```
#include <conio.h>

#include <cstdio>

#include <iostream>

#include <string.h>

#include <cstdlib>

using namespace std;

static int p = 0;

class a

{

  char busn[5], driver[10], arrival[5], depart[5], from[10], to[10], seat[8][4][10];

public:

  void install();

  void allotment();

  void empty();

  void show();

  void avail();
```

```
  void position(int i);

}

bus[10];

void vline(char ch)

{

  for (int i=80;i>0;i--)

  cout<<ch;

}

void a::install()

{

  cout<<"Enter bus no: ";

  cin>>bus[p].busn;

  cout<<"\nEnter Driver's name: ";

  cin>>bus[p].driver;

  cout<<"\nArrival time: ";
```

```
  cin>>bus[p].arrival;
  cout<<"\nDeparture: ";
  cin>>bus[p].depart;
  cout<<"\nFrom: \t\t\t";
  cin>>bus[p].from;
  cout<<"\nTo: \t\t\t";
  cin>>bus[p].to;
  bus[p].empty();
  p++;
}
void a::allotment()
{
  int seat;
  char number[5];
  top:
  cout<<"Bus no: ";
```

```
cin>>number;

int n;

for(n=0;n<=p;n++)

{

  if(strcmp(bus[n].busn, number)==0)

  break;

}

while(n<=p)

{

  cout<<"\nSeat Number: ";

  cin>>seat;

  if(seat>32)

  {

    cout<<"\nThere are only 32 seats available in this bus.";

  }
```

```
else

{

if (strcmp(bus[n].seat[seat/4][(seat%4)-1], "Empty")==0)

 {

   cout<<"Enter passanger's name: ";

   cin>>bus[n].seat[seat/4][(seat%4)-1];

   break;

 }

else

  cout<<"The seat no. is already reserved.\n";

 }

 }

if(n>p)

{

  cout<<"Enter correct bus no.\n";

  goto top;
```

```
    }

  }


void a::empty()

{

  for(int i=0; i<8;i++)

  {

    for(int j=0;j<4;j++)

    {

      strcpy(bus[p].seat[i][j], "Empty");

    }

  }

}

void a::show()

{

  int n;
```

```
  char number[5];

  cout<<"Enter bus no: ";

  cin>>number;

  for(n=0;n<=p;n++)

  {

    if(strcmp(bus[n].busn, number)==0)

    break;

  }

while(n<=p)

{

  vline('*');

  cout<<"Bus no: \t"<<bus[n].busn

  <<"\nDriver: \t"<<bus[n].driver<<"\t\tArrival time: \t"

  <<bus[n].arrival<<"\tDeparture time:"<<bus[n].depart

  <<"\nFrom: \t\t"<<bus[n].from<<"\t\tTo: \t\t"<<
```

```
bus[n].to<<"\n";

vline('*');

bus[0].position(n);

int a=1;

for (int i=0; i<8; i++)

{

  for(int j=0;j<4;j++)

  {

    a++;

    if(strcmp(bus[n].seat[i][j],"Empty")!=0)

    cout<<"\nThe seat no "<<(a-1)<<" is reserved for "<<bus[n].seat[i][j]<<".";

  }

}

break;

}

if(n>p)
```

```
    cout<<"Enter correct bus no: ";

}

void a::position(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(strcmp(bus[l].seat[i][j], "Empty")==0)

        {

          cout.width(5);

          cout.fill(' ');
```

```
    cout<<s<<".";

    cout.width(10);

    cout.fill(' ');

    cout<<bus[l].seat[i][j];

    p++;

   }

   else

   {

   cout.width(5);

   cout.fill(' ');

   cout<<s<<".";

   cout.width(10);

   cout.fill(' ');

   cout<<bus[l].seat[i][j];

   }

  }
```

```
    }

  cout<<"\n\nThere are "<<p<<" seats empty in Bus No: "<<bus[l].busn;

  }

void a::avail()

{

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

  {

    vline('*');

    cout<<"Bus no: \t"<<bus[n].busn<<"\nDriver: \t"<<bus[n].driver

    <<"\t\tArrival time: \t"<<bus[n].arrival<<"\tDeparture Time: \t"

    <<bus[n].depart<<"\nFrom: \t\t"<<bus[n].from<<"\t\tTo: \t\t\t"

    <<bus[n].to<<"\n";

    vline('*');

    vline('_');

  }
```

```
}

int main()

{

system("cls");

int w;

while(1)

{

   //system("cls");

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

  cout<<"\t\t\t1.Install\n\t\t\t"

  <<"2.Reservation\n\t\t\t"

  <<"3.Show\n\t\t\t"

  <<"4.Buses Available. \n\t\t\t"

  <<"5.Exit";

  cout<<"\n\t\t\tEnter your choice:-> ";
```

```
 cin>>w;

 switch(w)

 {

  case 1:  bus[p].install();

    break;

  case 2:  bus[p].allotment();

    break;

  case 3:  bus[0].show();

    break;

  case 4:  bus[0].avail();

    break;

  case 5:  exit(0);

 }

}

return 0;

}
```