```
#include <conio.h>
#include <st dio.h>
#include <iost r eam.h>
#include <st r ing.h>
#include <gr aphics.h>
#include <st dlib.h>
#include <dos.h>
st at ic int  p = 0;
class a
{
      char  busn[5], dr iver [10], ar r ival[5], depar t [5], fr om[10], t o[10], seat [8][4][10];
public:
      void inst all();
      void allot ment ();
      void empt y();
      void show();
      void avail();
      void posit ion(int  i);
}
bus[10];
void vline(char  ch)
{
      for  (int  i=80;i>0;i- - )
      cout << ch;
}
void a::inst all()
{
      cout << "Ent er  bus no: ";
      cin>>bus[p].busn;
      cout << "\nEnt er  Dr iver 's name: ";
      cin>>bus[p].dr iver ;
      cout << "\nAr r ival t ime: ";
      cin>>bus[p].ar r ival;
      cout << "\nDepar t ur e: ";
      cin>>bus[p].depar t ;
      cout << "\nFr om: \t \t \t ";
      cin>>bus[p].fr om;
      cout << "\nTo: \t \t \t ";
      cin>>bus[p].t o;
      bus[p].empt y();
      p++;
}
void a::allot ment ()
{
      int  seat ;
      char  number [5];
      t op:
      cout << "Bus no: ";
      cin>>number ;
      int  n;
      for (n=0;n<=p;n++)
      {
            if(st r cmp(bus[n].busn, number )==0)
            br eak;
      }
```

```
        while(n<=p)
        {
            cout <<"\nSeat  Number : ";
            cin>>seat ;
            if(seat >32)
            {
                cout <<"\nTher e ar e only 32 seat s available in t his bus.";
            }
            else
            {
            if (st r cmp(bus[n].seat [seat /4][(seat %4)- 1], "Empt y")==0)
                {
                    cout <<"Ent er  passanger 's name: ";
                    cin>>bus[n].seat [seat /4][(seat %4)- 1];
                    br eak;
                }
            else
                cout <<"The seat  no. is alr eady r eser ved.\n";
                }
                }
            if(n>p)
            {
                cout <<"Ent er  cor r ect  bus no.\n";
                got o t op;
            }
        }

void a::empt y()
{
        for (int  i=0; i<8;i++)
        {
            for (int  j=0;j<4;j++)
            {
                st r cpy(bus[p].seat [i][j], "Empt y");
            }
        }
}
void a::show ()
{
        int  n;
        char  number [5];
        cout <<"Ent er  bus no: ";
        cin>>number ;
        for (n=0;n<=p;n++)
        {
            if(st r cmp(bus[n].busn, number )==0)
            br eak;
        }
while(n<=p)
{
        vline('*');
        cout <<"Bus no: \t "<<bus[n].busn
        <<"\nDr iver : \t "<<bus[n].dr iver <<"\t \t Ar r ival  t ime: \t "
        <<bus[n].ar r ival<<"\t Depar t ur e t ime:"<<bus[n].depar t
        <<"\nFr om: \t \t "<<bus[n].fr om<<"\t \t To: \t \t "<<
```

```
        bus[n].t o<< "\n";
        vline('*');
        bus[0].posit ion(n);
        int  a=1;
        for  (int  i=0; i<8; i++)
        {
              for (int  j=0;j<4;j++)
              {
                    a++;
                    if(st r cmp(bus[n].seat [i][j],"Empt y")!=0)
                    cout <<"\nThe seat  no "<<(a- 1)<<" is r eser ved for  "<<bus[n].seat [i][j]<<".";
              }
        }
        br eak;
        }
        if(n>p)
              cout <<"Ent er  cor r ect  bus no: ";
}
void a::posit ion(int  l)
{
        int  s=0;p=0;
        for  (int  i =0; i<8;i++)
        {
              cout <<"\n";
              for  (int  j = 0;j<4; j++)
              {
                    s++;
                    if(st r cmp(bus[l].seat [i][j], "Empt y")==0)
                          {
                                cout .w idt h(5);
                                cout .fill(' ');
                                cout <<s<<".";
                                cout .w idt h(10);
                                cout .fill(' ');
                                cout <<bus[l].seat [i][j];
                                p++;
                          }
                          else
                          {
                          cout .w idt h(5);
                          cout .fill(' ');
                          cout <<s<<".";
                          cout .w idt h(10);
                          cout .fill(' ');
                          cout <<bus[l].seat [i][j];
                          }
                    }
              }
        cout <<"\n\nTher e ar e "<<p<<" seat s empt y in Bus No: "<<bus[l].busn;
        }
void a::avail()
{

        for (int  n=0;n<p;n++)
        {
```

```
            vline('*');
            cout <<"Bus no: \t "<<bus[n].busn<<"\nDr iver : \t "<<bus[n].dr iver
            <<"\t \t Ar r ival t ime: \t "<<bus[n].ar r ival<<"\t Depar t ur e Time: \t "
            <<bus[n].depar t <<"\nFr om: \t \t "<<bus[n].fr om<<"\t \t To: \t \t \t "
            <<bus[n].t o<<"\n";
            vline('*');
            vline('_');
      }
}
void main()
{
clr scr ();
int  w;
int  gd=DETECT, gm;
init gr aph(&gd, &gm, "");
set bkcolor (BLUE);
while(1)
{
      cout <<"\n\n\n\n\n";
      cout <<"\t \t \t 1.Inst all\n\t \t \t "
      <<"2.Reser vat ion\n\t \t \t "
      <<"3.Show \n\t \t \t "
      <<"4.Buses Available. \n\t \t \t "
      <<"5.Exit ";
      cout <<"\n\t \t \t Ent er  your  choice:- > ";
      cin>>w;
      swit ch(w)
      {
            case 1:    bus[p].inst all();
                  br eak;
            case 2:    bus[p].allot ment ();
                  br eak;
            case 3:    bus[0].show ();
                  br eak;
            case 4:    bus[0].avail();
                  br eak;
            case 5:    exit (0);
      }
}
}
```