OBJECT ORIENTED PROGRAMMING WITH CPP - LAB

PROJECT BY:

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I. Certificate

This is to certify that the work present in this Project entitled "**BUS RESERVATION SYSTEM**" has been carried out by ChallapalliNagasai, Nakka Akash,Neelapala Abhilash,Lokesh Rai kumar,Kiran Venkata Sai under my/our supervision. The work is **genuine, original, and suitable for submission to the SRM University – AP for the award of Bachelor of Technology/Master of Technology in School of Engineering and Sciences.**

Supervisor

Prof. / **Banee Bandana Das,**

Affiliation.

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Date: 06-Dec-22

II. Acknowledgements

We are extremely grateful and remain indebted to our honorable Professor L SRINIVASA RAO who has given us this opportunity to do this project and thereby improve our knowledge. We are also thankful to him for his constructive criticism and invaluable suggestions, which benefited the project on “Library Management System.” He is very cooperative throughout this project work. Through this column, it would be our utmost pleasure to him for his encouragement, cooperation and consent without which we wouldn’t be able to accomplish this project.

With Regards.

III. ABSTRACT

Travel industry is evolving day to day. As the industry evolves the need to digitalise all the transactions becomes the need of the hour. That is exactly what this project is about. It helps to manage bus scheduling and bookings. This Bus Booking System is an easily deployable, integrated end-to-end system starting from searching bus routes to book them.

The application gives utmost importance to security and usability. The database is updated from time to time and a user can reserve his ticket from any part of the world and any time.

IV. Introduction

Bus Booking System is a web based application which is connected to a complete database. The database includes information about buses, no. of seats available, occupancy, availability, days and time of operation, no. of buses from point ‘A’ to point ‘B’, Price ranges, automated report and bill generation etc.

Our project has mainly four features.

1.Installing: This feature allows you to install bus information before it can be reserved. It includes the bus no., driver’s name, arrival time, departure time and destination (from and to) of the bus.

2.Reservation: This feature includes the bus number, seat number and the passenger’s name. The seat number of the particular bus is reserved under the passenger’s name that was given by the user.

3.Show: This feature basically helps us to see all the information of the required bus in a very vivid format.

4.Buses available: This helps us to see all the available seats in the bus.

V. Objectives

To make bus registration and traveling easier.

BUS RESERVATION SYSTEM

CODE:

```
#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[7], depart[7], 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: ";
}
```

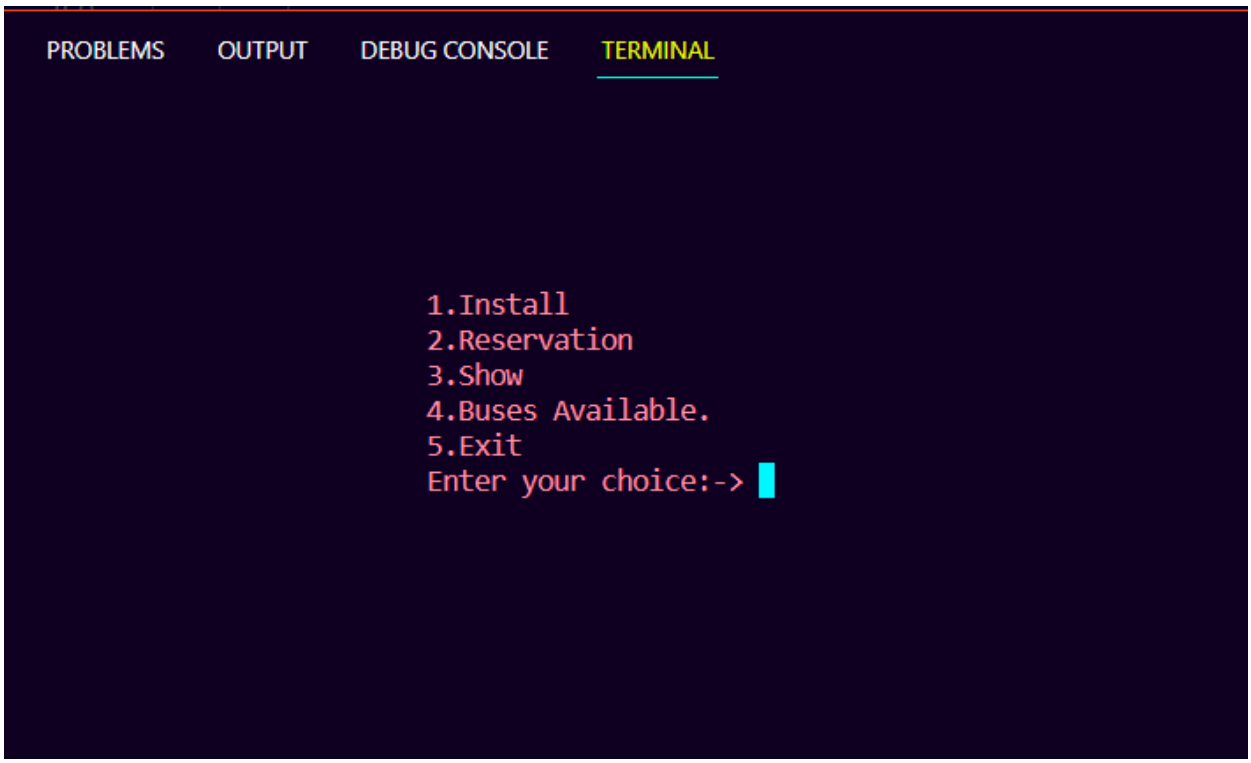
```
void a::position(int l)
{
   int s = 0;
   p = 0;
   for (int i = 0; i < 8; i++)
   {
      cout << "\n";
      for (int j = 0; j < 4; j++)
      {
         s++;
         if (strcmp(bus[l].seat[i][j], "Empty") == 0)
         {
            cout.width(5);
            cout.fill(' ');
            cout << s << ".";
            cout.width(10);
            cout.fill(' ');
            cout << bus[l].seat[i][j];
            p++;
         }

         else
         {
            cout.width(5);
```

