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PROJECT DESCRIPTION

AIM:

Our program helps to manage various day today activities of HOTEL SCHOOLVIEW like booking a room, generating bill, rescheduling, etc..

No cancellation of booking is allowed. There are 30 rooms of three types(10 of each type). Rooms are allotted during check - in date. Options for food and laundry services are also provided.

USER TYPES:

1.ADMIN: Admin is the head of all activities. Activities that can be done are listed below

- BOOK ROOM
- VACATE ROOM
- VIEW CUSTOMER DETAILS
- CHECK AVAILABILITY
- ADD/MODIFY/REMOVE ADMIN
- GENERATE BILL
- RESCHEDULE
- SEARCH CUSTOMER // Gives all details of customer of particular name
- GENERATE REPORT

2. CUSTOMER OR USER : He can perform the following activities

- VIEW DETAILS
- VIEW AVAILABLE PROMO CODE
- CHECK AVAILABILITY

CLASS USED:

Customer Class:

It has only data members(check in date, month, year check out date, month, year, name, phone number, age, address, customer id, no of members, no of rooms).

Hotel Class :

It inherits customer in private mode

member functions are :

i. void addmin(string);

ii. void addtorecord(customer&); //add customer details to the file

iii. void adminlogin();

iv. void book(); //allows admin to book a room

v. double discount(int); //gives discount based on no of visits

vi. void genbill(int);

vii. int id(); //provides unique id for the customer

viii. void incemployees();

ix. void vacate();

x. void viewdetails(int); //for checking details of customer and to check availability

Room Class:

It has only data members.

Data members are customer,roomno,roomtype

FILES USED:

users.txt //contain details of all the customers

dates.txt //contains all dates in which rooms are booked

rooms.txt // details of all the rooms(name and other details of customer along
with roomno).

id.txt

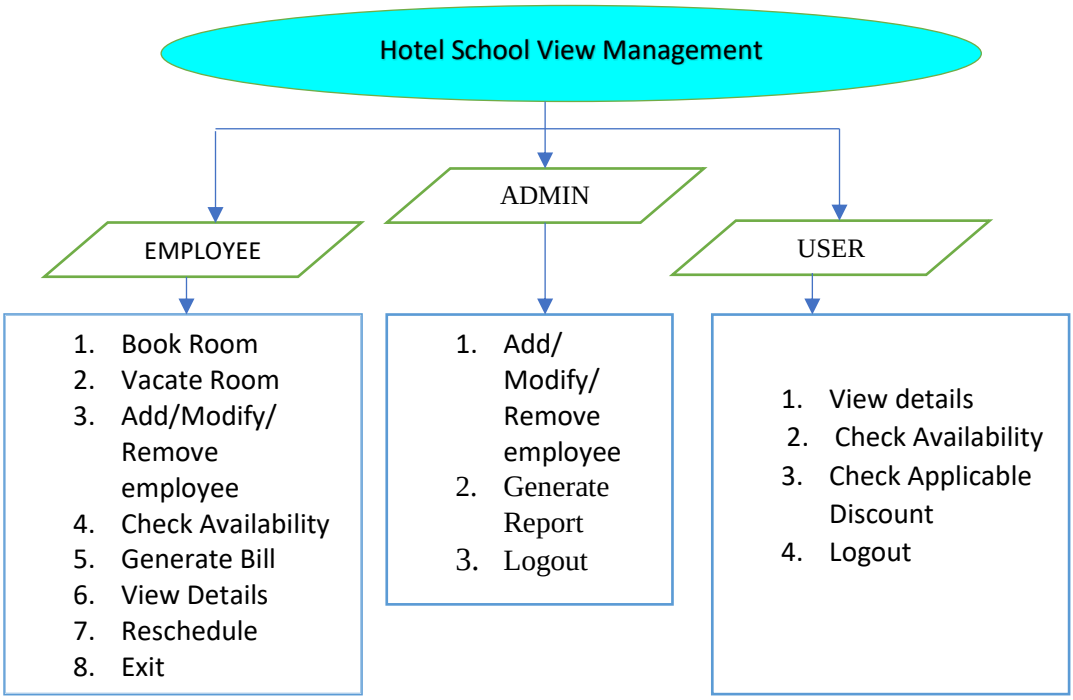
admin.txt //contain password of the admin(encrypted)

REPORT GENERATED:

generates all the details of customers who checked in and checked out along with the bill amount on a given date.

Project Planning

Flowchart of outsketch of programming modules



SHORTCOMINGS:

1. It cannot be used for managing multiple branches of our hotel, though it can be developed later.

2.This is not an online booking portal. Only employees of the hotel can book for the customers either through phone or in person.

3.Booking is not allowed after check in time of 12 noon for that day.

