

BUS TICKET RESERVATION SYSTEM

Academic Year: 2021-22 ODD-SEMESTER

**Department with Specialization: B-Tech Computer Science and
Engineering with
Specialization in Artificial
Intelligence and Machine
Learning.**

Semester : 1
Course Code : 18CSS101J
**Course Title : Programming for Problem
Solving**

Submitted by

ASTITVA VEER GARG (RA2111026010247)

SAI SATWIKA MAHANKALI (RA2111026010226)

KUNAL CHOPRA (RA2111026010245)

Under the Guidance of

Dr. R.LAKSHMINARAYANAN

(Associate Professor, NWC)



DEPARTMENT OF COMPUTING
COLLEGE OF ENGINEERING AND TECHNOLOGY
SRM INSTITUTE OF SCIENCE AND TECHNOLOGY
KATTANKULATHUR- 603 203

JANUARY 2022

AIM

To create a Bus Ticket Reservation System which shows you Bus List, Allows you to book tickets, cancel tickets and check Bus seats availability.

ABSTRACT

This bus reservation system in c program has a login system, which makes it more stable. There is no risk of data abuse or loss, and it takes very little time. This bus reservation system mini project in c design is straightforward and clean, making it easy for users to learn, use, and navigate.

The Bus Reservation System Project is developed using C programming language. In this bus reservation system in c helps the user to reserve a bus tickets.

ALGORITHM

➤ **STEP-1**: START

➤ **STEP-2**: DECLARE ALL THE FUNCTIONS USED

1. LOGIN
2. BUS LIST
3. BOOKING
4. CANCEL RESERVATION
5. STATUS
6. STATUS 1
7. READ NAME
8. READ NUMBER
9. NAME NUMBER

➤ **STEP-3**: DECLARE THE VARIABLES TO BE USED

➤ **STEP-4**: GET THE USERNAME AND PASSWORD FROM THE USER. IF THE GIVEN INFORMATION IS VALID GO TO THE MAIN SCREEN.

➤ **STEP-5**: USE SWITCH CASE STATEMENT TO WORK ON EACH CASE.

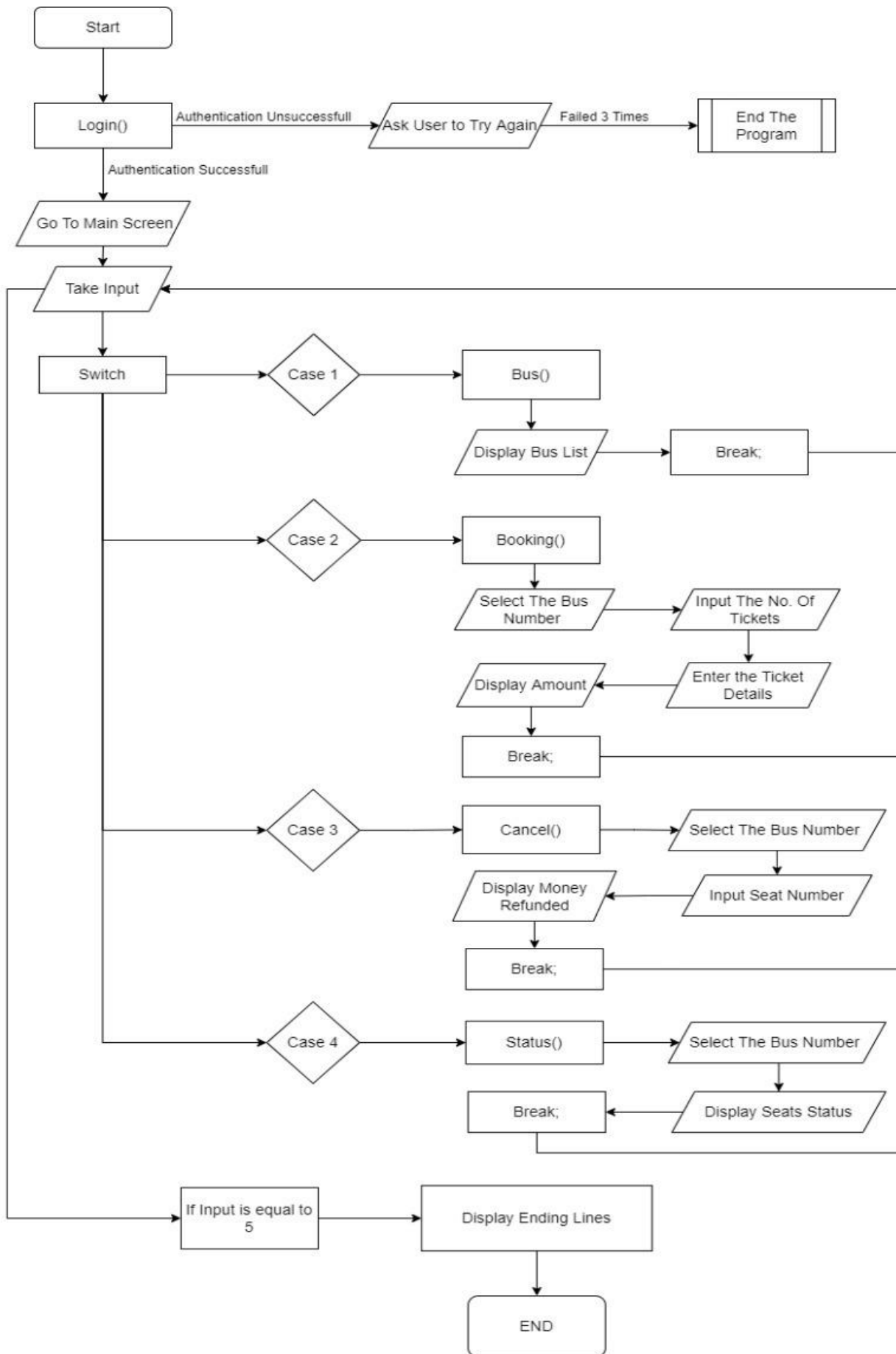
- **CASE-1**: IF THE USER CHOICE IS 1, GO TO BUS() FUNCTION AND DISPLAY ALL THE BUSES LIST.
- **CASE-2**: IF THE USER CHOICE IS 2, GO TO BOOKING() FUNCTION AND ASK THE USER TO ENTER THE BUS NUMBER. THEN ASK FOR NUMBER OF TICKETS REQUIRED. THEN ASK FOR THE DETAILS

