

## OEP

### **Bus reservation system**

Code :

```
#include<iostream>

#include<string.h>

#include<string>

#include<cstdlib>

#include<fstream>

using namespace std;

static int p = 0;

class a
{
    public:

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

    void install();

    void allotment();

    void position(int i);

};

class b : public a
{public:

void empty();

    void show();

}bus[10];

void vline(char ch)
{
    for (int i=80;i>0;i--)
```

```

    cout<<ch;
}
void a::install()
{
    ofstream fout;
    fout.open("details.txt",ios :: app);
    cout<<"Enter bus no: ";
    cin>>bus[p].busn;
    fout <<bus[p].busn<<"\t";
    cout<<"\nEnter driver's name: ";
    cin>>bus[p].driver;
    fout << bus[p].driver<<"\t";
    cout<<"\nFrom: \t\t";
    cin>>bus[p].from;
    fout <<bus[p].from<<"\t";
    cout<<"\nTo: \t\t";
    cin>>bus[p].to;
    fout << bus[p].to<<"\t";
    cout<<"\nArrival time:";
    cin>>bus[p].arrival;
    fout << bus[p].arrival<<"\t";
    cout<<"\nDeparture time:";
    cin>>bus[p].depart;
    fout << bus[p].depart<<"\n";
    bus[p].empty();
    p++;
    fout.close();
}

```

```

}

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 b::empty()

{

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

    {

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

        {

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

        }

    }

}

void b::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)
{
    char c[1000];

    vline('*');

    ifstream fin;

    fin.open("details.txt");

    while(!fin.eof())
    {
        cout<<"\nBus no Driver From To Arrival Depart\n";

        fin.getline(c,sizeof(fin));

        if(strcmp(number,c))
        {
            cout<<c<<"\n";

            int i=0;

            while(!fin.eof())
            {
                fin.getline(c,sizeof(fin));

                cout<<c<<"\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;

}

int main()
{
    system("cls");
    int w;

```

```

while(1)
{
    cout<<"\n\n\n";
    cout<<"\t\t1.Install\n\t\t\t"
    <<"2.Reservation\n\t\t\t"
    <<"3.Show\n\t\t\t"
    <<"4.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: exit(0);

        default:
            cout << "invalid choice";
            break;
    }
}

return 0;
}

```