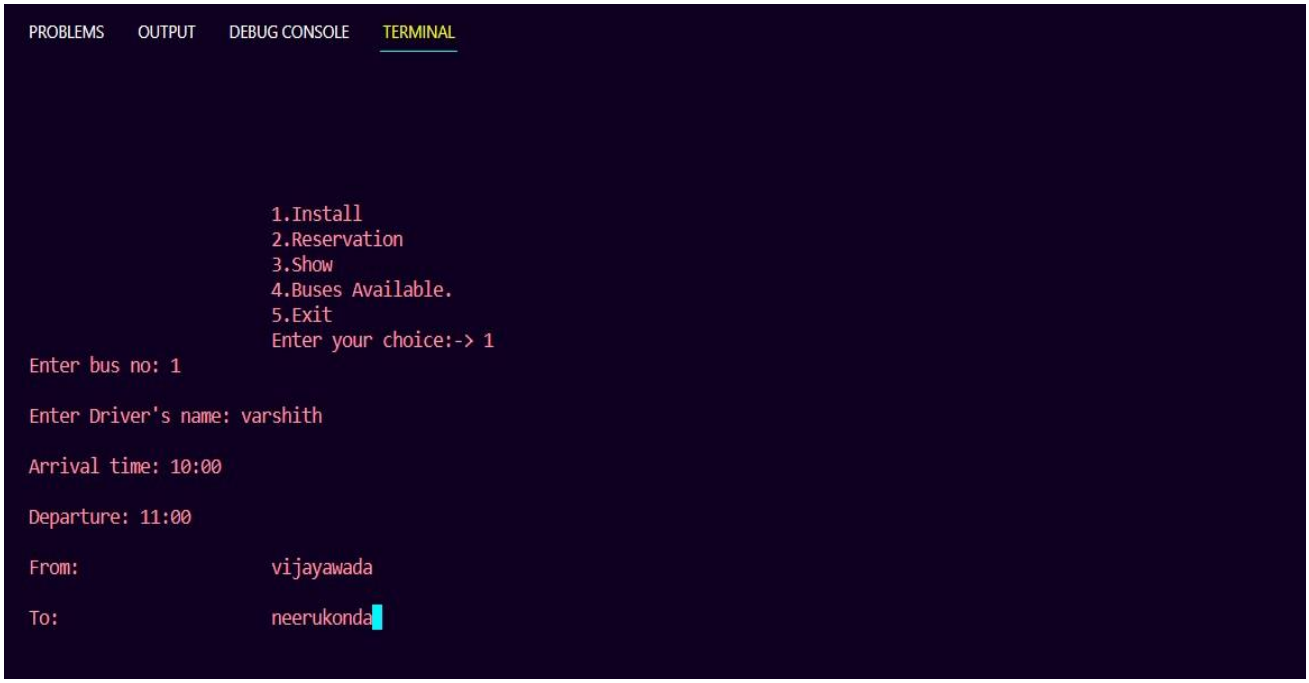
```
            cout.fill(' ');
            cout << s << ".";
            cout.width(10);
            cout.fill(' ');
            cout << bus[l].seat[i][j];
         }
      }
   }
   cout << "\n\nThere are " << p << " seats empty in Bus No: " <<
bus[l].busn;
}
void a::avail()
{
   for (int n = 0; n < 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";
```