4. No cancellation is allowed, as money cannot be refunded.

SOURCE CODE:

```
1  ///HOTEL SCHOOLVIEW
2  ///PROJECT DONE BY ABISHEK.S AND AHMED SHAMSUDEEN, class 12-
A
3
4  #include<iostream>
5  #include<stdio.h>
6  #include<stdlib.h>
7  #include<string.h>
8  #include<fstream>
9  #define _WIN32_WINNT 0x0500        ///FOR FULL SCREEN VIEWING
10  #include<windows.h>
11  #include<dos.h>
12  #include<conio.h>
13  #include<bits/stdc++.h>
14  #include<time.h>
15  #include<graphics.h>
16  #include<cstring>
17
18  using namespace std;
19
20  ///CLASS DEFINITIONS.....
21  ///Class customer for storing details of each booking of a customer
22  class customer {
23  public:
24     char name[50];           ///Name of customer
25     char address[250];        ///Address of customer's residence
26     int age;                ///Age of customer as on the date of booking
27     int rtype;              ///room type: 1. A.C Deluxe  2. A.C Luxury  3.
NON-A.C------THERE ARE 10 ROOMS OF EACH TYPE
28     string phno;             ///customer's contact number
29     int memb;                ///number of members
30     int laundry;             ///customer's choice for laundry service:1 for
YES,0 for NO
31     int food;               ///customer's choice for food service:1 for YES,0
for NO
32     int cndate;              ///check-in date dd format
33     int cnmonth;             ///check-in month mm format
34     int cnyear;              ///check in year  yyyy format
35     int codate;              ///check-out date dd format
36     int comonth;             ///check-out month mm format
```

```
37      int coyear;              ///check out year yyyy format
38      int nroom;               ///number of rooms booked
39      int id;                  ///user identification number
40      ///Constructors:
41      customer(){
42          strcpy(name,"\0");
43          strcpy(address,"\0");
44          age=rtype=cndate=cnmonth=cnyear=codate=comonth=coyear=0;
45          phno="";
46          food=laundry=memb=0;
47          nroom=0;
48          id=0;
49      }
50      ///Functions.....
51      friend istream&  operator>>(istream&  str,customer&  a) {    ///To
input customer details from users.txt file
52          char ch;
53          str.get(ch);
54          if(ch!='\n'&&ch!='\0') str.unget();
55          str.getline((char*)&(a.name),50,'\n');
56          str.getline((char*)&(a.address),250,'\n');
57
str>>a.phno>>a.age>>a.rtype>>a.cndate>>a.cnmonth>>a.cnyear>>a.codate>
>a.comonth>>a.coyear>>a.nroom>>a.id>>a.laundry>>a.food>>a.memb;
58          return str;
59
60      }
61      friend ostream&  operator<<(ostream& str,const customer &a) {
///To output customer details to users.txt file
62          str.write((char*)&(a.name),strlen(a.name));
63          str<<'\n';
64          str.write((char*)&(a.address),strlen(a.address));
65          str<<'\n';
66          str<<a.phno<<' '<<a.age<<' '<<a.rtype<<' '<<a.cndate<<'
'<<a.cnmonth<<' '<<a.cnyear<<' '<<a.codate<<' '<<a.comonth<<'
'<<a.coyear<<' '<<' '<<a.nroom<<' '<<a.id<<' '<<a.laundry<<' '<<a.food<<'
'<<' '<<a.memb<<'\n';
67          return str;
68      }
69  };
70
71  ///Class room for storing status of each room
```

```
72  class room{
73  public:
74     int rno;       ///ROOM NO
75     char status;   ///'b'-BOOKED    'a'-AVAILABLE(EMPTY)
76     customer c;    ///CUSTOMER IN THAT ROOM
77  };
78
79  map<int,room> r;  ///This is to keep track of rooms and their status
80
81  ///Class hotel to take care of the hotel operations
82  class hotel:protected room{
83  protected:
84     vector<pair<string,string> > emps;  ///Hotel employee details:
user name,password
85  public:
86     ///Member Functions-prototypes
87     void addemp(string);
88     void dsearch();
89     void nsearch();
90     void addtorecord(customer&);
91     void emplogin();
92     int  available(int,int,int,int,int,int,int,int);
93     int nodays(int,int,int,int,int,int);
94     void book();
95     double discount(int);
96     string encDec(string& , char);
97     int full(int,int,int,int,int);
98     int genbill(int);
99     int genbill(int,int,int,int);
100     void homescreen();
101     int id();
102     void allroom(int);
103     void incemps();
104     int IsInRange(int,int,int,int,int,int,int,int,int);
105     void loginscreen();
106     void remodate(int,int,int,int,int,int,int,int);
107     void userlogin();
108     void usermanage(int);
109     void vacate(int);
110     void viewdetails(int);
111     int iscorrect(int,int,int);
112     int iscorrect(int,int,int,int,int,int);
```

```
113     int  checkdate(int,int,int,int,int,int);
114     void adminlogin();
115  };
116
117  ///MEMBER FUNCTION DEFINITIONS.....
118  ///Class room member functions
119  void hotel::allroom(int id=-1){     ///To allot rooms properly each time
program is closed and opened again
120     for(int i=100;i<=130;i++){
121     customer d;
122     r[i].status='a';
123     r[i].rno=i;
124     r[i].c=d;
125     }
126     fstream fin("rooms.txt",ios::in);
127     customer c;
128     time_t timer;
129     timer=time(NULL);
130     struct tm* timers=localtime(&timer);
131     int rn;char st;
132     ofstream fout;
133     int cnt=0;
134     cout<<"\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t"<<ctime(&timer);
135     cout<<"\n\n\t\t\t\t\tVACATING TODAY(ROOM NUMBERS) : ";
136     while(fin>>rn&&fin>>st&&fin>>c){
137        if(id!=-1){
138        if(c.codate==timers->tm_mday&&c.comonth==timers-
>tm_mon+1&&c.coyear==timers->tm_year+1900&&c.id==id){
139           r[rn].status='a';
140           customer d;
141           r[rn].c=d;
142           r[rn].rno=rn;
143        }
144        }
145        else{
146        if(c.codate==timers->tm_mday&&c.comonth==timers-
>tm_mon+1&&c.coyear==timers->tm_year+1900){
147           cout<<rn<<'('<<c.rtype<<")  ";
148           cnt++;
149           r[rn].status=st;
150           r[rn].rno=rn;
151           r[rn].c=c;
```

```
152         }
153         else{
154             if(c.cndate==timers->tm_mday&&c.cnmonth==timers-
>tm_mon+1&&c.cnyear==timers->tm_year+1900){
155                 r[rn].status='a';
156                 r[rn].rno=rn;
157                 customer d;
158                 r[rn].c=d;
159             }
160             else{
161             r[rn].status=st;
162             r[rn].rno=rn;
163             r[rn].c=c;
164             }
165         }
166         }
167     }
168     if(cnt==0) cout<<"--NIL--";
169     fin.close();
170     fin.open("users.txt");
171     fout.open("rooms.txt",ios::trunc);
172     int i1=100,i2=101,i3=102,j;
173     int ct=0;
174    cout<<"\n\n\t\t\t\t\tROOM ALLOTMENTS TODAY ";
175
176     while(fin>>c){
177         if(c.cndate==timers->tm_mday&&c.cnmonth==timers-
>tm_mon+1&&c.cnyear==timers-
>tm_year+1900&&iscorrect(c.cndate,c.cnmonth,c.cnyear)==0){
178             int cnt=0;
179             if(c.rtype==1) j=i1;
180             else if(c.rtype==2) j=i2;
181             else if(c.rtype==3) j=i3;
182             while(cnt<c.nroom){
183             while(r[j].status!='a') {j=j+3;}
184             r[j].rno=j;
185             r[j].status='b';
186             r[j].c=c;
187             cnt++;
188             }
189         }
190     }
```

```
 191     for(int i=100;i<=130;i++){
 192        fout<<r[i].rno<<" "<<r[i].status<<"\n"<<r[i].c<<"\n";
 193        if(r[i].status=='b'){
 194           ct++;
 195           cout<<"\n\t\t\t\t\t"<<r[i].rno<<'('<<r[i].c.rtype<<") "<<"--->"<<'
'<<r[i].c.id;
 196        }
 197     }
 198     if(ct==0) cout<<"---NIL---";
 199     cout<<"\n\n";
 200     fin.close();
 201     fout.close();
 202     if(id!=-1)
 203     system("pause");
 204  }
 205
 206  int hotel::full(int rtype,int n,int cd ,int cm,int cy){   ///To check if a
room of given type is vacant on a given day
 207      int a=0,b=0,c=0,d=0,rt=0;
 208      ifstream fin("dates.txt");
 209      while(!fin.eof()){
 210        fin>>a>>b>>d>>rt;
 211        if (a==cd&&b==cm&&d==cy&&rtype==rt)
 212           c++;
 213      }
 214      fin.close();
 215      if(c+n>10) return 0;
 216      else return 1;
 217  }
 218
 219  int hotel::iscorrect(int cnd,int cnm,int cny){    ///To check if booking is
allowed for the check in date
 220       time_t timer=time(NULL);
 221       struct tm new1;
 222
new1.tm_hour=12;new1.tm_min=2;new1.tm_sec=59;new1.tm_mon=cnm-
1;new1.tm_mday=cnd;new1.tm_year=cny-1900;
 223       double sec=difftime(mktime(&new1),timer);
 224       if(sec>=0) return 1;
 225       else return 0;
 226  }
 227
```

```
 228  int hotel::iscorrect(int cnd,int cnm,int cny,int cod,int com,int coy){
///To check if the check in date and check out date are proper in terms of
time
 229       struct tm new1;
 230
new1.tm_hour=12;new1.tm_min=2;new1.tm_sec=59;new1.tm_mon=cnm-
1;new1.tm_mday=cnd;new1.tm_year=cny-1900;
 231       struct tm new2;
 232
new2.tm_hour=12;new2.tm_min=2;new2.tm_sec=59;new2.tm_mon=com-
1;new2.tm_mday=cod;new2.tm_year=coy-1900;
 233       double sec=difftime(mktime(&new2),mktime(&new1));
 234       if(sec>=0) return 1;
 235       else return 0;
 236  }
 237
 238  int hotel::available(int rtype,int n,int cnd,int cnm,int cny,int cod,int
com,int coy){  ///To check if rooms of a given type are available
 239       int i=cnd , j=cnm,k=cny;                                        ///for
the entered dates
 240       while(i!=cod || j!=com||k!=coy){
 241         if(full(rtype,n,i,j,k)==0) return 0;
 242         if((i==31&&(j==1||j==3||j==5||j==7||j==8||j==10)) ||
(i==30&&(j==4||j==6||j==9||j==11)) ||
(i==28&&j==2&&k%4!=0)||(i==29&&j==2&&k%4==0))
 243           {i=0; j++;}
 244         else if(i==31&&j==12) {i=0;j=1;k++;}
 245         i++;
 246       }
 247       ofstream fout("dates.txt",ios::app);
 248       int c=0;
 249       while(c<n){
 250         i=cnd;
 251         j=cnm;
 252         k=cny;
 253         while(i!=cod || j!=com||k!=coy){
 254           fout<<i<<" "<<j<<" "<<k<<" "<<rtype<<"\n";
 255           if((i==31&&(j==1||j==3||j==5||j==7||j==8||j==10)) ||
(i==30&&(j==4||j==6||j==9||j==11)) ||
(i==28&&j==2&&k%4!=0)||(i==29&&j==2&&k%4==0))
 256             {i=0; j++;}
 257           else if(i==31&&j==12) {i=0;j=1;k++;}
```

```
258           i++;
259         }
260         c++;
261       }
262       fout.close();
263       return 1;
264   }
265
266   int hotel::nodays(int cnd,int cnm,int cny,int cod,int com,int coy){   ///To
find number of days between the check in and check out dates
267       int i=cnd,j=cnm,k=cny;
268       int nodays=0;
269       while(i!=cod||j!=com||k!=coy) {
270         if((i==31&&(j==1||j==3||j==5||j==7||j==8||j==10)) ||
(i==30&&(j==4||j==6||j==9||j==11)) ||
(i==28&&j==2&&k%4!=0)||(i==29&&j==2&&k%4==0))
271           {i=0; j++;}
272         else if(i==31&&j==12) {i=0;j=1;k++;}
273         i++;
274         nodays++;
275       }
276       return nodays;
277   }
278
279   int hotel::checkdate(int cnd,int cnm,int cny,int cod,int com,int coy){
///To check if the check in date and check out date are proper
280     int res=0;
281
if(cnd>=1&&cnm>=1&&cnm<=12&&(cnd<=31&&(cnm==1||cnm==3||cnm==5||
cnm==7||cnm==8||cnm==10||cnm==12)) ||
282         (cnd<=30&&(cnm==4||cnm==6||cnm==9||cnm==11)) ||
(cnd<=28&&cnm==2&&cny%4!=0)||(cnd<=29&&cnm==2&&cnm%4==0))
res++;
283
if(cod>=1&&com>=1&&com<=12&&(cod<=31&&(com==1||com==3||com==5||c
om==7||com==8||com==10||cnm==12)) ||
284         (cod<=30&&(com==4||com==6||com==9||com==11)) ||
(cod<=28&&com==2&&coy%4!=0)||(cod<=29&&com==2&&com%4==0)) res++;
285     return res;
286   }
287
288   double hotel::discount(int l) {   ///To find discount applicable
```

```
289       if(l==0) return 0;
290       else if(l==1) return 3;
291       else if(l==2) return 5;
292       else if(l<=5&&l>2) return 10;
293       else if(l<=10&&l>5) return 15;
294       else return 20;
295   }
296
297   void hotel::homescreen() {    ///To display the standard homescreen
298       system("COLOR B2");
299
cout<<"\n\t\t\t\t\t\t\t**********************************************";
300       cout<<"\n\t\t\t\t\t\t\t********** HOTEL SCHOOLVIEW
**********";
301
cout<<"\n\t\t\t\t\t\t\t**********************************************";
302       cout<<"\n\n\n";
303       cout<<"\t\t\t\t\t\t\t  KOTTUR GARDENS,\n\n\t\t\t\t\t\t\t\t\t
KOTTURPURAM,\n\n\t\t\t\t\t\t\t\t  CHENNAI-600024.";
304       cout<<"\n\n\n\t\t\t\tOUR HOTEL ALLOWS NO CANCELLATION OF
BOOKED ROOMS!!ONLY RESCHEDULING IS ALLOWED!!";
305       string a="admin",b="admin";
306       pair<string,string> p(a,b);
307       emps.push_back(p);
308       system("pause");
309       loginscreen();
310       return;
311   }
312
313   void hotel::loginscreen() {    ///To choose whether we are an employee
or customer or ADMIN
314       time_t timer;
315       timer=time(NULL);
316       system("COLOR B2");
317       int i=0;
318       while(i!=4) {
319           system("cls");
320           system("COLOR B2");
321           cout<<"\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t"<<ctime(&timer);
322
cout<<"\n\t\t\t\t\t\t\t**********************************************";
323           cout<<"\n\t\t\t\t\t\t\t*********  HOTEL   PAAR
```

```
**********";
 324
cout<<"\n\t\t\t\t\t\t\t**********************************************";
 325        cout<<"\n\n\n";
 326        cout<<"\t\t\t\t\t\tSELECT  : "
 327           <<"\n\t\t\t\t\t\t\t\t1.EMPLOYEE Login"
 328           <<"\n\t\t\t\t\t\t\t\t2.USER Login"
 329           <<"\n\t\t\t\t\t\t\t\t3.ADMIN Login"
 330           <<"\n\t\t\t\t\t\t\t\t4.EXIT";
 331        cin>>i;
 332        switch(i) {
 333           case 1:{
 334              emplogin();
 335           }
 336           break;
 337           case 2:{
 338              userlogin();
 339           }
 340           break;
 341           case 4:{
 342              system("cls");
 343              system("COLOR 07");
 344              time_t timer1;
 345              timer1=time(NULL);
 346
cout<<"\t\t\t\t\t\t\t\t
```

```
358             delay(500);
359             system("color 47");
360             delay(500);
361             system("color 57");
362             delay(500);
363             system("color 67");
364             delay(500);
365             system("color 07");
366             delay(500);
367         }
368         break;
369         case 3: {
370             system("cls");
371             adminlogin();
372         }
373         break;
374         default:
375             cout<<"\n\n\t\t\t\t\tENTER CORRECTLY : ";
376             delay(2000);
377       }
378     }
379 }
380
381 void hotel::viewdetails(int id){   ///To view details of a customer
382     ifstream fin("users.txt");
383     customer c;
384     while(!fin.eof()) {
385         fin>>c;
386         if(c.id==id) break;
387     }
388     system("cls");
389     time_t timer;
390     timer=time(NULL);
391     system("COLOR B2");
392     cout<<"\t\t\t\t\t\t\t\t\t\t"<<ctime(&timer);
393
cout<<"\n\t\t\t\t\t\t\t**********************************************";
394     cout<<"\n\t\t\t\t\t\t\t*********** HOTEL PAAR
**********";
395
cout<<"\n\t\t\t\t\t\t\t**********************************************";
396     cout<<"\n\n\n\t\t\t\tNAME : ";
```

```
397       puts(c.name);
398       cout<<"\n\t\t\t\tADDRESS : ";
399       puts(c.address);
400       cout<<"\n\t\t\t\tAGE : "<<c.age<<"\n\t\t\t\tID : "<<c.id<<'\n';
401       system("pause");
402  }
403
404  void hotel::userlogin() {
405       system("cls");
406       time_t timer;
407       timer=time(NULL);
408       system("COLOR B2");
409       cout<<"\t\t\t\t\t\t\t\t\t\t"<<ctime(&timer);
410
cout<<"\n\t\t\t\t\t\t\t**********************************************";
411       cout<<"\n\t\t\t\t\t\t\t*********** HOTEL PAAR
**********";
412
cout<<"\n\t\t\t\t\t\t\t**********************************************";
413       int k=0,i=1;
414       while(i==1){
415         cout<<"\n\n\n\t\t\t\t\tEnter your ID : ";
416         cin>>k;
417         int l=0;
418         ifstream fin("users.txt");
419         customer c;
420         system("cls");
421         cout<<"\n\n\n\n\n\n\t\t\t\t\t\tSearching....";
422         delay(1000);
423         cout<<".";
424         delay(1000);
425         cout<<"..";
426         delay(1000);
427         cout<<"..";
428         while(fin>>c) {
429           if(c.id==k){
430              l++;
431              break;
432           }
433         }
434         fin.close();
435         if(l==0) {
```

```
436           i=0;
437           system("cls");
438           cout<<"\n\n\n\t\t\t\t\tNO SUCH RECORD!!Click 1 to enter again 2 to
exit";
439           while(i!=1&&i!=2){
440             cin>>i;
441             if (i==2) return;
442             else if(i!=1) {
443                 system("cls");
444                 cout<<"\n\n\n\t\t\t\t\tEnter proper number.....(1 to enter 2 to
exit)";
445                 delay(2000);
446             }
447           }
448         }
449         else{
450           int j=0;
451           while(j!=4) {
452             system("cls");
453             system("COLOR B2");
454             time_t timer1;
455             timer1=time(NULL);
456             struct tm* time1=localtime(&timer1);
457             system("COLOR B2");
458             cout<<"\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t"<<ctime(&timer1);
459             cout<<"\n\n\t\t\t\t\t\tWELCOME ";
460             puts(c.name);
461             cout<<"\n\t\t\t\t\t\tID : "<<c.id;
462             fin.open("rooms.txt");
463             int rn,cnt=0;
464             char st;
465             customer d;
466             while(fin>>rn&&fin>>st&&fin>>d){
467               if(d.id==c.id) {
468                 if(cnt==0)
469                   cout<<"\n\t\t\t\t\t\tROOMS ALLOTTED: ";
470                 cout<<rn<<'('<<d.rtype<<")  ";
471                 cnt++;
472               }
473             }
474             cout<<"\n\n";
475             fin.close();
```

```
476             fin.open("rooms.txt");
477             int roo=0;
478             cnt=0;
479             while(fin>>rn&&fin>>st&&fin>>d){
480               if(d.codate==time1->tm_mday&&d.comonth==time1-
>tm_mon+1&&d.coyear==time1->tm_year+1900&&d.id==c.id) {
481                 if(cnt==0) cout<<"\n\t\t\t\t\tROOMS TO BE VACATED: ";
482                 cout<<rn<<'('<<d.rtype<<")  ";
483                 cnt++;
484               }
485             }
486             if(cnt!=0)
487               cout<<"\n\t\t\t\t\tHOPE YOU ENJOYED YOUR STAY WITH US!!";
488             fin.close();
489
cout<<"\n\t\t\t\t\t\t**********************************************";
490             cout<<"\n\t\t\t\t\t\t********** USER   PORTAL
**********";
491
cout<<"\n\t\t\t\t\t\t**********************************************";
492             cout<<"\n\n\n";
493             cout<<"\t\t\tSELECT  :\n ";
494             cout<<"\n\n\t\t\t1.VIEW DETAILS "
495                <<"\n\t\t\t2.VIEW AVAILABLE DISCOUNT "
496                <<"\n\t\t\t3.CHECK AVAILABILITY "
497                <<"\n\t\t\t4.LOGOUT ";
498             cout<<"\n\t\t\tENTER YOUR CHOICE.....";
499             cin>>j;
500             switch(j){
501               case 1:{
502                  system("cls");
503                  viewdetails(c.id);
504               }
505               break;
506               case 2:{
507                  system("cls");
508                  fin.open("users.txt");
509                  int l=0;
510                  customer d;
511                  while(fin>>d)
512                    if(d.id==c.id) l++;
513                  fin.close();
```

```
514                 cout<<"\n\n\t\t\t\tYOU ARE ELIGIBLE FOR A DISCOUNT OF :
"<<discount(l)<<"%";
515                 system("pause");
516             }
517             break;
518             case 3:{
519                 system("cls");
520                 int cnd,cnm,com,cod,coy,cny,n,rt;
521                 int j=1;
522                 while(j==1){
523                   cout<<"\n\n\t\t\t\tEnter the check in date,check in
month,check in year:";
524                   cin>>cnd>>cnm>>cny;
525                   cout<<"\n\t\t\t\t\tEnter the check out date,check out
month,check out year:";
526                   cin>>cod>>com>>coy;
527
if(iscorrect(cnd,cnm,cny)==0||iscorrect(cnd,cnm,cny,cod,com,coy)==0) {
528                     system("cls");
529                     cout<<"\n\n\n\t\t\t\tCAN'T CHECK AVAILABIITY FOR THE
ENTERED DATE!!";
530                     cout<<"\n\t\t\t\t\t\tCLICK 1 TO ENTER ANOTHER
DATE,ANY OTHER NUMBER TO EXIT";
531                     cin>>j;
532                   }
533                   else j=-1;
534                 }
535                 if(j!=-1) break;
536                 cout<<"\n\t\t\t\tEnter number of rooms required in the
selected dates : ";
537                 cin>>n;
538                 cout<<"\n\t\t\t\tEnter the room type(1. A.C Deluxe  2. A.C
Luxury  3. NON-A.C): ";
539                 cin>>rt;
540                 int k=available(rt,n,cnd,cnm,cny,cod,com,coy);
541                 if(k==1) {
542                    system("cls");
543                    cout<<"\n\n\n\n\t\t\t\tROOMS AVAILABLE IN THE
SELECTED DATES!!!HURRY UP AND BOOK FAST!!";
544                 }
545                 else{
546                    system("cls");
```

```
547                     cout<<"\n\n\n\n\t\t\t\tSORRY!!SELECTED NUMBER OF
ROOMS NOT AVAILABLE IN THE SELECTED DATES....\n\n\t\tCHECK FOR AN
ALTERNATIVE!!";
548                 }
549                 cout<<"\n";
550                 system("pause");
551             }
552             break;
553             case 4:{
554                 system("cls");
555                 cout<<"\n\n\n\n\n\n\t\t\t\t\t\t\tLOGGING YOU OUT.....";
556                 i=-1;
557                 delay(1000);
558             }
559             break;
560             default:
561                 system("cls");
562                 cout<<"\n\n\n\n\t\t\t\tENTER CORRECTLY!!";
563                 delay(2000);
564          }
565         }
566        }
567       }
568     return;
569 }
570
571 string hotel::encDec(string& a,char key) {    ///To encrypt and decrypt
the employee password
572     string out = a;
573     for (int i = 0; i < out.size(); i++)
574         out[i] = out[i] ^ key;
575     return out;
576 }
577
578 void hotel::addtorecord(customer &c){    ///To add a customer object to
file
579     ofstream fout("users.txt",ios::app);
580     fout<<c;
581     fout.close();
582 }
583
584 int hotel::id() {    ///To assign new id for the customer
```

```
    int v=1200;
    fstream file("id.txt",ios::in);
    file>>v;
    v++;
    file.close();
    file.open("id.txt",ios::out|ios::trunc);
    file<<v<<"\n";
    file.close();
    return v;
}
    void hotel::adminlogin(){  ///for logging into  the admin account
        int i=-1;
      while(i!=0) {
        system("cls");
        time_t timer;
        timer=time(NULL);
        system("COLOR B2");
        cout<<"\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t"<<ctime(&timer);
cout<<"\n\t\t\t\t\t\t\t*********************************************";
        cout<<"\n\t\t\t\t\t\t\t*************  HOTEL   PAAR
****************";
cout<<"\n\t\t\t\t\t\t\t*********************************************";
        cout<<"\n\n\n";
        string a,b;
        char c;
        cout<<"\n\n\t\t\t\tUSERNAME : ";
        cin>>a;
        cout<<"\n\n\t\t\t\tPASSWORD : ";
        c=_getch();
        while(c!='\r'&&c!=' '&&c!='\n') {
            if(c!='\b'){
            cout<<"*";
            b.push_back(c);
            }
            else if(c=='\b'){cout<<'\b'<<" "<<'\b';b.erase(b.size()-1,1);}
            c=_getch();
        }
        if(a=="admin"&&b=="admin") i=0;
        system("cls");
        if(i!=0){
```

```
624         cout<<"\n\n\n\n\t\tWRONG USERNAME AND/OR PASSWORD!!!!!DO
YOU WANT TO ENTER AGAIN? (1.YES,2.NO) ";
625         cin>>i;
626         }
627         if (i==2) {return;}
628       }
629       system("cls");
630       cout<<"\n\n\n\n\n\n\t\t\t\tPROCEEDING.";
631         delay(1000);
632         cout<<".";
633         delay(1000);
634         cout<<"..";
635         delay(1000);
636         cout<<"..";
637       while(i!=3) {
638         system("cls");
639         system("COLOR B2");
640         time_t timer1;
641         timer1=time(NULL);
642         cout<<"\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t"<<ctime(&timer1);
643         cout<<"\n\n\t\t\t\tWELCOME ";
644         cout<<"admin";
645
cout<<"\n\t\t\t\t\t\t\t**********************************************";
646         cout<<"\n\t\t\t\t\t\t\t*************  HOTEL   PAAR
*****************";
647
cout<<"\n\t\t\t\t\t\t\t**********************************************";
648         cout<<"\n\n\n";
649         cout<<"\t\t\t\t\tSELECT YOUR CHOICE : "
650         <<"\n\t\t\t\t\t\t1.ADD/MODIFY/REMOVE EMPLOYEE"
651         <<"\n\t\t\t\t\t\t2.GENERATE REPORT"
652         <<"\n\t\t\t\t\t\t3.EXIT";
653         cin>>i;
654         switch(i){
655           case 1: addemp("admin");
656           break;
657           case 2: {
658             system("cls");
659             string dt;
660             int id,cnt=0;
661             double revenue;
```

```
662             fstream fin("revenue.txt",ios::in);
663             fin.get();
664             while(getline(fin,dt,'\n')&&fin>>id&&fin>>revenue){
665                cout<<"\n\n\t\t\t\t\tDATE AND TIME OF VACATING:
"<<dt<<"\n\t\t\t\t\tID: "<<id<<"\n\t\t\t\t\tAMOUNT: "<<revenue;
666                cnt++;
667                fin.get();
668             }
669             cout<<dt<<endl;
670             if(cnt==0) cout<<"\n\n\t\t\t\t\t\tNO REVENUE UPDATED TILL
NOW!!";
671             fin.close();
672             system("pause");
673          }
674          break;
675          case 3:{
676             system("cls");
677             cout<<"\n\n\n\t\t\t\t\tLOGGING YOU OUT....";
678             delay(500);
679             cout<<"...";
680             delay(750);
681             cout<<"...";
682             delay(750);
683             cout<<"..";
684             delay(500);
685          }
686          break;
687          default:{
688             cout<<"\n\n\t\t\t\t\t\tENTER PROPER NUMBER!!";
689          }
690       }
691    }
692 }
693
694 void hotel::emplogin() { ///for logging into employee account
695       int i=-1;
696       vector<pair<string,string> >::iterator it=emps.begin();
697       while(i!=0) {
698          system("cls");
699          time_t timer;
700          timer=time(NULL);
701          system("COLOR B2");
```

```
 702            cout<<"\t\t\t
```

```
740         cout<<"..";
741         i=0;
742         while(i!=8) {
743            system("cls");
744            system("COLOR B2");
745            time_t timer1;
746            timer1=time(NULL);
747            cout<<"\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t"<<ctime(&timer1);
748            cout<<"\n\n\t\t\t\tWELCOME ";
749            cout<<it->first;
750
cout<<"\n\t\t\t\t\t\t\t\t**********************************************";
751            cout<<"\n\t\t\t\t\t\t\t\t*************  HOTEL   PAAR
*****************";
752
cout<<"\n\t\t\t\t\t\t\t\t**********************************************";
753            cout<<"\n\n\n";
754            cout<<"\t\t\t\t\t\tSELECT YOUR CHOICE : "
755            <<"\n\t\t\t\t\t\t\t1.BOOK ROOM"
756            <<"\n\t\t\t\t\t\t\t2.VACATE ROOM"
757            <<"\n\t\t\t\t\t\t\t3.VIEW CUSTOMER DETAILS"
758            <<"\n\t\t\t\t\t\t\t4.CHECK AVAILABILITY"
759            <<"\n\t\t\t\t\t\t\t5.ADD/MODIFY/REMOVE EMPLOYEE"
760            <<"\n\t\t\t\t\t\t\t6.GENERATE BILL"
761            <<"\n\t\t\t\t\t\t\t7.RESCHEDULE"
762            <<"\n\t\t\t\t\t\t\t8.LOGOUT";
763            cin>>i;
764            switch(i) {
765               case 1:{
766                  system("cls");
767                  cout<<"\n\n\n\n\n\t\t\tPROCEEDING TO BOOKING
PORTAL....";
768                  delay(1000);
769                  cout<<"...";
770                  delay(500);
771                  cout<<"...";
772                  delay(500);
773                  book();
774               }
775               break;
776               case 2:{
777                  system("cls");
```

```
778                 cout<<"\n\n\n\n\n\t\t\t\tPLEASE WAIT .....";
779                 delay(2000);
780                 system("cls");
781                 int id;
782                 cout<<"\n\t\t\t\tEnter user id to vacate!!";
783                 cin>>id;
784                 vacate(id);
785              }
786              break;
787              case 3:{
788                 system("cls");
789                 int z=0;
790                 while(z!=1&&z!=2){
791                   cout<<"\n\n\t\t\t\tDATE SEARCH OR NAME
SEARCH?(1.DATE SEARCH,2.NAME SEARCH)";
792                   cin>>z;
793                   system("cls");
794                   if(z!=1&&z!=2)
795                   cout<<"\n\n\t\t\t\tENTER PROPER DETAILS";
796                 }
797                 if (z==1) {
798                    dsearch();
799                 }
800                 else {
801                    nsearch();
802                 }
803              }
804              break;
805              case 4: {
806                 system("cls");
807                 int cnd,cnm,com,cod,coy,cny,n,rt;
808                 int j=1;
809                 while(j==1){
810                   cout<<"\n\n\t\t\t\tEnter the check in date,check in
month,check in year:";
811                   cin>>cnd>>cnm>>cny;
812                   cout<<"\n\t\t\t\tEnter the check out date,check out
month,check out year:";
813                   cin>>cod>>com>>coy;
814
if(iscorrect(cnd,cnm,cny)==0||iscorrect(cnd,cnm,cny,cod,com,coy)==0) {
815                     system("cls");
```

```
816                     cout<<"\n\n\n\t\t\t\tCAN'T CHECK AVAILABIITY FOR THE
ENTERED DATE!!";
817                     cout<<"\n\t\t\t\tCLICK 1 TO ENTER ANOTHER DATE,ANY
OTHER NUMBER TO EXIT";
818                     cin>>j;
819                   }
820                   else j=-1;
821                   }
822                   if(j!=-1) break;
823                   cout<<"\n\t\t\t\tEnter number of rooms required in the
selected dates : ";
824                   cin>>n;
825                   cout<<"\n\t\t\t\tEnter the room type(1. A.C Deluxe  2. A.C
Luxury  3. NON-A.C): ";
826                   cin>>rt;
827                   int k=available(rt,n,cnd,cnm,cny,cod,com,coy);
828                   if(k==1) {
829                      system("cls");
830                      cout<<"\n\n\n\n\t\t\t\tROOMS AVAILABLE IN THE
SELECTED DATES!!!HURRY UP AND BOOK FAST!!";
831                   }
832                   else{
833                     system("cls");
834                     cout<<"\n\n\n\n\t\t\t\tSORRY!!SELECTED NUMBER OF
ROOMS NOT AVAILABLE IN THE SELECTED DATES....\n\n\t\tCHECK FOR AN
ALTERNATIVE!!";
835                   }
836                   cout<<"\n";
837                   system("pause");
838             }
839             break;
840             case 5: {
841                addemp(it->first);
842             }
843             break;
844             case 6: {
845                system("cls");
846                int checkd=0,checkg=0,id,cod,com,coy;
847                while(checkd==0||checkg==0){
848                   cout<<"\n\n\t\t\t\tEnter your ID: ";
849                   cin>>id;
850                   cout<<"\n\t\t\t\tEnter check out date,month and year: ";
```

```
851                     cin>>cod>>com>>coy;
852                     checkd=1;
853                     checkg=1;
854                     if(checkdate(cod,com,coy,1,1,2018)!=2){
855                        checkd=0;
856                        cout<<"\n\t\t\t\tEnter proper dates!!";
857                        delay(1500);
858                     }
859                     checkg=genbill(id,cod,com,coy);
860                     if(checkg==0){
861                        cout<<"\n\t\t\t\tEnter proper details!!";
862                        delay(1500);
863                     }
864                  }
865               }
866               break;
867               case 7:{
868                  usermanage(3);
869               }
870               break;
871               case 8: {
872                  system("cls");
873                  cout<<"\n\n\n\n\n\n\t\t\t\tLOGGING YOU OUT ....";
874                  delay(1000);
875                  cout<<"...";
876                  delay(500);
877                  cout<<"...";
878                  delay(500);
879                  return;
880               }
881               break;
882               default:
883                  cout<<"\n\n\t\t\t\tENTER CORRECTLY!!";
884                  delay(2000);
885            }
886         }
887   }
888
889   void hotel::addemp(string its) {   ///For adding employee
890         system("cls");
891         system("COLOR B2");
892
```

```
cout<<"\n\t\t\t\t\t\t\t\t**********************************************
*";
 893        cout<<"\n\t\t\t\t\t\t\t\t********** EMPLOYEE   PORTAL
**********";
 894
cout<<"\n\t\t\t\t\t\t\t\t**********************************************
*";
 895        cout<<"\n\n\n";
 896        string nam=its,pass;
 897        cout<<"\t\t\t\tEnter the username : ";
 898        cin.ignore(1,'\n');
 899        while(nam==its){
 900        getline(cin,nam);
 901        if(nam==its) cout<<"\n\t\t\t\t\tYOU CANT ADD OR MODIFY
YOURSELF!!....ENTER PROPER NAME!!";
 902        }
 903        int i=0;
 904        vector<pair<string,string> >::iterator it=emps.begin();
 905        for (;it!=emps.end();it++){
 906           if (it->first==nam) {
 907              while(i!=1 && i!=2 &&i!=3) {
 908                 if(nam!="admin")
 909                 {
 910                    cout<<"\n\t\t\t\t\tThe username exists.....click 1 to change
password 2 to exit 3 to remove employee";
 911                    cin>>i;
 912                 }
 913                 else{
 914                    cout<<"\n\t\t\t\t\tYOU CANT MODIFY OR REMOVE
ADMIN!!";
 915                    delay(2000);
 916                    return;
 917                 }
 918                 if(i==1) {cout<<"\n\t\t\t\t\tEnter the new
password";cin>>pass;it->second=pass;}
 919                 else if (i==2) return;
 920                 else if(i!=3){
 921                    system("cls");
 922                    cout<<"\n\n\n\t\t\t\t\tEnter proper number.....";