OF THE RESEPECTIVE SEAT.THEN FINALLY DISPLAY THE BOOKING AMOUNT.

- **CASE-3**: IF THE USER CHOICE IS 3,THEN ENTER THE CANCEL FUNCTION, THEN ASK FOR THE BUS NUMBER AND DISPLAY THE SEATS AND ASK FOR SEAT NUMBER. THEN CANCEL THE SEAT AND DISPLAY MONEY REFUNDED.
- **CASE-4**: IF THE USER CHOICE IS 4, THEN ENTER TO BUS STATUS FUNCTION. ASK FOR BUS NUMBER AND THEN DISPLAY THE SEATS CURRENT STATUS.
- **CASE-5**: IF USERS CHOICE IS 5, THEN EXIT THE MAIN SCREEN AND DISPLAY THANKYOU.

➤ **STEP-6**: EXIT THE PROGRAM..

FLOW CHART



SOURCE CODE

```
#include <stdio.h>

#include <stdlib.h>

#include <string.h>

char ch[10][130]={"Astitva SuperFast Express","Satwika Express","Kunal Express","ASK Express","UDS Express"};

char name[32][100]={'\0'};

char number[32][2]={'\0'};

int num1[32]={0};

int trno;

void bus();

void name_number(int booking,char numstr[100]);

void booking();//for booking the tickets

int read_number(int trno);//for reading the number from the file

void read_name(int trno);//for reading the name from the file

void status();//for printing the status by user input

void status_1(int trno);//for printing the status while booking ticket

void cacle();


int main()
{
    login();

    int num,i;

    do{
        system("cls");
```

[illegible]

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


[illegible]

```
void booking()
```

 $\{$

```
int i=0;
```

```
char numstr[100];
```

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

[illegible]

[illegible]

[illegible]

[illegible]

```
printf("\n  AVAILABLE NO OF SEATS: %d\n",seat1);
```

```
printf("\n  NUMBER OF TICKETS: ");
```

scanf("%d",&booking);

```
printf("\n");
```

```
seat1=seat1-booking;
```

```
itoa(trno,numstr,10);
```

```
name_number(booking,numstr);
```

```
printf(" The Total booking amount is %d",600*booking);
```

```
itoa(seat1, str1, 10);
```

```
//for reading the seats from the user.
```

```
if(trno == 1)
```