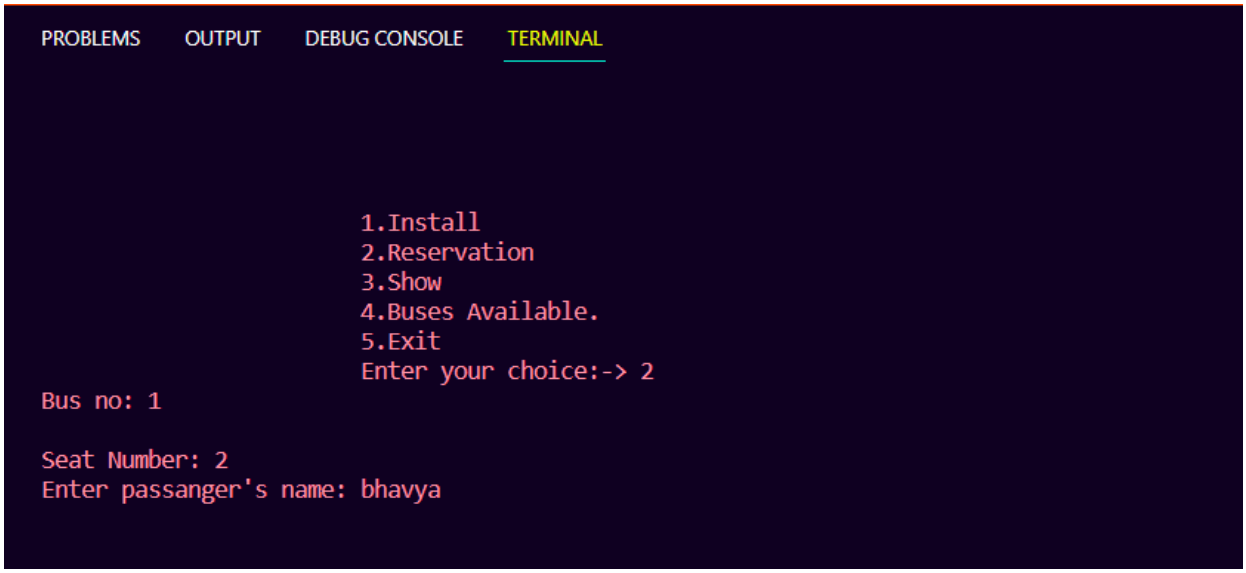
```
        vline('*');

        vline('_');
    }
}
int main()
{
    system("cls");
    int w;
    while (1)
    {
        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";
```