 923                    delay(2000);
 924                    system("cls");
 925                 }
```

```
926             }
927          }
928       }
929       if(i==0) {
930          cout<<"\n\n\t\t\t\t\tEnter the password : ";
931          getline(cin,pass);
932          srand(time(NULL));
933          char k=rand()%257;
934          string tn=encDec(nam,k),tp=encDec(pass,k);
935          ofstream fout("emp.txt",ios::app);
936          fout<<tn<<' '<<tp<<' '<<k<<'\n';
937          emps.push_back(make_pair(nam,pass));
938          fout.close();
939          cout<<"\n\n\t\t\t\t\tSUCCESSFULLY ADDED EMPLOYEE!!";
940          delay(2000);
941       }
942       else if (i==1) {
943          fstream file1("emp.txt",ios::in);
944          fstream file2("temp.txt",ios::out);
945          string tnam,tpass;
946          char tmp,k;
947          while(file1>>tnam&&file1>>tpass&&file1>>tmp){
948             if (encDec(tnam,tmp)==nam) k=tmp;
949             else file2<<tnam<<' '<<tpass<<' '<<tmp<<'\n';
950          }
951          file2<<encDec(nam,k)<<' '<<encDec(pass,k)<<' '<<k<<'\n';
952          file1.close();
953          file2.close();
954          remove("emp.txt");
955          rename("temp.txt","emp.txt");
956          for(int i=0;i<emps.size();i++){
957             if(emps[i].first==nam) {emps[i].first="";emps[i].second="";}
958          }
959          cout<<"\n\n\t\t\t\t\tSUCCESSFULLY CHANGED PASSWORD!!";
960          delay(2000);
961       }
962       else if(i==3) {
963          fstream file1("emp.txt",ios::in);
964          fstream file2("temp.txt",ios::out);
965          string tnam,tpass;
966          char tmp;
967          while(file1>>tnam&&file1>>tpass&&file1>>tmp){
```

```
968             if (encDec(tnam,tmp)==nam);
969             else file2<<tnam<<' '<<tpass<<' '<<tmp<<'\n';
970          }
971          file1.close();
972          file2.close();
973          remove("emp.txt");
974          rename("temp.txt","emp.txt");
975          for(int i=0;i<emps.size();i++){
976             if(emps[i].first==nam) {emps[i].first="";emps[i].second="";}
977          }
978          cout<<"\n\t\t\t\t\tSUCCESSFULLY REMOVED EMPLOYEE!!";
979          delay(2000);
980       }
981 }
982
983 void hotel::usermanage(int key=1) {   ///To manage bookings
984       system("cls");
985       system("COLOR B2");
986       time_t timer1;
987       timer1=time(NULL);
988       cout<<"\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t"<<ctime(&timer1);
989
cout<<"\n\t\t\t\t\t\t\t**********************************************";
990       cout<<"\n\t\t\t\t\t\t\t********** EMPLOYEE PORTAL
**********";
991
cout<<"\n\t\t\t\t\t\t\t**********************************************";
992       if (key==1) {
993          customer c;
994          cout<<"\n\t\t\t\tEnter name : ";
995          cin.ignore(1,'\n');
996          gets(c.name);
997          cout<<"\n\t\t\t\tEnter address : ";
998          gets(c.address);
999          cout<<"\n\t\t\t\tEnter age : ";
1000         cin>>c.age;
1001         cout<<"\n\t\t\t\tEnter number of members : ";
1002         cin>>c.memb;
1003         cout<<"\n\t\t\t\tDo you want laundry services(RS.50 per day per
person)(1 for YES,2 for NO) : ";
1004         cin>>c.laundry;
1005         cout<<"\n\t\t\t\tDo you want food services(RS.800 per day per
```

```
person)(1 for YES,2 for NO) : ";
1006            cin>>c.food;
1007            int chumm=1;
1008            while(chumm==1){
1009               cout<<"\n\t\t\t\tEnter Contact Number: ";
1010               cin>>c.phno;
1011               if(c.phno.length()==8) cout<<"\n\t\t\t\tENTER YOUR PHONE
NUMBER WITH PROPER STD CODE: ";
1012               else if(c.phno.length()!=10&&c.phno.length()!=11){
cout<<"\n\t\t\t\tENTER PROPER PHONE NUMBER....1 to enter again any other
number to exit";
1013               cin>>chumm;}
1014               else chumm=2;
1015               if(chumm!=1&&chumm!=2) return;
1016            }
1017            cout<<"\n\t\t\t\tEnter Room type (1. A.C Deluxe  2. A.C Luxury  3.
NON-A.C) ";
1018            cin>>c.rtype;
1019            int j=1,s=1;
1020           while(j==1||s==1){
1021            cout<<"\n\t\t\t\tEnter check in date,month,year (DD MM YYYY) : ";
1022            cin>>c.cndate>>c.cnmonth>>c.cnyear;
1023            cout<<"\n\t\t\t\tEnter check out date,month,year (DD MM YYYY) :
";
1024            cin>>c.codate>>c.comonth>>c.coyear;
1025
if(iscorrect(c.cndate,c.cnmonth,c.cnyear)==0||iscorrect(c.cndate,c.cnmonth,c.cnye
ar,c.codate,c.comonth,c.coyear)==0||
1026
checkdate(c.cndate,c.cnmonth,c.cnyear,c.codate,c.comonth,c.coyear)!=2||nodays(
c.cndate,c.cnmonth,c.cnyear,c.codate,c.comonth,c.coyear)==0) {
1027               system("cls");
1028               cout<<"\n\n\n\t\t\t\tBOOKING NOT ALLOWED FOR THE
ENTERED DATE!!";
1029               cout<<"\n\t\t\t\tCLICK 1 TO ENTER ANOTHER DATE,2 TO EXIT";
1030               cin>>j;
1031               if(j==2) return;
1032            }
1033            else{
1034               j=0;
1035               int chumma=1;
1036               while(chumma==1){
```

```
1037                cout<<"\n\n\t\t\t\tEnter number of rooms required : ";
1038                cin>>c.nroom;
1039                if(c.memb/c.nroom>3) cout<<"\n\n\t\t\t\tRequired rooms not
enough according to our policy(A MAXIMUM OF THREE PER ROOM ONLY)!!";
1040                else chumma=2;
1041             }
1042             int
k=available(c.rtype,c.nroom,c.cndate,c.cnmonth,c.cnyear,c.codate,c.comonth,c.coy
ear);
1043             if(k==0) {
1044                system("cls");
1045                cout<<"\n\t\t\t\tSORRY!!ENTERED NUMBER OF ROOMS NOT
AVAILABLE IN THE SELECTED DATES AND ROOM TYPE!!";
1046                cout<<"\n\t\t\t\tCLICK 1 TO ENTER ANOTHER DATE AND/OR
ROOMS,2 TO EXIT";
1047                cin>>s;
1048                if(s==2) return;
1049             }
1050             else if (k==1) {
1051                s=0;
1052                system("cls");
1053                cout<<"\n\n\n\n\t\t\t\tCONGRATULATIONS!!YOUR ROOMS
HAVE BEEN BOOKED!!";
1054                c.id=id();
1055                cout<<"\n\n\t\t\t\tYOUR ID is : "<<c.id;
1056                addtorecord(c);
1057                system("pause");
1058                genbill(c.id,c.codate,c.comonth,c.coyear);
1059                cout<<"\n\n";
1060             }
1061          }
1062         }
1063       }
1064       else if (key==2) {
1065          int m=0;
1066          customer d,c;
1067          int l=0;
1068          cout<<"\n\n\t\t\t\tEnter user ID : ";
1069          while(l==0){
1070          cin>>m;
1071          ifstream fin("users.txt");
1072          while(l==0 && fin>>d){
```

```
1073            if(d.id == m) {c=d;
1074            l++;}
1075         }
1076         fin.close();
1077         if (l==0) {
1078            system("cls");
1079            int i=1;
1080            cout<<"\n\n\t\t\t\tWRONG USER ID!!TYPE 1 TO ENTER AGAIN
AND ANY OTHER NUMBER TO EXIT: ";
1081            cin>>i;
1082            if(i!=1) return;
1083            else
1084            cout<<"\n\n\n\t\t\t\tENTER CORRECT ID : ";
1085         }
1086         }
1087         system("cls");
1088         cout<<"\n\n\t\t\t\tEnter age: ";
1089         cin>>c.age;
1090         cout<<"\n\t\t\t\tEnter number of members : ";
1091         cin>>c.memb;
1092         cout<<"\n\t\t\t\tDo you want laundry services(RS.50 per day per
person)(1 for YES,2 for NO) : ";
1093         cin>>c.laundry;
1094         cout<<"\n\t\t\t\tDo of days you want food services(RS.800 per day
per person)(1 for YES,2 for NO) : ";
1095         cin>>c.food;
1096         int chumm=1;
1097         while(chumm==1){
1098            c.phno="";
1099            cout<<"\n\t\t\t\tEnter New Contact Number: ";
1100            cin>>c.phno;
1101            if(c.phno.length()==8){ cout<<"\n\t\t\t\tENTER YOUR PHONE
NUMBER WITH PROPER STD CODE...PRESS ANY KEY....";}
1102            else if(c.phno.length()!=10&&c.phno.length()!=11){
cout<<"\n\t\t\t\tENTER PROPER PHONE NUMBER....1 to enter again, any other
number to exit";
1103            cin>>chumm;
1104            }
1105            else chumm=2;
1106            if(chumm!=1&&chumm!=2) return;
1107         }
1108         cout<<"\n\n\t\t\t\tEnter room type (1. A.C Deluxe  2. A.C Luxury
```

```
3. NON-A.C): ";
1109            cin>>c.rtype;
1110            int j = 1,s = 1;
1111            while(j == 1 || s == 1){
1112            cout<<"\n\t\t\t\tEnter check in date,month,year (DD MM YYYY) : ";
1113            cin>>c.cndate>>c.cnmonth>>c.cnyear;
1114            cout<<"\n\t\t\t\tEnter check out date,month,year (DD MM YYYY) :
";
1115            cin>>c.codate>>c.comonth>>c.coyear;
1116
if(iscorrect(c.cndate,c.cnmonth,c.cnyear)==0||iscorrect(c.cndate,c.cnmonth,c.cnye
ar,c.codate,c.comonth,c.coyear)==0||
1117
checkdate(c.cndate,c.cnmonth,c.cnyear,c.codate,c.comonth,c.coyear)!=2||nodays(
c.cndate,c.cnmonth,c.cnyear,c.codate,c.comonth,c.coyear)==0) {
1118               system("cls");
1119               cout<<"\n\n\n\t\t\t\tBOOKING NOT ALLOWED FOR ENTERED
DATES!!!";
1120               cout<<"\n\n\n\t\t\t\tCLICK 1 TO ENTER ANOTHER DATE,2 TO
EXIT";
1121               cin>>j;
1122               if(j==2) return;
1123            }
1124            else{
1125               j=0;
1126               int chumma=1;
1127               while(chumma==1){
1128                  cout<<"\n\n\t\t\t\tEnter number of rooms required : ";
1129                  cin>>c.nroom;
1130                  if(c.memb/c.nroom>3) cout<<"\n\n\t\t\t\tRequired rooms not
enough according to our policy(A MAXIMUM OF THREE PER ROOM ONLY)!!";
1131                  else chumma=2;
1132               }
1133               int
k=available(c.rtype,c.nroom,c.cndate,c.cnmonth,c.cnyear,c.codate,c.comonth,c.coy
ear);
1134               if(k==0) {
1135                  system("cls");
1136                  cout<<"\n\t\t\t\tSORRY!!ENTERED NUMBER OF ROOMS NOT
AVAILABLE IN THE SELECTED DATES AND ROOM TYPE!!";
1137                  cout<<"\n\t\t\t\tCLICK 1 TO ENTER ANOTHER DATE AND/OR
ROOMS,2 TO EXIT";
```

```
1138                cin>>s;
1139                if(s==2) return;
1140             }
1141             else if (k==1) {
1142                s=0;
1143                system("cls");
1144                cout<<"\n\n\n\n\t\t\t\tCONGRATULATIONS!!YOUR ROOMS
HAVE BEEN BOOKED!!";
1145                cout<<"\n\t\t\t\tYou are eligible for discount of
"<<discount(l)<<"%"<<"(as of now)"<<endl;
1146                addtorecord(c);
1147                system("pause");
1148                genbill(c.id,c.codate,c.comonth,c.coyear);
1149             }
1150          }
1151        }
1152       }
1153       else if(key==3) {
1154          int
cnd1,cnm1,cod1,com1,cnd2,cnm2,cod2,com2,cny1,cny2,coy1,coy2,n1=0,n2,i=0,j=
0;
1155          system("cls");
1156          system("COLOR B2");
1157          time_t timer1;
1158          timer1=time(NULL);
1159          cout<<"\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t"<<ctime(&timer1);
1160
cout<<"\n\t\t\t\t\t\t\t**************************************************";
1161          cout<<"\n\t\t\t\t\t\t\t********** EMPLOYEE PORTAL
**********";
1162
cout<<"\n\t\t\t\t\t\t\t**************************************************";
1163
1164          int m=0;
1165             fstream fin;
1166             customer d,c;
1167             int l=0;
1168             cout<<"\n\n\t\t\t\tEnter user ID : ";
1169             while(l==0){
1170             cin>>m;
1171             fin.open("users.txt",ios::in);
1172             while(l==0&&fin>>d){
```

```
1173                if(d.id==m) {c=d;l++;}
1174             }
1175             if (l==0) {
1176                system("cls");
1177                int i=1;
1178                cout<<"\n\n\t\t\t\tWRONG USER ID!!TYPE 1 TO ENTER AGAIN
AND ANY OTHER NUMBER TO EXIT: ";
1179                cin>>i;
1180                if(i!=1) return;
1181                else
1182                cout<<"\n\n\n\t\t\t\tENTER CORRECT ID : ";
1183             }
1184             fin.close();
1185             }
1186          j=1;
1187         while(j==1){
1188         cout<<"\n\n\t\t\t\tEnter your current check in date,month and year
(DD MM YYYY) : ";
1189         cin>>cnd1>>cnm1>>cny1;
1190         cout<<"\n\n\t\t\t\tEnter the current check out date,month and year
(DD MM YYYY) : ";
1191         cin>>cod1>>com1>>coy1;
1192
if(iscorrect(cnd1,cnm1,cny1)==0||iscorrect(cnd1,cnm1,cny1,cod1,com1,coy1)==0
||
1193
checkdate(cnd1,cnm1,cny1,cod1,com1,coy1)!=2||nodays(cnd1,cnm1,cny1,cod1,co
m1,coy1)==0) {
1194             system("cls");
1195             cout<<"\n\n\n\t\t\t\tRESCHEDULING NOT ALLOWED FOR
ENTERED DATES!!!";
1196             cout<<"\n\n\n\t\t\t\tCLICK 1 TO ENTER ANOTHER DATE,2 TO
EXIT";
1197             cin>>j;
1198             if(j==2) return;
1199         }
1200         else j=0;
1201         }
1202         fin.open("users.txt");
1203
while(fin>>c&&(c.cndate!=cnd1||c.cnmonth!=cnm1||c.cnyear!=cny1||c.codate!=c
od1||c.comonth!=com1||c.coyear!=coy1||c.id!=m));
```

```
1204          fin.close();
1205          int kj=1;j=1;
1206          int rt=0;
1207          while(kj==1||j==1){
1208          cout<<"\n\n\t\t\t\tEnter the required check in date,month and year
(DD MM YYYY) : ";
1209          cin>>cnd2>>cnm2>>cny2;
1210          cout<<"\n\n\t\t\t\tEnter the required check out date,month and year
(DD MM YYYY) : ";
1211          cin>>cod2>>com2>>coy2;
1212
if(iscorrect(cnd2,cnm2,cny2)==0||iscorrect(cnd2,cnm2,cny2,cod2,com2,coy2)==0
||checkdate(cnd2,cnm2,cny2,cod2,com2,coy2)!=2||
1213            nodays(cnd2,cnm2,cny2,cod2,com2,coy2)==0) {
1214              system("cls");
1215              cout<<"\n\n\n\t\t\t\tRESCHEDULING NOT ALLOWED FOR
ENTERED DATES!!";
1216              cout<<"\n\n\n\t\t\t\tCLICK 1 TO ENTER ANOTHER DATE,2 TO
EXIT";
1217              cin>>kj;
1218              if(kj==2) return;
1219          }
1220          else{
1221          kj=0;
1222          n2=c.nroom+2;
1223          int cc=1,memb;
1224          while(cc==1){
1225          cout<<"\n\t\t\t\tEnter number of members : ";
1226          cin>>memb;
1227          if(memb>c.memb) cout<<"Enter a proper number(less than or equal
to what you have given earlier!!)";
1228          else cc++;
1229          }
1230          cout<<"\n\t\t\t\tDo you want laundry services(RS.50 per day per
person)(1 for YES,2 for NO) : ";
1231          cin>>c.laundry;
1232          cout<<"\n\t\t\t\tDo you want food services(RS.800 per day per
person)(1 for YES,2 for NO) : ";
1233          cin>>c.food;
1234          while(c.nroom<n2){
1235            cout<<"\n\n\t\t\t\tNumber of rooms you want to reschedule : ";
1236            cin>>n2;
```

```
1237            if(c.nroom<n2) cout<<"\n\t\t\t\tENTER A PROPER NUMBER(LESS
THAN OR EQUAL TO THE NUMBER OF ROOMS YOU HAVE ALREADY BOOKED!!";
1238            else if(c.memb/c.nroom>3) cout<<"\n\t\t\t\tENTERED NUMBER OF
ROOMS NOT ENOUGH ACCORDING TO OUR POLICY(A MAXIMUM OF THREE PER
ROOM ONLY)!!";
1239          }
1240          n1=c.nroom;
1241          cout<<"\n\n\t\t\t\tEnter the room type you want to choose (1. A.C
Deluxe  2. A.C Luxury  3. NON-A.C):";
1242          cin>>rt;
1243          int ii=cnd2 , ji=cnm2,ki=cny2,cot=1;
1244          while((ii!=cod2 || ji!=com2||ki!=coy2)&&cot!=0){
1245            int
isin=IsInRange(ii,ji,ki,cnd1,cnm1,cny1,cod1,com1,coy1),num=n2;
1246            if(isin==1&&rt==c.rtype);
1247            else if(full(rt,n2,ii,ji,ki)==0) {cot=0;}
1248            if((ii==31&&(ji==1||ji==3||ji==5||ji==7||ji==8||ji==10)) ||
(ii==30&&(ji==4||ji==6||ji==9||ji==11)) ||
1249                (ii==28&&ji==2&&ki%4!=0)||(ii==29&&ji==2&&ki%4==0))
1250               {ii=0; ji++;}
1251            else if(ii==31&&ji==12) {ii=0;ji=1;ki++;}
1252            ii++;
1253          }
1254          if(cot==1) {
1255              i=1;
1256              remodate(c.rtype,n2,cnd1,cnm1,cny1,cod1,com1,coy1);
1257              available(rt,n2,cnd2,cnm2,cny2,cod2,com2,coy2);
1258          }
1259          else i=0;
1260          if(i==0){
1261            cout<<"\n\n\t\t\t\tSorry rooms are not available in that date for the
room type!!";
1262            cout<<"\n\n\t\t\t\tEnter 1 to enter again and 2 to exit";
1263            cin>>j;
1264            if(j==2) return;
1265          }
1266          else{j=0;}
1267          }
1268          }
1269          if(i==1) {
1270             customer f;
1271             fstream file1("users.txt",ios::in);
```

```
1272              fstream file2("temp.txt",ios::out|ios::app);
1273              while(file1>>f){
1274                if
(f.cndate==cnd1&&f.cnmonth==cnm1&&f.cnyear==cny1&&f.coyear==coy1&&f.cod
ate==cod1&&f.comonth==com1&&f.id==m);
1275                else file2<<f;
1276              }
1277
1278             file1.close();
1279             file2.close();
1280             remove("users.txt");
1281             rename("temp.txt","users.txt");
1282             f=c;
1283             f.nroom=n1-n2;
1284             ofstream fout("users.txt",ios::app);
1285             fout<<f;
1286             fout.close();
1287             f.cndate=cnd2;
1288             f.cnmonth=cnm2;
1289             f.codate=cod2;
1290             f.comonth=com2;
1291             f.cnyear=cny2;
1292             f.coyear=coy2;
1293             f.nroom=n2;
1294             f.rtype=rt;
1295             addtorecord(f);
1296             cout<<"\n\n\t\t\t\tyour booking dates have been changed
successfully!!";
1297             system("pause");
1298             genbill(f.id,f.codate,f.comonth,f.coyear);
1299         }
1300     }
1301  }
1302
1303
1304  void hotel::incemps() {    ///To include employees
1305        ifstream fin("emp.txt");
1306        while(!fin.eof()) {
1307          string a,b;
1308          char k;
1309          fin>>a>>b>>k;
1310          emps.push_back(make_pair(encDec(a,k),encDec(b,k)));
```

```
1311        }
1312        fin.close();
1313  }
1314
1315  void hotel::book(){  ///To book rooms
1316        system("cls");
1317        system("COLOR B2");
1318        time_t timer1;
1319        timer1=time(NULL);
1320        cout<<"\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t"<<ctime(&timer1);
1321
cout<<"\n\t\t\t\t\t\t\t**********************************************";
1322        cout<<"\n\t\t\t\t\t\t\t********** BOOKING PORTAL
**********";
1323
cout<<"\n\t\t\t\t\t\t\t**********************************************";
1324        cout<<"\n\n\n";
1325        int i=0;
1326        while(i!=1&&i!=2){
1327        cout<<"\t\tDo you have an user ID? (1 for YES 2 for NO) ";
1328        cin>>i;
1329        if(i==2) {
1330           usermanage(1);
1331           i= 2;
1332        }
1333        else if (i==1) {
1334           usermanage(2);
1335           i= 1;
1336        }
1337        else {
1338           system("cls");
1339           cout<<"\n\n\t\t\t\t\tPLEASE CHOOSE SUITABLY.....";
1340        }
1341        }
1342  }
1343
1344  void hotel::remodate(int rtype,int n,int cnd,int cnm,int cny,int cod,int
com,int coy) {   ///To remove given set of date
1345       fstream file1("dates.txt",ios::in);
1346       fstream file2("temp.txt",ios::out);
1347       int i=0,j=0,k=0,rt=0;
1348       map<pair<int,pair<int,int> >,int > c;
```

```
1349        file1>>i>>j>>k>>rt;
1350        while(!file1.eof()){
1351          if(IsInRange(i,j,k,cnd,cnm,cny,cod,com,coy)==1&&rtype==rt) {
1352             pair<int,pair<int,int> >temp;
1353             temp.first=i;
1354             temp.second.first=j;
1355             temp.second.second=k;
1356             if(c.count(temp)==0) c[temp]=1;
1357             else if(c[temp]<n&&c.count(temp)==1){
1358               c[temp]++;
1359             }
1360             else file2<<i<<" "<<j<<" "<<k<<" "<<rt<<'\n';
1361          }
1362          else file2<<i<<" "<<j<<" "<<k<<" "<<rt<<'\n';
1363          file1>>i>>j>>k>>rt;
1364       }
1365       file1.close();
1366       file2.close();
1367       remove("dates.txt");
1368       rename("temp.txt","dates.txt");
1369   }
1370
1371   int hotel::genbill(int id,int cod,int com,int coy){    ///To generate bill
1372          fstream file("users.txt",ios::in);
1373          vector<customer> c;
1374          customer d;
1375          while(file>>d){
1376
if(d.id==id&&d.codate==cod&&d.comonth==com&&d.coyear==coy){c.push_back
(d);}
1377          }
1378          file.close();
1379          if(c.size()==0) return 0;
1380          time_t timer;
1381          timer=time(NULL);
1382          struct tm* timers=localtime(&timer);
1383          system("cls");
1384          cout<<"\n\n\n\n\n\n\t\t\t\t\t\tPROCEEDING.";
1385          cout<<"...";
1386          delay(500);
1387          cout<<"...";
1388          delay(500);
```

```
        cout<<"...";
        delay(500);
        system("cls");
        system("color F0");
        cout<<"\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t"<<ctime(&timer);
        cout<<"\t\t\tUSER  ID :   "<<id<<endl;
        cout<<"\n-----------------------------------------------------------------------------------------------------------------"
           <<"-----------------------------------------------";
        cout<<"\n\t\t\t\t\t\t\t   **********@@@@@@@   HOTEL   PAAR @@@@@@@**********";
        cout<<"\n-----------------------------------------------------------------------------------------------------------------"
           <<"-----------------------------------------------";
        cout<<"\n  S.NO                    \t\t\t     TITLE \t\t\tAMOUNT            ";
        cout<<"\n-----------------------------------------------------------------------------------------------------------------"
           <<"-----------------------------------------------";
        cout<<"\n-----------------------------------------------------------------------------------------------------------------"
           <<"-----------------------------------------------";
        file.open("users.txt",ios::in);
        int coun=0;
        while(file>>d)
          if(d.id==id) coun++;
        file.close();
        int disc=discount(coun-c.size());
        string a="LUXURY AC ",b=" DELUXE AC ",e="NON AC ";
        for(long int i=0;i<c.size();i++){
           double billamt;
           cout<<"\n\n    "<<i+1<<".\t\t\t\t\t   ";
           if(c[i].rtype==1){
              cout<<a;
              billamt=2000;
           }
           else if(c[i].rtype==2){
              cout<<b;
              billamt=2500;
           }
           else {
              cout<<e;
```

```
1425              billamt=1500;
1426           }
1427           cout<<"   x"<<c[i].nroom;
1428           int
nod=nodays(c[i].cndate,c[i].cnmonth,c[i].cnyear,c[i].codate,c[i].comonth,c[i].coye
ar);
1429           billamt*=c[i].nroom;
1430           billamt*=nod;
1431           cout<<"            \t      \t\t\t\t                          "<<billamt;
1432           double laundry=0;
1433           if(c[i].laundry!=2)
1434             laundry=50*nod*c[i].memb;
1435           else laundry=0;
1436           billamt+=laundry;  ///base fare:50 per day per member
1437           cout<<"\n\t\t\t\t\t   LAUNDRY CHARGES                \t \t\t\t\t
"<<laundry;
1438           double food=0;
1439           if(c[i].food!=2)
1440              food=800*c[i].memb*nod;
1441           else food=0;
1442           billamt+=food;  ///base fare:800 per day per member
1443           cout<<"\n\t\t\t\t\t   FOOD CHARGES                     \t      \t
\t\t\t                  "<<food;
1444           cout<<"\n\n";
1445           cout<<"\n-----------------------------------------------------------------
-------------------------------------"
1446              <<"-------------------------------------------------------------";
1447           double gst=0.12*billamt;
1448           cout<<"\n                          \t\t\t\t\t\t
TOTAL AMOUNT: "<<"    "<<billamt;
1449           cout<<"\n                          \t\t\t\t\t\t
DISCOUNT: "<<disc<<"%"<<"      "
1450              <<disc/100.0*billamt;
1451           cout<<"\n                           \t\t\t\t\t\t
GST : "<<"12%"<<"        "<<gst;
1452           billamt=billamt-(disc/100.0*billamt)+gst;
1453           cout<<"\n\n                                \t\t\t\t\t\t
NET AMOUNT: "<<"      "<<billamt;
1454           cout<<"\n\n-----------------------------------------------------------------
-------------------------------------"
1455              <<"-------------------------------------------------------------";
1456           delay(1000);
```

```
        }
        cout<<"\n\n\n\n\n";
        system("pause");
        system("cls");
    }
    int hotel::genbill(int id){
        ifstream fin("users.txt");
        vector<customer> c;
        customer d;
        time_t timer;
        timer=time(NULL);
        struct tm* timers=localtime(&timer);
        while(fin>>d){
            if(id==d.id&&d.codate==timers->tm_mday&&d.comonth==timers->tm_mon+1&&d.coyear==timers->tm_year+1900) c.push_back(d);
        }
        fin.close();
        fin.open("rooms.txt");
        int rn,countt=0;char st;
        while(fin>>rn&&fin>>st&&fin>>d){
            if(id==d.id&&id==d.id&&d.codate==timers->tm_mday&&d.comonth==timers->tm_mon+1&&d.coyear==timers->tm_year+1900) countt++;
        }
        if(c.size()==0){
            return 0;
        }
        else if(countt==0){
            return -1;
        }
        else {
            system("cls");
            cout<<"\n\n\n\n\n\n\t\t\t\t\t\tPROCEEDING.";
            cout<<"...";
            delay(500);
            cout<<"...";
            delay(500);
            cout<<"...";
            delay(500);
            system("cls");
            system("color F0");
            cout<<"\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t\t"<<ctime(&timer);
```

```
        cout<<"\t\t\tUSER  ID :   "<<id<<endl;
        cout<<"\n-------------------------------------------------------------------------------------------------------"
           <<"----------------------------------------------";
        cout<<"\n\t\t\t\t\t\t\t   **********@@@@@@@   HOTEL   PAAR @@@@@@@**********";
        cout<<"\n-------------------------------------------------------------------------------------------------------"
           <<"----------------------------------------------";
        cout<<"\n  S.NO                    \t\t\t     TITLE \t\t\tAMOUNT          ";
        cout<<"\n-------------------------------------------------------------------------------------------------------"
           <<"----------------------------------------------";
        cout<<"\n-------------------------------------------------------------------------------------------------------"
           <<"----------------------------------------------";
        fin.open("users.txt");
        int coun=0;
        while(fin>>d)
           if(d.id==id) coun++;
        fin.close();
        double payamt=0;
        int disc=discount(coun-c.size());
        string a="LUXURY AC ",b="DELUXE AC ",e="NON AC ";
        for(long int i=0;i<c.size();i++){
           double billamt;
           cout<<"\n\n    "<<i+1<<".\t\t\t\t\t   ";
           if(c[i].rtype==1){
              cout<<a;
              billamt=2000;
           }
           else if(c[i].rtype==2){
              cout<<b;
              billamt=2500;
           }
           else {
              cout<<e;
              billamt=1500;
           }
           cout<<"   x"<<c[i].nroom;
           int
```

```
nod=nodays(c[i].cndate,c[i].cnmonth,c[i].cnyear,c[i].codate,c[i].comonth,c[i].coye
ar);
1532              billamt*=c[i].nroom;
1533              billamt*=nod;
1534              cout<<"            \t      \t\t\t\t
"<<billamt;
1535              double laundry=0;
1536              if(c[i].laundry!=2)
1537                laundry=50*nod*c[i].memb;
1538              else laundry=0;
1539              billamt+=laundry; ///base fare:50 per day per member
1540              cout<<"\n\t\t\t\t\t   LAUNDRY CHARGES                \t \t\t\t\t
"<<laundry;
1541              double food=0;
1542              if(c[i].food!=2)
1543                food=800*c[i].memb*nod;
1544              else food=0;
1545              billamt+=food; ///base fare:800 per day per member
1546              cout<<"\n\t\t\t\t\t   FOOD CHARGES                    \t      \t
\t\t\t                "<<food;
1547              cout<<"\n\n";
1548              cout<<"\n-----------------------------------------------------------
-------------------------------------------------------"
1549                 <<"-----------------------------------------------";
1550              double gst=0.12*billamt;
1551              cout<<"\n                          \t\t\t\t\t\t
TOTAL AMOUNT: "<<"    "<<billamt;
1552              cout<<"\n                          \t\t\t\t\t\t
DISCOUNT: "<<disc<<"%"<<"      "
1553                 <<disc/100.0*billamt;
1554              cout<<"\n                           \t\t\t\t\t\t
GST : "<<"12%"<<"       "<<gst;
1555              billamt=billamt-(disc/100.0*billamt)+gst;
1556              cout<<"\n\n                                \t\t\t\t\t\t
NET AMOUNT: "<<"      "<<billamt;
1557              cout<<"\n\n-----------------------------------------------------------
-------------------------------------------------------"
1558                 <<"-----------------------------------------------";
1559              delay(1000);
1560              payamt+=billamt;
1561       }
1562       cout<<"\n\n\n\t\t\t\t\t\t\tAMOUNT TO BE PAID BY YOU:     "<<payamt;
```

```
1563        ofstream fout("revenue.txt",ios::app);
1564        fout<<ctime(&timer)<<id<<" "<<payamt<<"\n";
1565        fout.close();
1566      }
1567      cout<<"\n\n\n\n\n\n";
1568      system("pause");
1569      system("cls");
1570      return 1;
1571  }
1572
1573  void hotel::vacate(int id){  ///To vacate room and generating bill
1574          system("cls");
1575          fstream fin("users.txt",ios::in);
1576          customer c;
1577          time_t timer;
1578          timer=time(NULL);
1579          struct tm* timers=localtime(&timer);
1580          int cd=0,ci=0;
1581          while(fin>>c&&cd==0){
1582            if(c.codate==timers->tm_mday&&c.comonth==timers-
>tm_mon+1&&c.coyear==timers->tm_year+1900&&c.id==id){
1583              ci=genbill(id);
1584              system("cls");
1585              system("color 07");
1586              cout<<"\n\n\n\n\n\n\t\t\t\t\t\t\t\t\t\tTHANK
YOU!!!\n\n\n\n\n\t\t\t\t\t\t\t\t\tVISIT AGAIN!!!";
1587              delay(500);
1588              system("color 17");
1589              delay(500);
1590              system("color 27");
1591              delay(500);
1592              system("COLOR 37");
1593              delay(500);
1594              system("color 47");
1595              delay(500);
1596              system("color 57");
1597              delay(500);
1598              system("color 67");
1599              delay(500);
1600              system("color 07");
1601              delay(1000);
1602              cd++;
```

```
1603
remodate(c.rtype,c.nroom,c.cndate,c.cnmonth,c.cnyear,c.codate,c.comonth,c.coyea
r);
1604          }
1605        }
1606        if(cd==0) cout<<"\n\n\t\t\t\tVACATING A ROOM CAN BE DONE ONLY
ON THE CHECK OUT DATES!!";
1607        else if(ci==-1) cout<<"\n\n\t\t\t\tALREADY VACATED!!";
1608        fin.close();
1609        delay(1000);
1610        allroom(id);
1611  }
1612
1613  int hotel::IsInRange(int m,int n,int o,int cnd,int cnm,int cny,int cod,int
com,int coy) {  ///To check if a given date is in a set of dates
1614       int i=cnd , j=cnm,k=cny,ct=0;
1615       while((i!=cod || j!=com||k!=coy)&&(i!=m||j!=n||k!=o)){
1616         if((i==31&&(j==1||j==3||j==5||j==7||j==8||j==10)) ||
(i==30&&(j==4||j==6||j==9||j==11)) ||
(i==28&&j==2&&k%4!=0)||(i==29&&j==2&&k%4==0))
1617           {i=0; j++;}
1618         else if(i==31&&j==12){i=0;j=1;k++;}
1619         i++;
1620       }
1621       if(i==cod&&j==com) return 0;
1622       else return 1;
1623  }
1624
1625  void hotel::dsearch(){    ///To search details based on date
1626     int da,m,y;
1627     ifstream fin("users.txt");
1628     customer d; int co=0,ch=1;
1629     while(ch==1){
1630      system("cls");
1631      int chec=1;
1632      while(chec==1){
1633      cout<<"\n\t\t\t\tENTER THE DATE,MONTH AND YEAR TO CHECK";
1634      cin>>da>>m>>y;
1635      chec=2;
1636      if(checkdate(da,m,y,1,1,2018)!=2) {cout<<"\n\t\t\t\tENTER PROPER
DETAILS!!";chec=1;}
1637      }
```

```
1638      system("cls");
1639      cout<< "\n\n\t\t\t\tLIST OF ALL RECORDS ON GIVEN DATE: ";
1640     while(fin>>d&&!fin.eof()){
1641        if((d.cndate==da && d.cnmonth==m&&d.cnyear==y)){
1642          cout<<"\n\n\t\t\t\tCHECKED IN.....";
1643          cout<<"\n\t\t\t\t\tNAME: "<<d.name
1644             <<"\n\t\t\t\t\tID: "<<d.id
1645             <<"\n\t\t\t\t\tADDRESS: "<<d.address
1646             <<"\n\t\t\t\t\tAGE: "<<d.age
1647             <<"\n\t\t\t\t\tPHONE NUMBER: "<<d.phno
1648             <<"\n\t\t\t\t\tCHECK IN DATE:
"<<d.cndate<<"/"<<d.cnmonth<<"/"<<d.cnyear
1649             <<"\n\t\t\t\t\tCHECK OUT DATE:
"<<d.codate<<"/"<<d.comonth<<"/"<<d.coyear
1650             <<"\n\t\t\t\t\tROOM TYPE: "<<d.rtype
1651             <<"\n\t\t\t\t\tNO OF ROOMS: "<<d.nroom;
1652             co++;
1653             ch=2;
1654         delay(1000);
1655        }
1656        if((d.codate==da&&d.comonth==m&&d.coyear==y)){
1657          cout<<"\n\n\t\t\t\tCHECKED OUT.....";
1658          cout<<"\n\t\t\t\t\tNAME: "<<d.name
1659             <<"\n\t\t\t\t\tID: "<<d.id
1660             <<"\n\t\t\t\t\tADDRESS: "<<d.address
1661             <<"\n\t\t\t\t\tAGE: "<<d.age
1662             <<"\n\t\t\t\t\tPHONE NUMBER: "<<d.phno
1663             <<"\n\t\t\t\t\tCHECK IN DATE:
"<<d.cndate<<"/"<<d.cnmonth<<"/"<<d.cnyear
1664             <<"\n\t\t\t\t\tCHECK OUT DATE:
"<<d.codate<<"/"<<d.comonth<<"/"<<d.coyear
1665             <<"\n\t\t\t\t\tROOM TYPE: "<<d.rtype
1666             <<"\n\t\t\t\t\tNO OF ROOMS: "<<d.nroom;
1667             co++;
1668             ch=2;
1669         delay(1000);
1670        }
1671
if(IsInRange(da,m,y,d.cndate,d.cnmonth,d.cnyear,d.codate,d.comonth,d.coyear)=
=1){
1672          cout<<"\n\n\t\t\t\tSTAYED.....";
1673          cout<<"\n\t\t\t\t\tNAME: "<<d.name
```

