DON BOSCO INSTITUTE OF TECHNOLOGY

Skill Lab: C++ and Java Programming
MINI PROJECT REPORT
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On

“Bus Reservation System C++”

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Mini Project Title : **Bus Reservation System C++ Project**

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Class : SE EXTC

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CHAPTER 1

INTRODUCTION

Bus reservation system is a very simple project showing the implementation of class along with the object of C++ language. This project is very simple to understand, and it will help you learn how to create class and object in your C++ project/mini project. Here, the user can perform tasks like install bus information, reserve bus seat, show reservation information and show information regarding the buses available.

Basically four features are available in this project.The focus of the project is to computerize traveling company to manage data, so that all the transactions become fast and there should not be any error in transaction like calculation mistake, bill generation and other things. It replaces all the paper work. It keeps records of all bills also, giving to ensure 100% successful implementation of the computerized Bus reservation system.

CHAPTER 2
IMPLEMENTATION

Code for the project is as follows:

```
#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++)

{
```

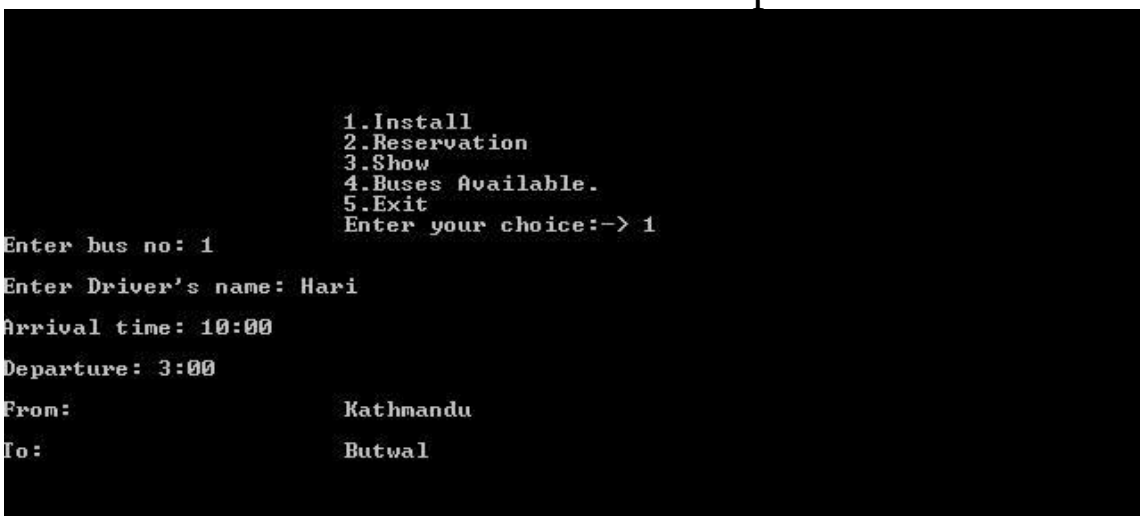
```
vline('*');

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)

{
```

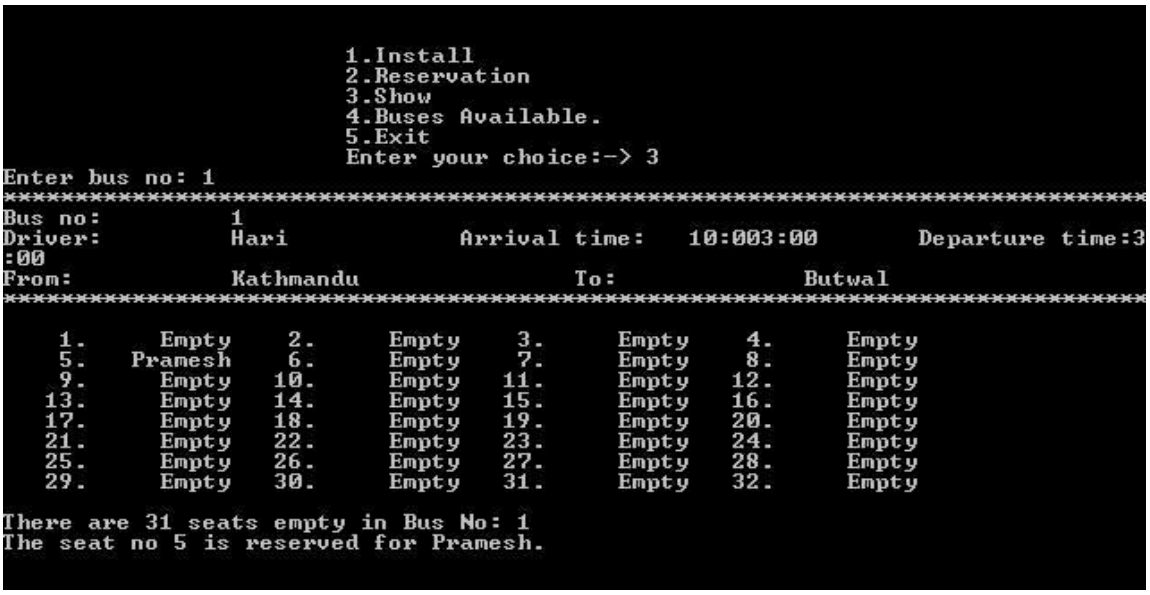
```
//system("cls");

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;

}
```

CHAPTER 3
OUTPUT
RESULTS:

Screenshots of The Output:-





CHAPTER 4

CONCLUSION

The project of Bus Reservation System using C++ has been successfully performed.We observed the working of the Bus reservation system and after going through it, we get to know that there are many operations, which they have to do manually. It takes a lot of time and causing many errors while data entry. Due to this, sometimes a lot of problems occur and they were facing many disputes with customers.

To solve the above problem, and further maintaining records of passenger details,bus details,seat availability,arrival depature time and other things, a computerized reservation system has been developed which helps to do bookings in a simple and a better way.

CHAPTER 5

References

1) https://t4tutorials.com/bus-ticket-reservation-system-project-in-c-oop/?amp

2) https://www.lovelycoding.org/bus-reservation-system/

3) https://www.codewithc.com/bus-reservation-system-project-in-c/