**Practical no 8**

#include <iostream>

#include<stdlib.h>

using namespace std;

class node

{ public:

node\* next;

node\* prev;

int seat;

string id;

int status;

};

class cinemax

{

public:

node\* head,\* tail ,\* temp;

cinemax()

{

head=NULL;

}

void create\_list();

void display();

void book();

void cancel();

void avail();

};

void cinemax::create\_list()

{

int i=1;

temp=new node;

temp->seat=1;

temp->status=0;

temp->id="null";

tail=head=temp;

for(int i=2;i<=70;i++)

{

node \*p;

p= new node;

p->seat=i;

p->status=0;

p->id="null";

tail->next=p;

p->prev=tail;

tail=p;

tail->next=head;

head->prev=tail;

}

}

void cinemax::display()

{

{ int r=1;

node\* temp;

temp=head;

int count=0;

cout<<"\n------------------------------------------------------------------------------------\n";

cout<<" Screen this way \n";

cout<<"------------------------------------------------------------------------------------\n";

while(temp->next!=head)

{

if(temp->seat/10==0)

cout<<"S0"<<temp->seat<<" :";

else

cout<<"S"<<temp->seat<<" :";

if(temp->status==0)

cout<<"|\_| ";

else

cout<<"|B| ";

count++;

if(count%7==0)

{

cout<<endl;

r++;

}

temp=temp->next;

}

cout<<"S"<<temp->seat<<" :";

if(temp->status==0)

cout<<"|\_| ";

else

cout<<"|B| ";

}

}

void cinemax::book()

{ int x;

string y;

label:

cout<<"\n\n\nEnter seat number to be booked\n";

cin>>x;

cout<<"Enter your ID number\n";

cin>>y;

if(x<1||x>70)

{

cout<<"Enter correct seat number to book (1-70)\n";

goto label;

}

node \*temp;

temp=new node;

temp=head;

while(temp->seat!=x)

{

temp=temp->next;

}

if(temp->status==1)

cout<<"Seat already booked!\n";

else{

temp->status=1;

temp->id=y;

cout<<"Seat "<<x<<" booked!\n";

}

}

void cinemax::cancel()

{

int x;

string y;

label1:

cout<<"Enter seat number to cancel booking\n";

cin>>x;

cout<<"Enter you ID\n";

cin>>y;

if(x<1||x>70)

{

cout<<"Enter correct seat number to cancel (1-70)\n";

goto label1;

}

node \*temp;

temp=new node;

temp=head;

while(temp->seat!=x)

{

temp=temp->next;

}

if(temp->status==0)

{

cout<<"Seat not booked yet!!\n";

}

else

{

if(temp->id==y)

{

temp->status=0;

cout<<"Seat Cancelled!\n";

}

else

cout<<"Wrong User ID !!! Seat cannot be cancelled!!!\n";

}

}

void cinemax::avail()

{

int r=1;

node\* temp;

temp=head;

int count=0;

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

cout<<"\n------------------------------------------------------------------------------------\n";

cout<<" Screen this way \n";

cout<<"------------------------------------------------------------------------------------\n";

while(temp->next!=head)

{

{

if(temp->seat/10==0)

cout<<"S0"<<temp->seat<<" :";

else

cout<<"S"<<temp->seat<<" :";

if(temp->status==0)

cout<<"|\_| ";

else if(temp->status==1)

cout<<" ";

count++;

if(count%7==0)

{

cout<<endl;

}

}

temp=temp->next;

}

if(temp->status==0)

{

cout<<"S"<<temp->seat<<" :";

if(temp->status==0)

cout<<"|\_| ";

}

}

int main()

{ cinemax obj;

obj.create\_list();

int ch;

char c='y';

while(c=='y')

{ obj.display();

cout<<"\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n";

cout<<" CINEMAX MOVIE THEATRE\n";

cout<<"\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n";

cout<<"\nEnter Choice\n1.Current SeatStatus\n2.Book Seat \n3.Available Seat\n4.CancelSeat\n";

cin>>ch;

switch(ch)

{

case 1:obj.display();

break;

case 2: obj.book();

break;

case 3:obj.avail();

break;

case 4: obj.cancel();

break;

default: cout<<"Wrong choice input\n";

}

cout<<"\nDo you want to perform any other operation : (y/n)\n";

cin>>c;

}

return 0;

}

**OUTPUT:-**

**------------------------------------------------------------------------------------**

**Screen this way**

**------------------------------------------------------------------------------------**

**S01 :|\_| S02 :|\_| S03 :|\_| S04 :|\_| S05 :|\_| S06 :|\_| S07 :|\_|**

**S08 :|\_| S09 :|\_| S10 :|\_| S11 :|\_| S12 :|\_| S13 :|\_| S14 :|\_|**

**S15 :|\_| S16 :|\_| S17 :|\_| S18 :|\_| S19 :|\_| S20 :|\_| S21 :|\_|**

**S22 :|\_| S23 :|\_| S24 :|\_| S25 :|\_| S26 :|\_| S27 :|\_| S28 :|\_|**

**S29 :|\_| S30 :|\_| S31 :|\_| S32 :|\_| S33 :|\_| S34 :|\_| S35 :|\_|**

**S36 :|\_| S37 :|\_| S38 :|\_| S39 :|\_| S40 :|\_| S41 :|\_| S42 :|\_|**

**S43 :|\_| S44 :|\_| S45 :|\_| S46 :|\_| S47 :|\_| S48 :|\_| S49 :|\_|**

**S50 :|\_| S51 :|\_| S52 :|\_| S53 :|\_| S54 :|\_| S55 :|\_| S56 :|\_|**

**S57 :|\_| S58 :|\_| S59 :|\_| S60 :|\_| S61 :|\_| S62 :|\_| S63 :|\_|**

**S64 :|\_| S65 :|\_| S66 :|\_| S67 :|\_| S68 :|\_| S69 :|\_| S70 :|\_|**

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**CINEMAX MOVIE THEATRE**

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**Enter Choice**

**1.Current SeatStatus**

**2.Book Seat**

**3.Available Seat**

**4.CancelSeat**

**2**

**Enter seat number to be booked**

**20**

**Enter your ID number**

**453**

**Seat 20 booked!**

**Do you want to perform any other operation : (y/n)**

**n**

**=== Code Execution Successful ===**