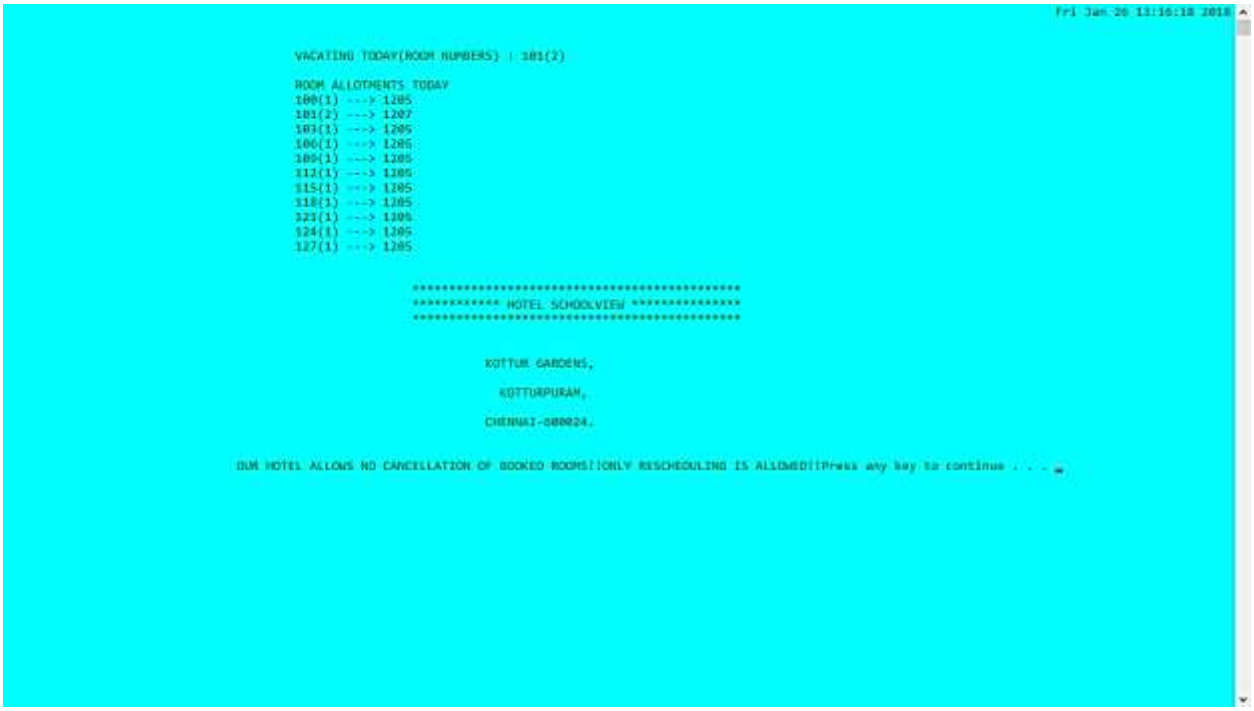
```
1674            <<"\n\t\t\t\t\t\tID: "<<d.id
1675            <<"\n\t\t\t\t\t\tADDRESS: "<<d.address
1676            <<"\n\t\t\t\t\t\tAGE: "<<d.age
1677            <<"\n\t\t\t\t\t\tPHONE NUMBER: "<<d.phno
1678            <<"\n\t\t\t\t\t\tCHECK IN DATE:
"<<d.cndate<<"/"<<d.cnmonth<<"/"<<d.cnyear
1679            <<"\n\t\t\t\t\t\tCHECK OUT DATE:
"<<d.codate<<"/"<<d.comonth<<"/"<<d.coyear
1680            <<"\n\t\t\t\t\t\tROOM TYPE: "<<d.rtype
1681            <<"\n\t\t\t\t\t\tNO OF ROOMS: "<<d.nroom;
1682            co++;
1683            ch=2;
1684          delay(1000);
1685        }
1686     }
1687     if(co==0){
1688          cout<<"\n\t\t\t\t\t\tNO RECORDS FOUND...";
1689          cout<<"\n\t\t\t\t\t\tENTER 1 TO ENTER ANOTHER DATE,ENTER 2 TO
EXIT";
1690          cin>>ch;
1691          if(ch==2) return;
1692     }
1693    }
1694    system("pause");
1695     fin.close();
1696  }
1697
1698
1699  void hotel::nsearch(){   ///To search details based on name
1700      ifstream fin("users.txt");
1701      customer d;
1702      char n[50];
1703      int ch=1,co=0;
1704      while(ch==1){
1705        system("cls");
1706        cout<<"\n\n\t\t\t\t\tENTER NAME TO SEARCH: ";
1707        cin.ignore(1,'\n');
1708        cin.getline(n,50,'\n');
1709        system("cls");
1710        cout<< "\n\n\t\t\t\tLIST OF ALL RECORDS: ";
1711        while(fin>>d){
1712          if(strcmpi(d.name,n)==0){
```

```
1713          cout<<"\n\t\t\t\t\t\tNAME: "<<d.name
1714            <<"\n\t\t\t\t\t\tID: "<<d.id
1715            <<"\n\t\t\t\t\t\tADDRESS: "<<d.address
1716            <<"\n\t\t\t\t\t\tAGE: "<<d.age
1717            <<"\n\t\t\t\t\t\tPHONE NUMBER: "<<d.phno
1718            <<"\n\t\t\t\t\t\tCHECK IN DATE:
"<<d.cndate<<"/"<<d.cnmonth<<"/"<<d.cnyear
1719            <<"\n\t\t\t\t\t\tCHECK OUT DATE:
"<<d.codate<<"/"<<d.comonth<<"/"<<d.coyear
1720            <<"\n\t\t\t\t\t\tROOM TYPE: "<<d.rtype
1721            <<"\n\t\t\t\t\t\tNO OF ROOMS: "<<d.nroom;
1722            co++;
1723            ch=2;
1724            delay(1000);
1725            cout<<"\n\n";
1726          }
1727       }
1728       if(co==0){
1729          cout<<"\n\n\t\t\t\t\tNO RECORDS FOUND";
1730          cout<<"\n\t\t\t\t1. TO ENTER ANOTHER NAME,2. TO EXIT";
1731          cin>>ch;
1732          if(ch==2) return;
1733       }
1734     }
1735     fin.close();
1736     system("pause");
1737  }
1738
1739
1740  ///MAIN FUNCTION.....
1741  int main() {
1742     system("mode con COLS=700");
1743     ShowWindow(GetConsoleWindow(),SW_MAXIMIZE);
1744
SendMessage(GetConsoleWindow(),WM_SYSKEYDOWN,VK_RETURN,0x20000000);
1745     hotel h;
1746     h.allroom();
1747     h.incemps();
1748     h.homescreen();
1749  }
1750
1751
```

