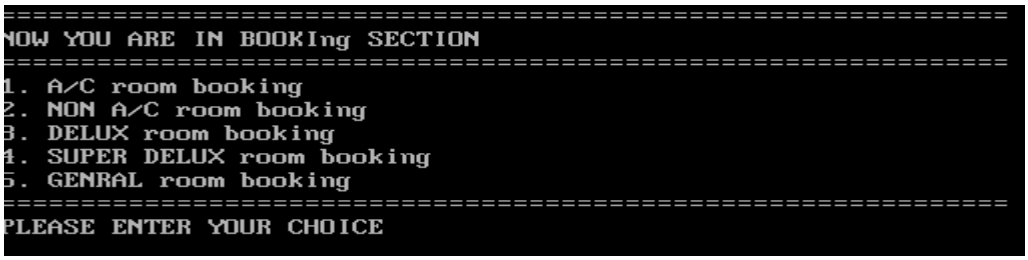
```
        }
        else
        {
         book_room();// some exit must call in thia area;
        }
}

void cal()
{
        int y;

printf("================================================================\n");
        printf("DO YOU WANT TO CONTIUE \n");
        printf("1. for yes \n");
        printf("2.for no\n");
        printf("=============================================\n");
        scanf("%d",&y);

        if(y==1)
        {
         check();
        }
        else
        {
         book_room();// some exit must call in thia area;
        }
```

Output

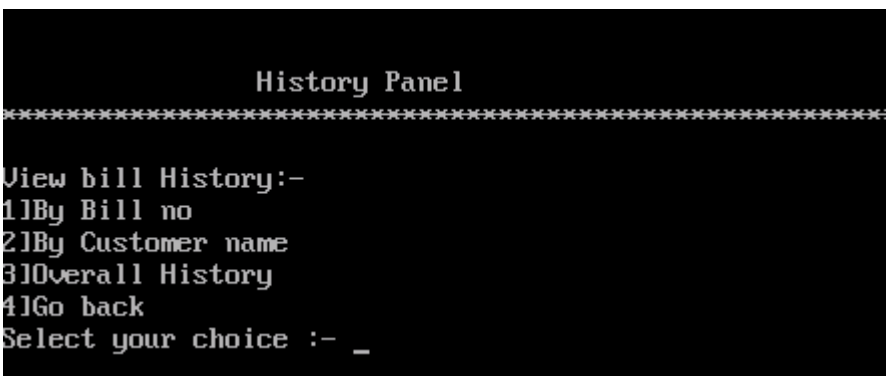
Main Menu-

Order Food:-

Book Room:-



History:-



Future Enhancement:-

We would improve the software by adding various options even to help the hotel owner to calculate GST according to his Net Income.