 $\{$

```
f1 = fopen("tr1.txt","w");
```

```
fputs(str1,f1);
```

```
fclose(f1);
```

}

```
else if(trno == 2)
```

{

```
f1 = fopen("tr2.txt","w");
```

```
fputs(str1,f1);
```

```
fclose(f1);
```

}

```
else if(trno == 3)
```

```
{
    f1 = fopen("tr3.txt","w");
    fputs(str1,f1);
    fclose(f1);
}
else if(trno == 4)
{
    f1 = fopen("tr4.txt","w");
    fputs(str1,f1);
    fclose(f1);
}
else if(trno == 5)
{
    f1 = fopen("tr5.txt","w");
    fputs(str1,f1);
    fclose(f1);
}
}
}
```

```
void name_number(int booking,char numstr[100])
{
    char tempstr[100],tempstr1[12]="status",tempstr2[12]="number";
    int number;
```

[illegible]

```
fclose(a);  
fclose(b);  
}
```

```
int read_number(int trno)//for putting the numeric value in the array  
{  
    char tempstr[100],tempstr2[12]="number";  
    FILE *a,*b;  
    char numstr[100];  
    int i=0,j=0,k;  
    itoa(trno,numstr,10);  
    strcat(numstr,".txt");  
    strcat(tempstr2,numstr);  
    a = fopen(tempstr2,"a+");//for open the file to write the name in the file  
    while(!feof(a))  
    {  
        number[i][j] = fgetc(a);  
  
        if(number[i][j] == ' ' )  
        {  
            j=0;  
            i++;  
        }  
        else
```

```

    {
        j++;
    }
}
k=i;
for(i=0; i<k; i++)
{
    num1[i] = atoi(number[i]);
}
fclose(a);
return k;
}

```

```

void read_name(int trno)//for putting the numeric value in the array
{
    char tempstr1[12]="status";
    FILE *b;
    char numstr[100];
    int i=0,j=0,k=0;
    itoa(trno,numstr,10);
    strcat(numstr,".txt");
    strcat(tempstr1,numstr);
    b = fopen(tempstr1,"a+");//for open the file to write the name in the file
    while(!feof(b))
    {

```



```
name[i][j] = fgetc(b);
```

```
if(name[i][j] == ' ')
```

 $\{$

j=0;

```
    i++;
```

}

else

 $\{$

j++;

}

}

```
name[i][j]='\0';
```

k=i;

```
fclose(b);
```

}

```
void status()
```

 $\{$

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

```
printf("\n\n
```

[illegible]

```
printf("\t\t BUS RESERVATION");
```

```
printf("\n\n");

int i,trno,index=0,j;

printf(" ENTER THE BUS NUMBER: ");

scanf("%d",&trno);

j=read_number(trno);

read_name(trno);

printf("\n\n");

printf("\t\t Bus No.%d: %s\n",trno,ch[trno-1]);

printf("\n\n");

char tempname[33][10]={"Empty ","Empty ","Empty ","Empty ","Empty ",
"Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ",
"Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ",
"Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty "};

for(i=0; i<j; i++)

{

strcpy(tempname[num1[i]],name[i]);

}

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



```
char tempname[33][10]={"Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty ","Empty "};
```

```
for(i=0; i<j; i++)
```

```
{
```

```
    strcpy(tempname[num1[i]],name[i]);
```

```
}
```

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

```
{
```

```
    printf(" ");
```

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

```
    {
```

```
        printf("%d.%s\t",index+1,tempname[index+1]);
```

```
        index++;
```

```
    }
```

```
        printf("\n");
```

```
}
```

```
}
```

```
void candle()
```

```
{
```

```
int seat_no,i,j;
```

```
char numstr[100],tempstr2[15]="number",tempstr1[15]="status";
```

```
printf("\n ENTER THE BUS NUMBER: ");
```

[illegible]

[illegible]

[illegible]

[illegible]


```
if (a>2)
{
    printf("\nSorry you have entered the wrong username and
password for four times!!!");

    getch();

}
system("cls");
}
```

OUTPUT

1. Login screen:

```
=====
BUS RESERVATION
=====

===== LOGIN FORM =====

ENTER USERNAME:
```

2. After login:

```
=====
BUS RESERVATION
=====

===== LOGIN FORM =====

ENTER USERNAME: admin
ENTER PASSWORD: *****
=====

WELCOME USER !!!!