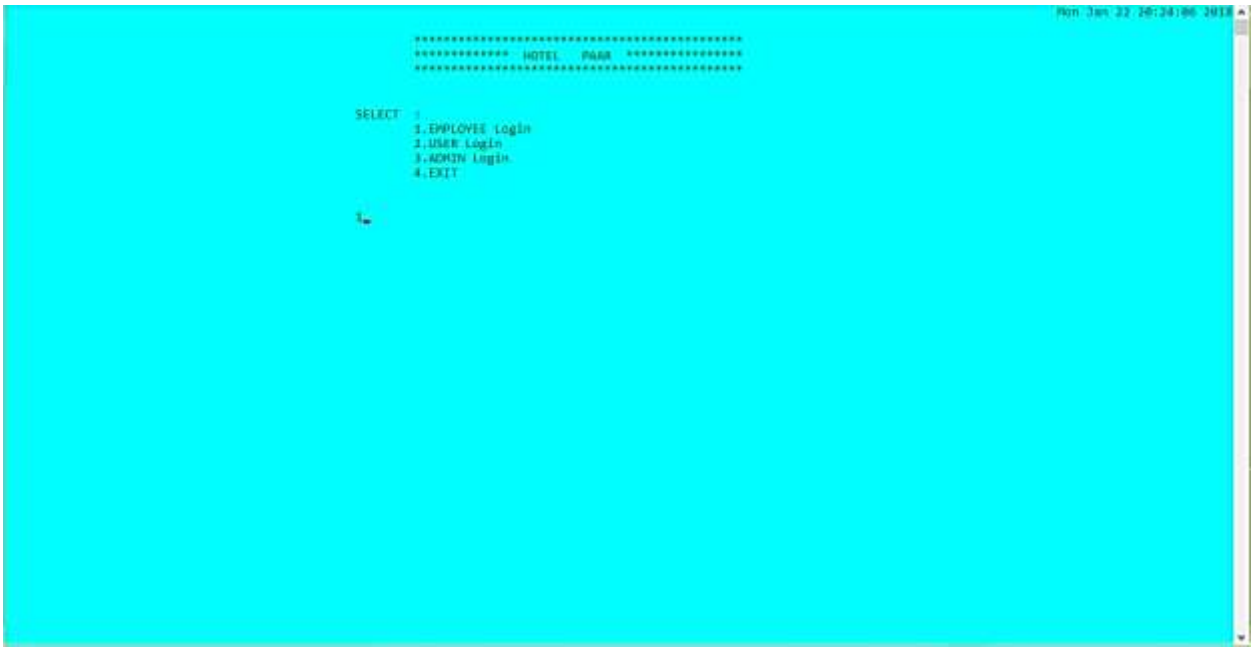
Output Screen Shots:

WELCOME SCREEN

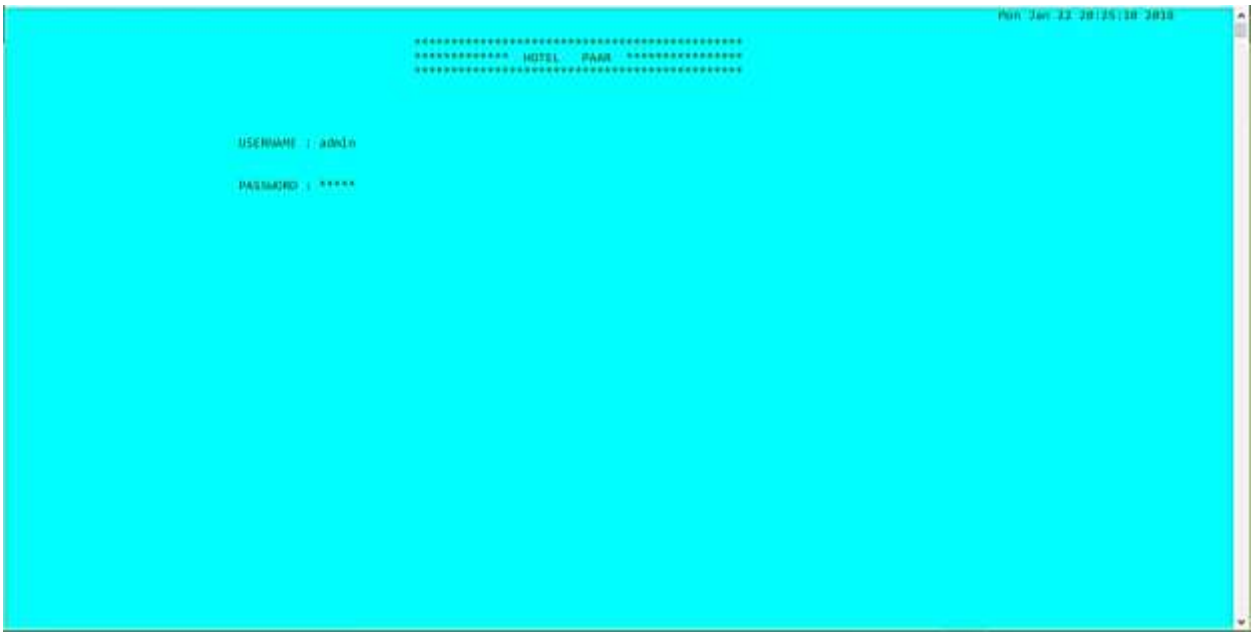
(OR)