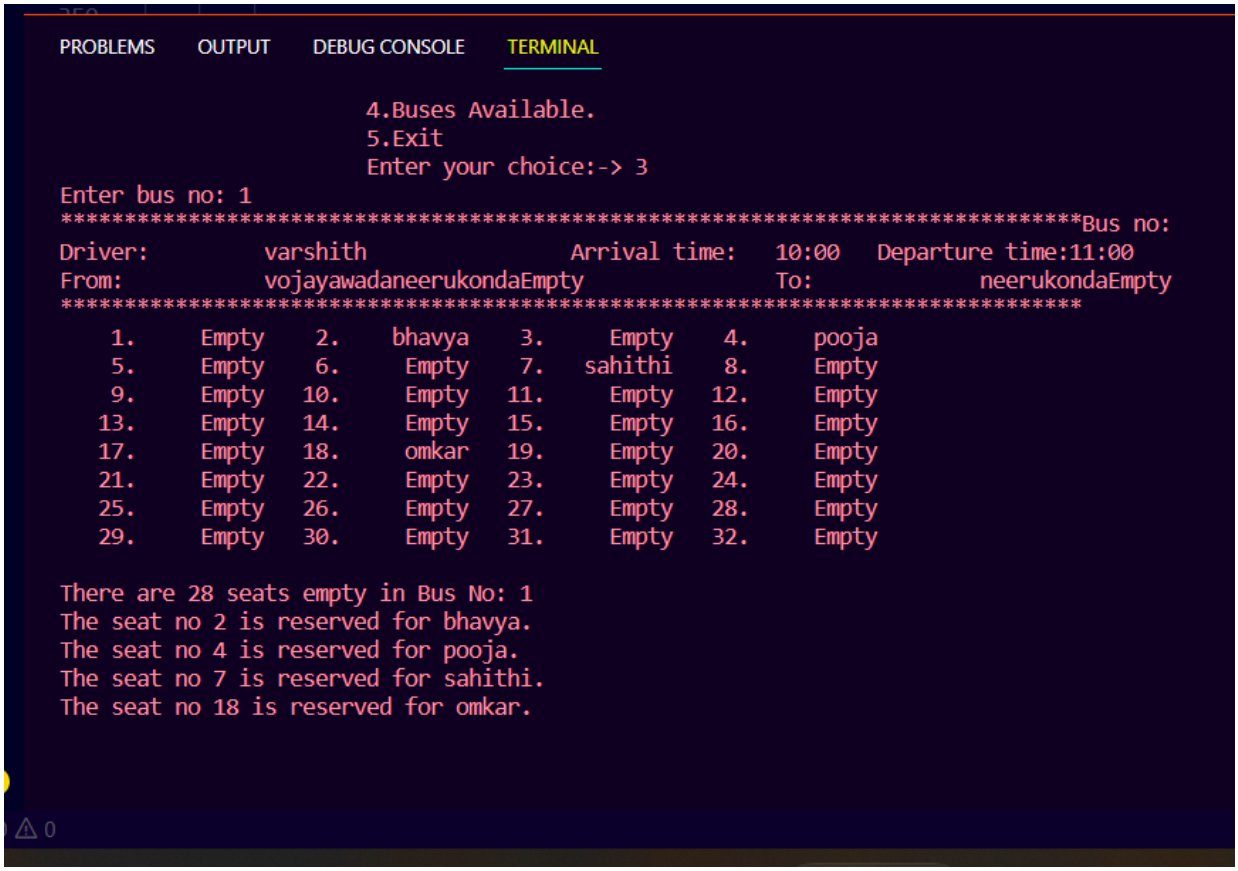
```
        cout << "\n\t\t\tEnter your choice:-> ";

        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;
}
```

OUTPUT


PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
1.Install
2.Reservation
3.Show
4.Buses Available.
5.Exit
Enter your choice:->


PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
1.Install
2.Reservation
3.Show
4.Buses Available.
5.Exit
Enter your choice:-> 1
Enter bus no: 1
Enter Driver's name: varshith
Arrival time: 10:00
Departure: 11:00
From: vijayawada
To: neerukonda


PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
1.Install
2.Reservation
3.Show
4.Buses Available.
5.Exit
Enter your choice:-> 2
Bus no: 1
Seat Number: 2
Enter passanger's name: bhavya


PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
4.Buses Available.
5.Exit
Enter your choice:-> 3
Enter bus no: 1
**********Bus no:
Driver: varshith Arrival time: 10:00 Departure time:11:00
From: vojayawadaneerukondaEmpty To: neerukondaEmpty
****
1. Empty 2. bhavya 3. Empty 4. pooja
5. Empty 6. Empty 7. sahithi 8. Empty
9. Empty 10. Empty 11. Empty 12. Empty
13. Empty 14. Empty 15. Empty 16. Empty
17. Empty 18. omkar 19. Empty 20. Empty
21. Empty 22. Empty 23. Empty 24. Empty
25. Empty 26. Empty 27. Empty 28. Empty
29. Empty 30. Empty 31. Empty 32. Empty
There are 28 seats empty in Bus No: 1
The seat no 2 is reserved for bhavya.
The seat no 4 is reserved for pooja.
The seat no 7 is reserved for sahithi.
The seat no 18 is reserved for omkar.