Press any key to continue...
```

3. Main page:

```
=====
BUS RESERVATION
=====

===== MAIN MENU =====

[1] View Bus List
[2] Book Tickets
[3] Cancel Booking
[4] Bus Status Board
[5] Exit

=====

ENTER YOUR CHOICE:
```

4. Bus():

```
=====
BUS RESERVATION
=====

===== BUS LIST =====

[1] => Astitva SuperFast Express
[2] => Satwika Express
[3] => Kunal Betrayal Express
[4] => ASK Express
[5] => UDS Express
```

5. Booking() Page 1:

```
=====
BUS RESERVATION
=====

===== BUS LIST =====

[1] => Astitva SuperFast Express
[2] => Satwika Express
[3] => Kunal Betrayal Express
[4] => ASK Express
[5] => UDS Express

ENTER THE BUS NUMBER:
```

6. Booking() Page 2:

```
=====
BUS RESERVATION
=====

1.Empty    2.Empty    3.Empty    4.Empty
5.Empty    6.Empty    7.Empty    8.Empty
9.Empty    10.Empty   11.Empty   12.Empty
13.Empty   14.Empty   15.Empty   16.Empty
17.Empty   18.Empty   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

=====

AVAILABLE SEATS: 32

NUMBER OF TICKETS:
```

7. Booking() Page 3:

BUS RESERVATION			
1.Empty	2.Empty	3.Empty	4.Empty
5.Empty	6.Empty	7.Empty	8.Empty
9.Empty	10.Empty	11.Empty	12.Empty
13.Empty	14.Empty	15.Empty	16.Empty
17.Empty	18.Empty	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

AVAILABLE SEATS: 32

NUMBER OF TICKETS: 2

===== Enter the details for ticket no 1 =====

ENTER THE SEAT NUMBER: 5

ENTER THE PERSON NAME: Corey

=====

===== Enter the details for ticket no 2 =====

ENTER THE SEAT NUMBER: 6

ENTER THE PERSON NAME: Kunal

=====

The Total booking amount is 400

8. Cancel() Page 1:

```
=====
BUS RESERVATION
=====

===== MAIN MENU =====

[1] View Bus List
[2] Book Tickets
[3] Cancel Booking
[4] Bus Status Board
[5] Exit

=====
ENTER YOUR CHOICE: 3

ENTER THE BUS NUMBER: 1
```

9. Cancel() Page 2:

```
=====
BUS RESERVATION
=====

1.Empty    2.Empty    3.Empty    4.Empty
5.Corey    6.Kunal    7.Empty    8.Empty
9.Empty    10.Empty   11.Empty   12.Empty
13.Empty   14.Empty   15.Empty   16.Empty
17.Empty   18.Empty   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

=====
ENTER THE SEAT NUMBER: 6

=====
Your 200 pesos has been Returned
=====
```

10. Status():

```

=====
                        BUS RESERVATION
=====

ENTER THE BUS NUMBER: 1

=====
                        Bus No.1: Astitva SuperFast Express
=====

1.Empty    2.Empty    3.Empty    4.Empty
5.Corey    6.Empty    7.Empty    8.Empty
9.Empty    10.Empty   11.Empty   12.Empty
13.Empty   14.Empty   15.Empty   16.Empty
17.Empty   18.Empty   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

```

11. Exit():

```

=====
THANK YOU FOR USING THIS BUS RESERVATION SYSTEM
=====

```

RESULT

Our project bus reservation system provides an easy way for booking the bus tickets. Our project has succeeded in managing the data and providing the best output.

CONCLUSION

Utilising the concepts of programming embedded in C language, the three developers have tried their best to create a simple and optimized program that does the work of a Bus Ticket Reservation System in real life, with a user-friendly terminal for the executable file of the source code. It has also exposed the developers to the intricate technicalities when working with older generation high level languages, in this case C, which is a 3rd generation High Level Language as opposed to modern 4th generation High Level languages like Python, Ruby etc., which has made the three developers appreciate the older generation languages which pioneered the programming scenarios among the general masses while also laying the foundation for the latest generation languages.