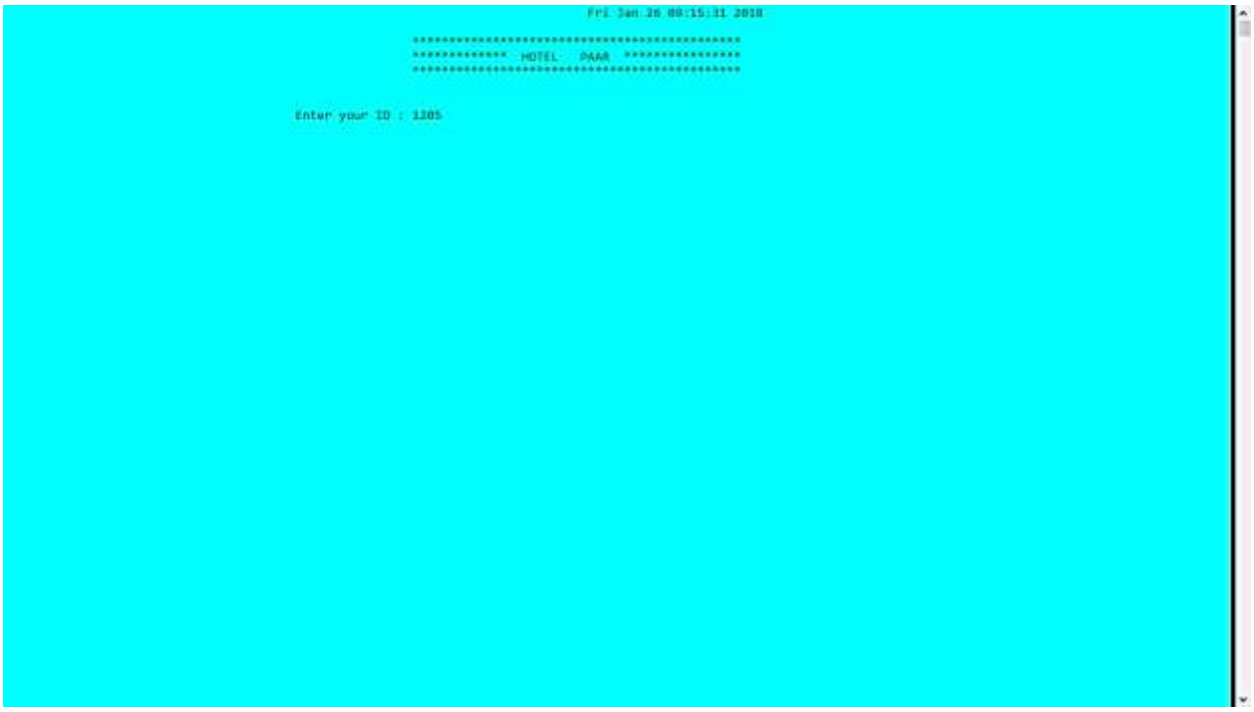
HOME SCREEN



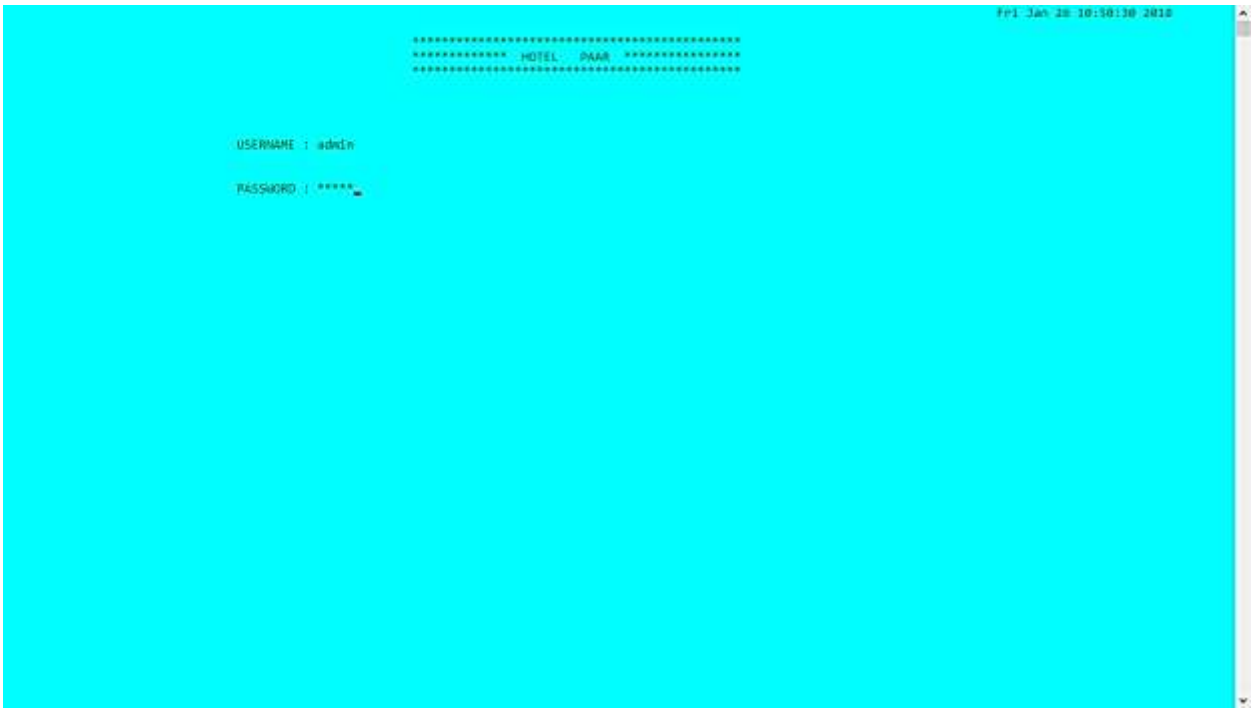
Employee Login Screen



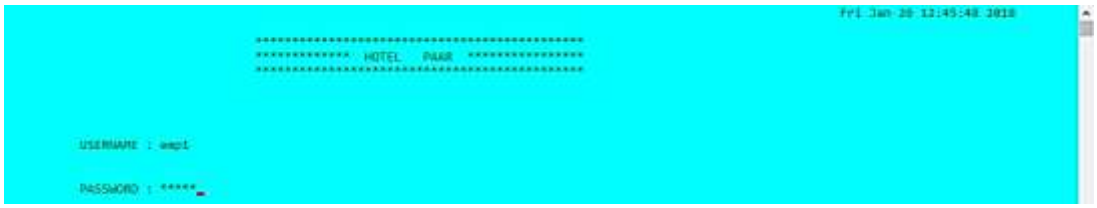
User Login Screen



Admin Login Screen



Employee Login Screen:

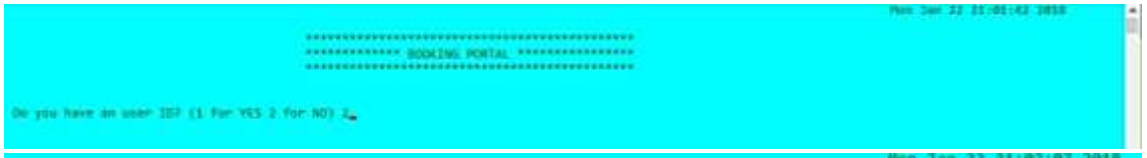


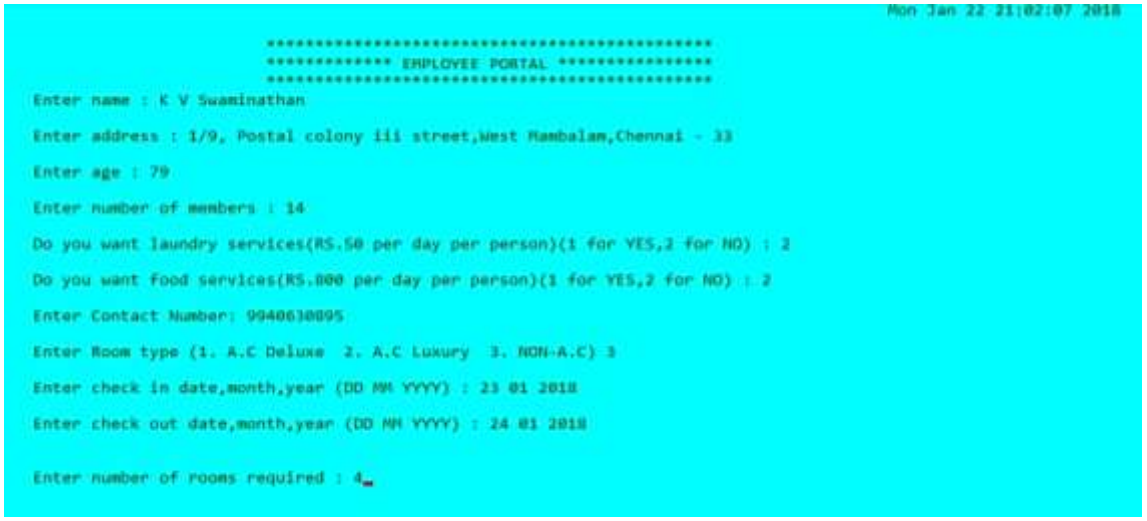
Employee Login Portal - Screen:

1. Employee Portal Screen Allowing Booking:

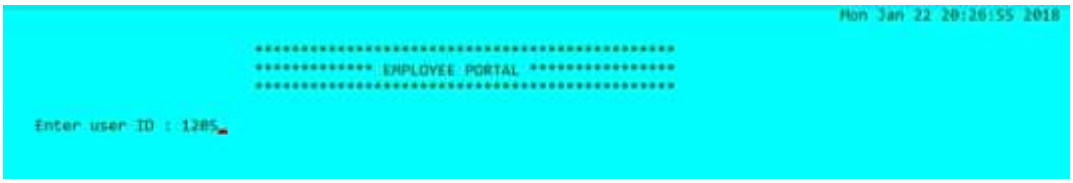
a. New User

b.

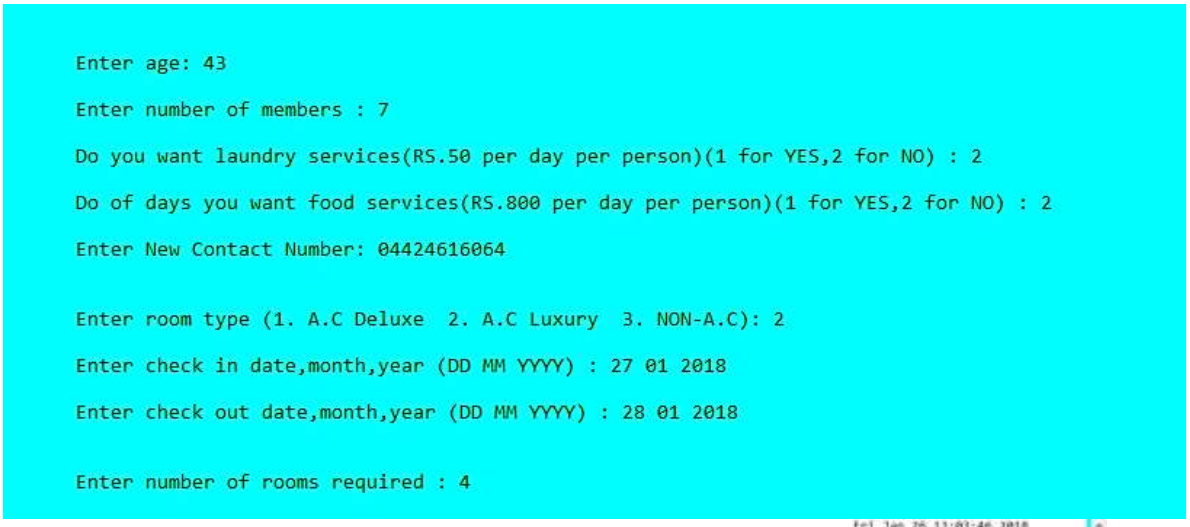




b. Existing user ID

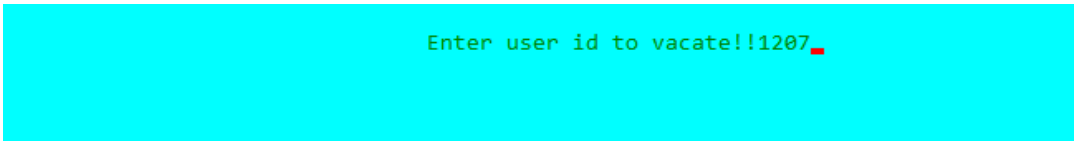


Employee Portal – Bill generated after Showing Successful Booking:



2. Employee Portal – Vacate a room:

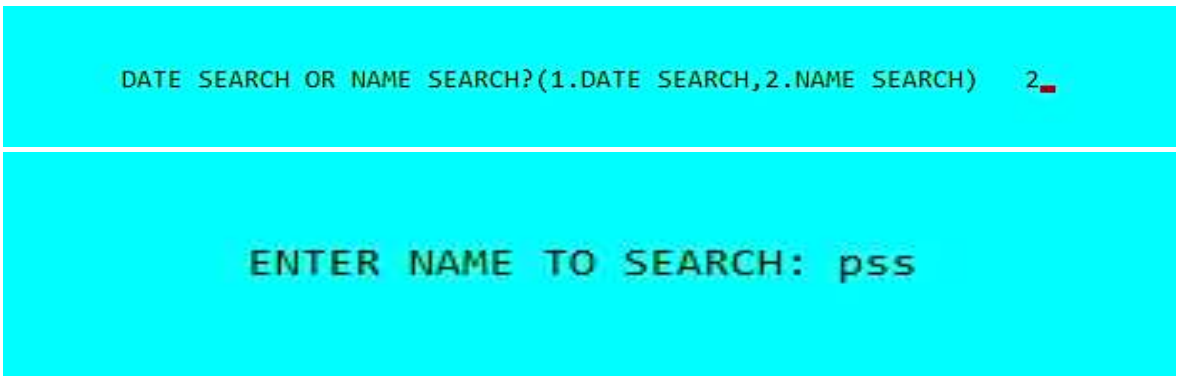
a. Screen for Data entry to vacate a room



b. Screen Showing it Done successfully

3. Employee Portal – View Customer Details

a. Through name



```
                        LIST OF ALL RECORDS:
                                NAME: PSS
                                ID: 1207
                                ADDRESS: 14, cauvery flats, Bhaktha st, kumbakonam
                                AGE: 72
                                PHONE NUMBER: 9262401867
                                CHECK IN DATE: 23/1/2018
                                CHECK OUT DATE: 24/1/2018
                                ROOM TYPE: 1
                                NO OF ROOMS: 3


                                NAME: PSS
                                ID: 1207
                                ADDRESS: 14, cauvery flats, Bhaktha st, kumbakonam
                                AGE: 72
                                PHONE NUMBER: 9962301867
                                CHECK IN DATE: 24/1/2018
                                CHECK OUT DATE: 26/1/2018
                                ROOM TYPE: 2
                                NO OF ROOMS: 1

Press any key to continue . . .
```

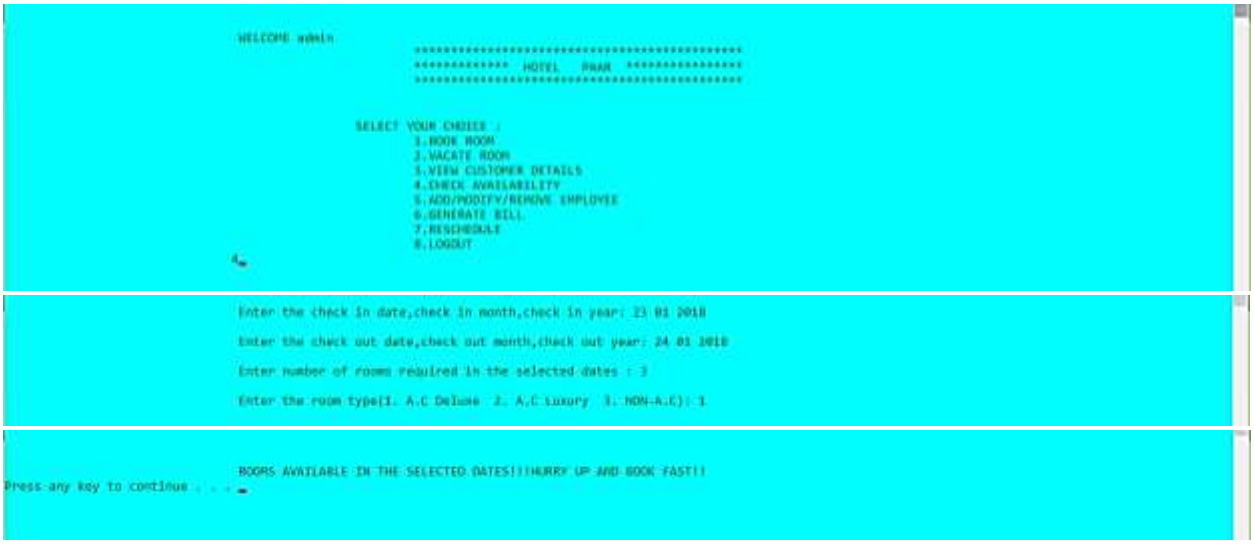
b. Through Date

```
DATE SEARCH OR NAME SEARCH?(1.DATE SEARCH,2.NAME SEARCH) 1
```

```
ENTER THE DATE,MONTH AND YEAR TO CHECK 26 01 2018
```

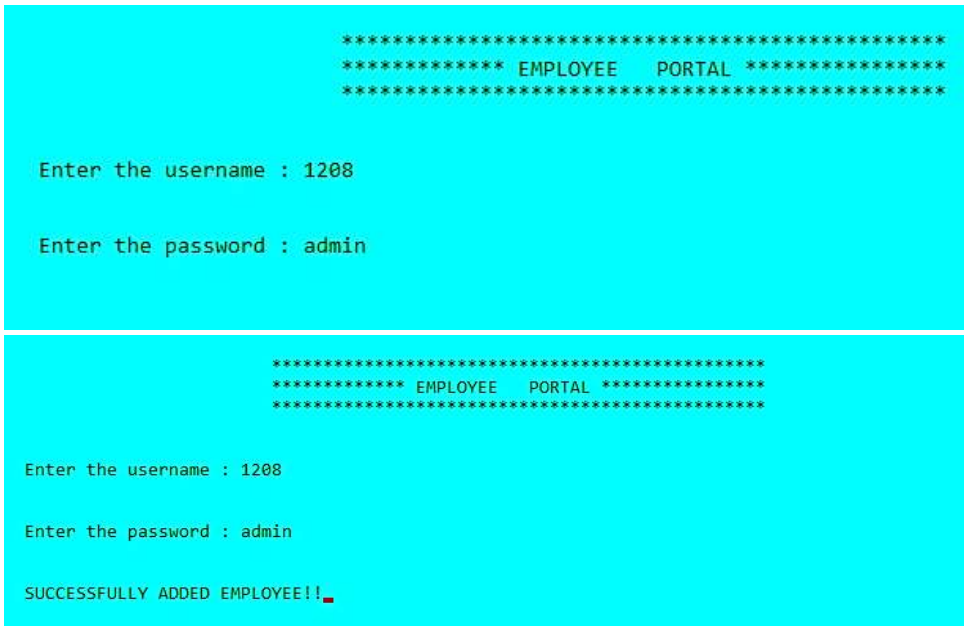
```
LIST OF ALL RECORDS ON GIVEN DATE:

CHECKED IN......
                NAME: srividya
                ID: 1205
                ADDRESS: AA58,sakaji street, kmubakonam
                AGE: 43
                PHONE NUMBER: 8682094884
                CHECK IN DATE: 26/1/2018
                CHECK OUT DATE: 27/1/2018
                ROOM TYPE: 1
                NO OF ROOMS: 10

STAYED.....
                NAME: srividya
                ID: 1205
                ADDRESS: AA58,sakaji street, kmubakonam
                AGE: 43
                PHONE NUMBER: 8682094884
                CHECK IN DATE: 26/1/2018
                CHECK OUT DATE: 27/1/2018
                ROOM TYPE: 1
                NO OF ROOMS: 10

CHECKED OUT.....
                NAME: PSS
                ID: 1207
                ADDRESS: 14, cauvery flats, Bhaktha st, kumbakonam
                AGE: 72
                PHONE NUMBER: 9962301867
                CHECK IN DATE: 24/1/2018
                CHECK OUT DATE: 26/1/2018
                ROOM TYPE: 2
                NO OF ROOMS: 1Press any key to continue . . .
```

4. Employee Portal – Checking availability of rooms



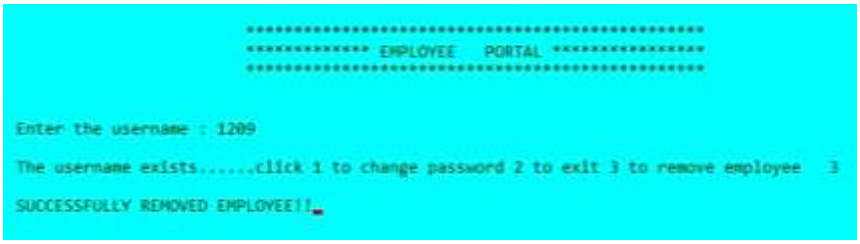
5. Employee Portal – Add / modify/remove an employee

a) Adding an employee:

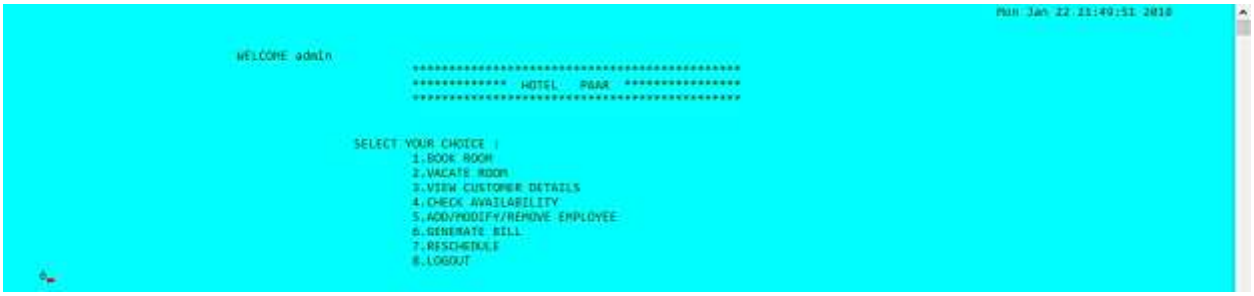


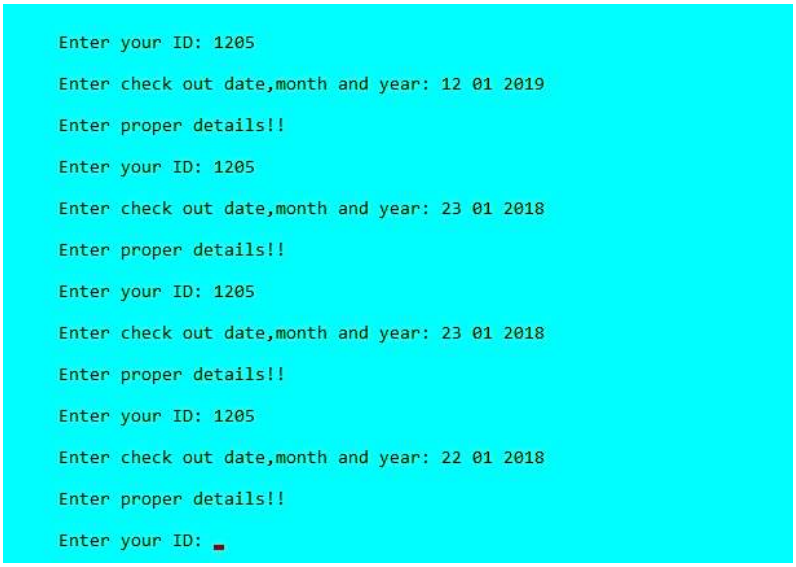
b) Modifying an Employee:

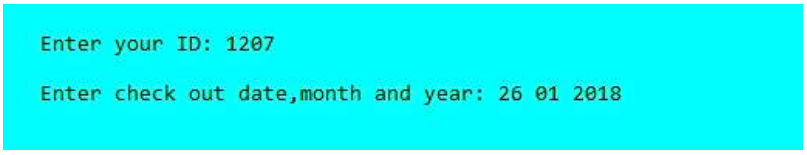
c) Deleting an Employee:

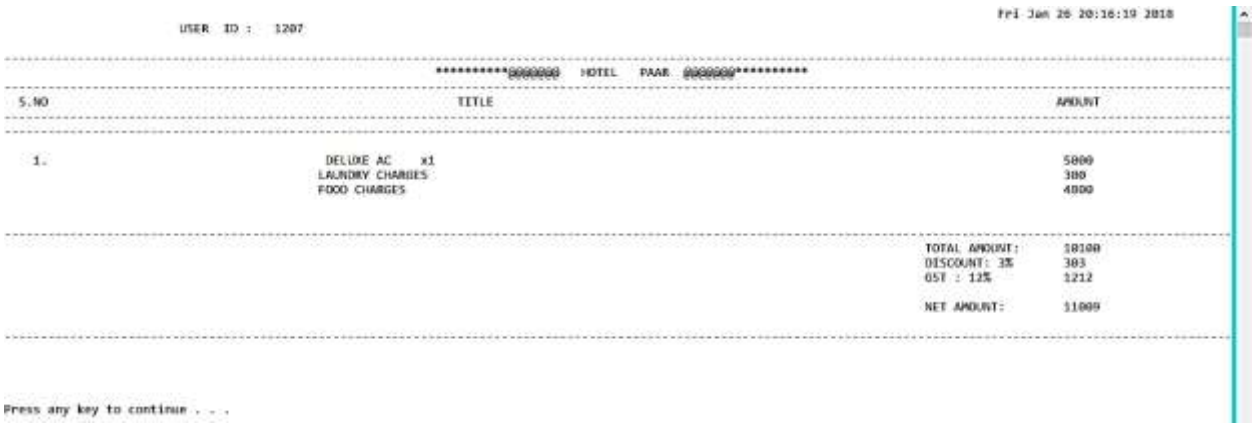


6. Employee Portal – Generate a bill



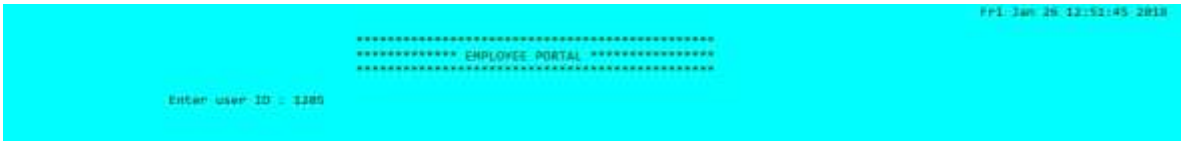






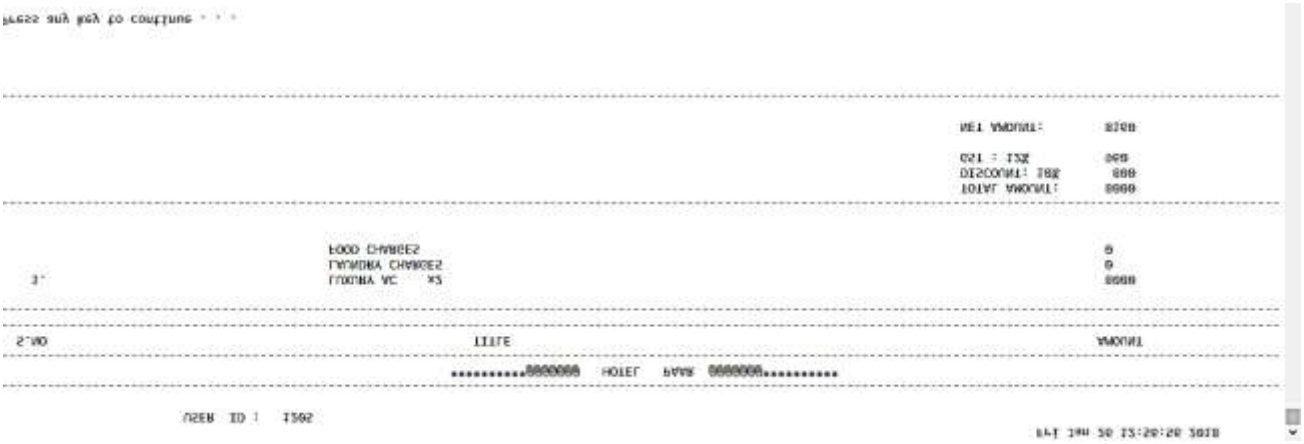
7. Employee Portal – Choice of Rescheduling the booking already done:

Data entry for rescheduling:



Employee Portal Screen showing successful rescheduling of dates of booking with valid entries:

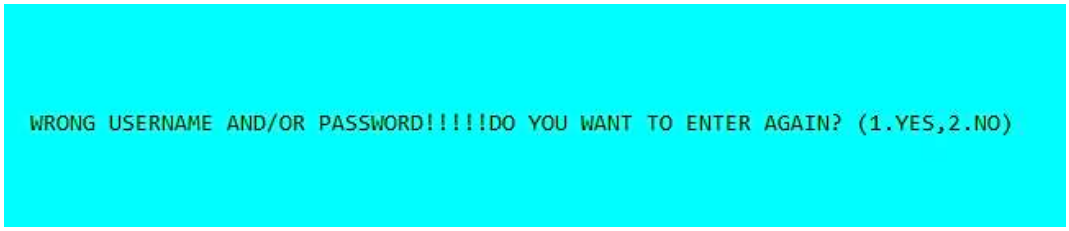
The Newly generated Bill after rescheduling:



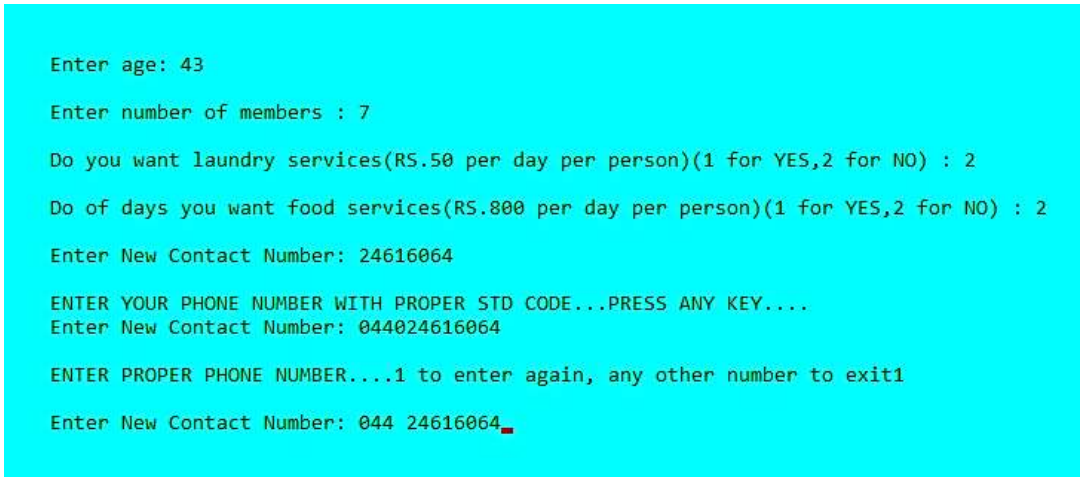
Employee Login : Some Important Error Handling:

I) Wrong Login:
If an employee do typographical error during login or any strange person tries to handle it with a wrong employee login entry, like the one shown below,

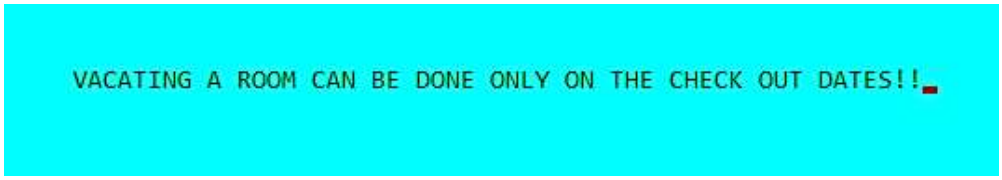
Screen showing wrong entry:

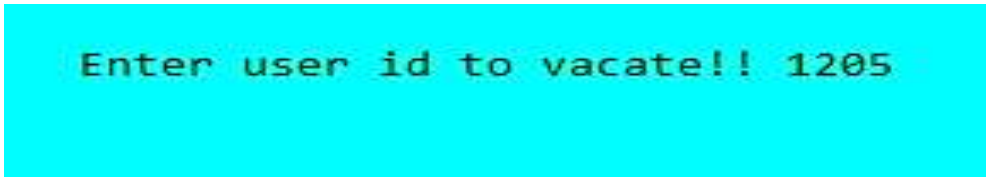


II) During booking, due to data entry



III) During vacating a Room:





If already vacated :

THANK YOU!!!

VISIT AGAIN!!!

ALREADY VACATED!!
Fri Jan 26 14:06:18 2018

VACATING TODAY(ROOM NUMBERS) : ---NIL---

ROOM ALLOTMENTS TODAY
100(1) ----> 1205
103(1) ----> 1205
106(1) ----> 1205
109(1) ----> 1205
112(1) ----> 1205
115(1) ---> 1205
118(1) ---> 1205
121(1) ---> 1205
124(1) ---> 1205
127(1) ---> 1205

Press any key to continue . . .

IV) During Resheduling:

Fri Jan 26 12:11:45 2018

********** EMPLOYEE PORTAL **********

Enter user ID : 1205

Enter your current check in date,month and year (DD MM YYYY) : 29 05 2018

Enter the current check out date,month and year (DD MM YYYY) : 31 05 2018

Enter the required check in date,month and year (DD MM YYYY) : 25 02 2018

Enter the required check out date,month and year (DD MM YYYY) : 27 02 2018

Enter number of members : 5

Do you want laundry services(RS.50 per day per person)(1 for YES,2 for NO) : 2

Do you want food services(RS.800 per day per person)(1 for YES,2 for NO) : 2

Number of rooms you want to reschedule : 3

ENTER A PROPER NUMBER(LESS THAN OR EQUAL TO THE NUMBER OF ROOMS YOU HAVE ALREADY BOOKED!!

Number of rooms you want to reschedule : 2

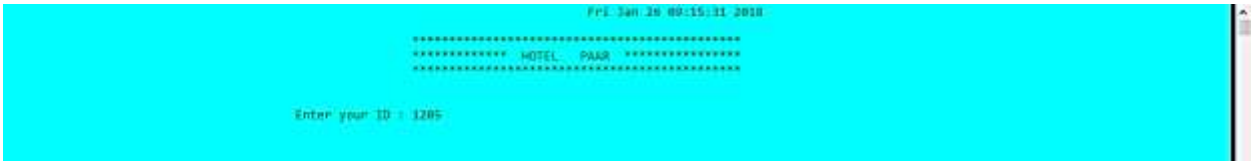
Enter the room type you want to choose (1. A.C Deluxe 2. A.C Luxury 3. NON-A.C):1

your booking dates have been changed successfully!!Press any key to continue . . .

USER PORTAL

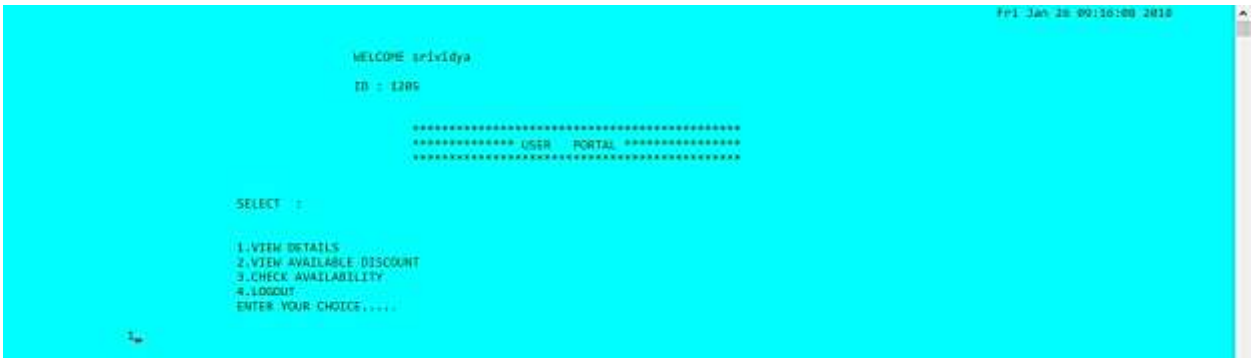
User Login Screen

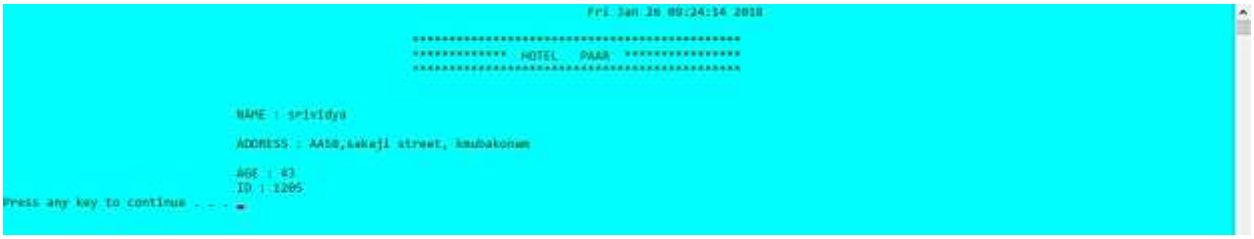
User - Intermediate input Screen before Booking: DATA ENTRY SCREEN for USER DETAILS



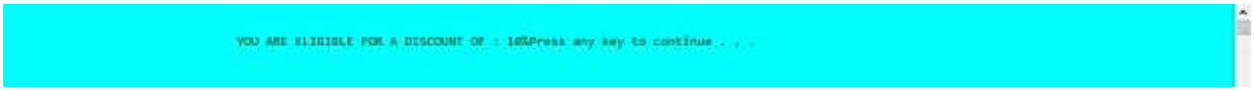
Intermediate screen before logging in USER PORTAL

1. USER Portal - Choice of View details:

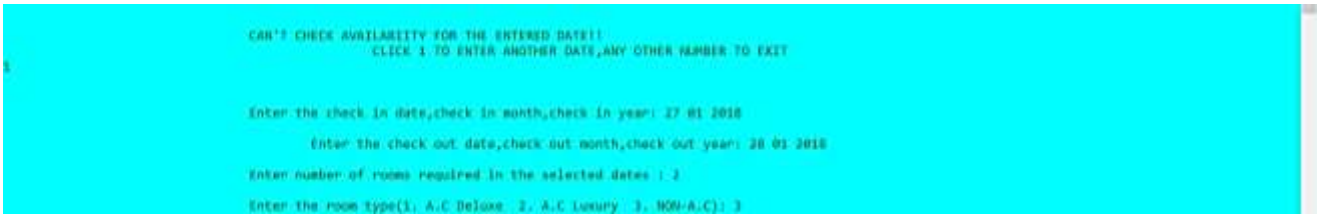


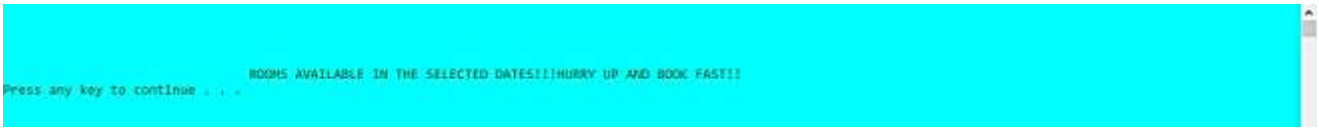


2. USER Portal - Choice of knowing Discount details:



3. USER Portal - Choice of knowing Room Availability:



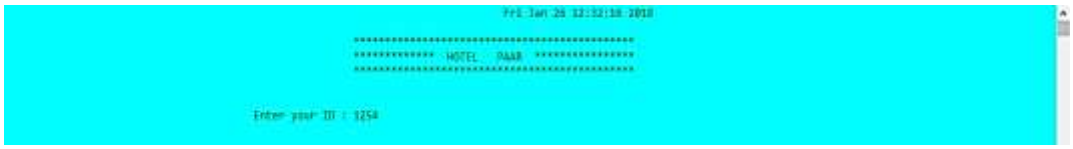


4. USER PORTAL _ LOG OUT

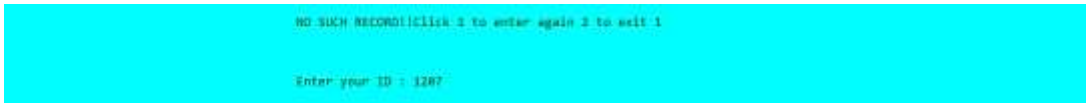
USER Portal – Some important Error Handling

I) Wrong Login

If the user enters a wrong user id, like the one shown here,

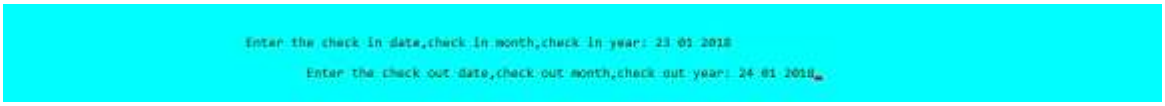


The output screen for wrong user id entry and the new re entry of id:

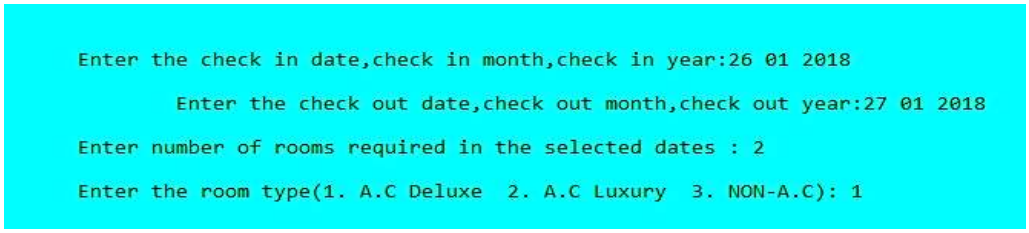


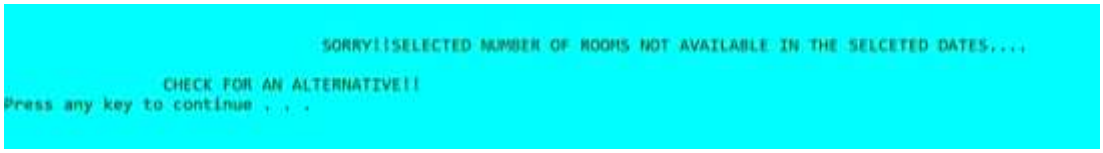
II) Checking Availability:

i) If the date entered is prior to the current date, then the display screen is

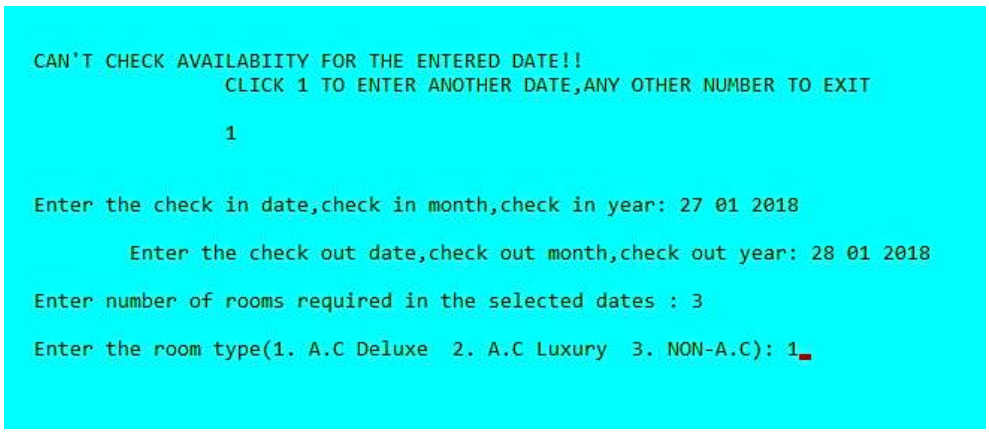


ii) If the entered date have all the rooms of a given type fully occupied,





iii) Interactive screen till the desired dates are entered correctly:



```
                                ROOMS AVAILABLE IN THE SELECTED DATES!!!HURRY UP AND BOOK FAST!!
Press any key to continue . . .
```

Admin Portal

```
                                                                                Fri Jan 26 11:55:38 2018

WELCOME admin
                        ********************************************
                        ************ HOTEL  PAAR ******************
                        ********************************************


                SELECT YOUR CHOICE :
                1.ADD/MODIFY/REMOVE EMPLOYEE
                2.GENERATE REPORT
                3.EXIT
```

```
                                                                                Mon Jan 22 20:59:03 2018

WELCOME admin
                        ********************************************
                        ************ HOTEL  PAAR ******************
                        ********************************************


              SELECT YOUR CHOICE :
                      1.BOOK ROOM
                      2.VACATE ROOM
                      3.VIEW CUSTOMER DETAILS
                      4.CHECK AVAILABILITY
                      5.ADD/MODIFY/REMOVE EMPLOYEE
                      6.GENERATE BILL
                      7.RESCHEDULE
                      8.LOGOUT
          1
```

Home screen for Admin Login

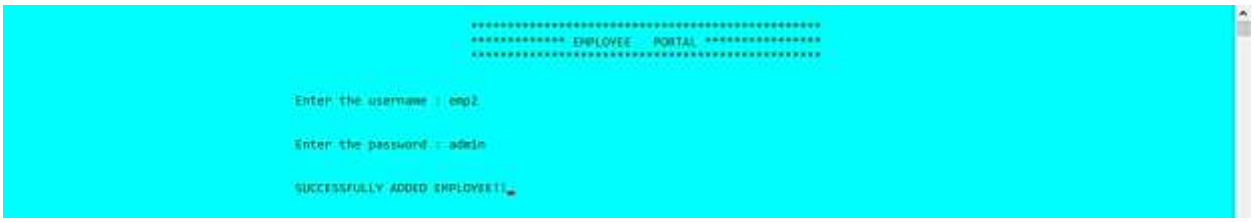
```
                                                                                Fri Jan 26 10:48:59 2018
                                ********************************************
                                ************ HOTEL  PAAR ******************
                                ********************************************


                        SELECT  :
                                1.EMPLOYEE Login
                                2.USER Login
                                3.ADMIN Login
                                4.EXIT

                        3
```

Admin Login Screen:

```
                                                                                Fri Jan 26 10:50:30 2018
                                ********************************************
                                ************ HOTEL  PAAR ******************
                                ********************************************



                        USERNAME : admin

                        PASSWORD : *****
```

```
                        PROCEEDING....
```

1. a. Admin Portal allowing ADDing Employee:

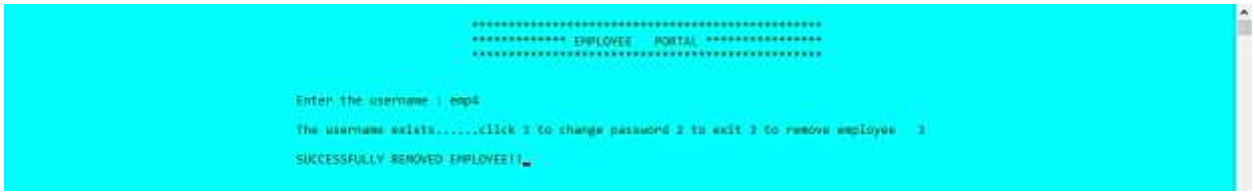


b.Admin Portal allowing Modification in Employee Details:

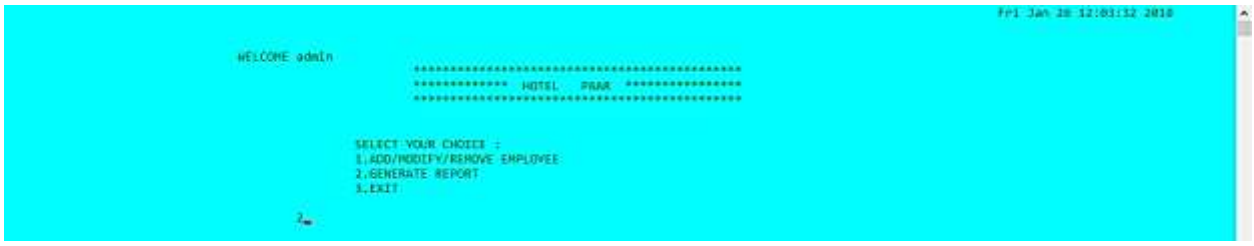
Validation of Change in password:

c. Remove an employee:

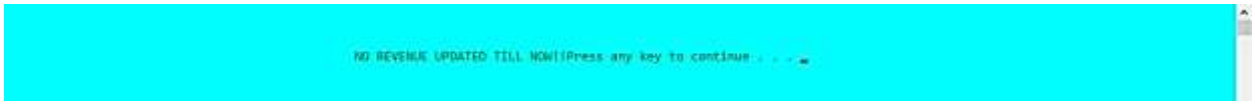
ADMIN Screen Showing validatation of removal:



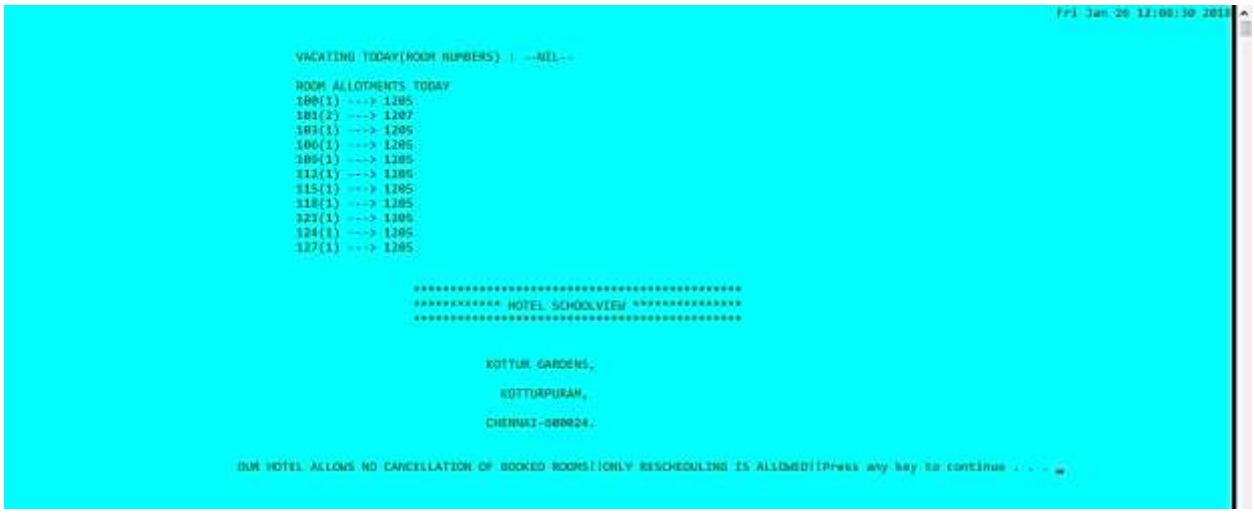
Admin Portal – to Generate Reports:



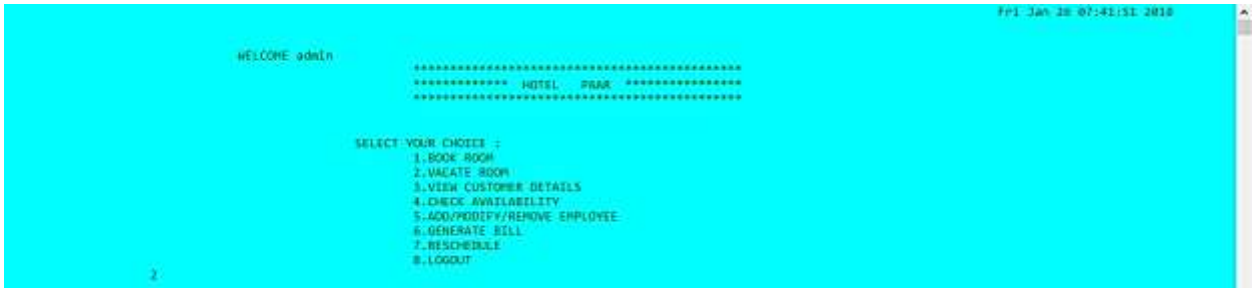
Admin Portal – Screen showing the revenue details:



Status responsible for the above screen:



Admin Portal – generate report - (after vacating a room):



```
Enter your ID: 1205

Enter check out date,month and year: 26 01 2018

Enter proper details!!

Enter your ID: 1205

Enter check out date,month and year: 26 01 2018_
```

```
                                                                                                Fri Jan 26 07:44:55 2018
USER  ID :   1205

                                  **********@@@@@@@  HOTEL   PAAR  @@@@@@@**********
S.NO                                  TITLE                                                          AMOUNT

  1.                        LUXURY AC    x4                                                            8000
                            LAUNDRY CHARGES                                                            400
                            FOOD CHARGES                                                              6600

                                                                                  TOTAL AMOUNT:       14800
                                                                                  DISCOUNT: 10%        1480
                                                                                  GST : 12%            1776

                                                                                  NET AMOUNT:         15096

Press any key to continue . . .
```

```
                        DATE AND TIME OF VACATING: Fri Jan 26 13:25:19 2018
                        ID: 1207
                        AMOUNT: 11000
Press any key to continue . . .
```

Fri Jan 26 13:54:56 2018
Press any key to continue . . .

Fri Jan 26 13:41:01 2018

CONCLUSION:

The project titled "HOTEL MANAGEMENT" done by ABISHEK.S AND AHMED SHAMSUDEEN for the academic year 2017-2018 has been completed and compiled, tested, and executed successfully.

It is a successful attempt to simulate a Hotel management system without the usage of graphics.

It is a try to bring it as close to reality as possible.

REFERENCES:

1. www.cplusplus.com
2. www.cppreference.com
3. www.stackexchange.com