

**PSP [20ES104] COURSE PROJECT REPORT**

**On**

**“Online Bus** **Ticket Reservation”**

Developed By:

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**Department of Computer Science and Artificial Intelligence**

**CERTIFICATE**

This is to certify that the PSP course project report entitled **“Online Bus Ticket Reservation”** is a record of bonafide work carried out by the student(s) *B.Swarna,* bearing roll number(s) 2203A51540 of Computer Science and Artificial Intelligence department during the academic year 2022-23.

**Supervisor**

(Riyaz Mohammed)

**INDEX**

**Sl. No Title Page No.**

1. Problem statement 1
2. Module-wise description 2
3. Knowledge required to develop the project 4
4. Source code (.c file code followed by .h file code) 5

# PROBLEM STATEMENT:

\*\*Develop an Online Bus Ticket Reservation System that allows the user to conveniently book their ticket….

System that are using by the staff at the counter currently is an internal system and just used to sell the bus ticket at the counter. Customer has to go to the counter to buy bus ticket or ask for bus schedule. Further, customers need to pay cash when they buy the bus ticket and sometimes needs to queue up long time to get the bus ticket. Besides that, customer also not allowed to buy bus ticket through telephone and the bus company’s telephone always-busy

# MODULES:

In this application all variables and structure are declared globally so that these variables and structure members can be accessed throughout the program at any function call. We can choose any function by using function calls which are declared in switch-case. In order to repeat the loop control statement (do-while) is used with condition. The memory allocation will be done in this program dynamically. The application asks the person who runs the program that how many passengers data he/she want to store.

In this application four modules are used.

1. Read/Input

In this module the application asks the person who runs the program to enter username and password.

1. Sorting

In this module sorting of data is done according to the chosen wise. In this module there is a menu which asks to select the sorting wise by using switch case. The sorting menu will be like press 1 to view bus list, press 2 to book tickets and enter details(bus number, number of seats, seat number, person(s) name ) press 3 to cancel booking (bus number, seat number), press 4 to display bus status board and press 5 to exit.

1. Print

In this module all the stored details of n customers will be displayed on to the screen. In this module printf function, while loop and for loop are used.

**KNOWLEDGE REQUIRED TO DEVELOP THIS APPLICATION**

* + Control Statements (if, if-else, switch)
  + Loop Statements (while/do while, for)
  + Arrays (1D/2D-arrays)
  + Strings (Strings and Table of strings) and its functions (strcpy, strcmp)
  + Functions (Any type of user defined functions)
  + Pointers (pointer to strings )
  + File Handling

**SOURCE CODE [.C FILE]:**

#include <stdio.h>

#include <stdlib.h>

#include <string.h>

char ch[10][130]={"Super Luxury Express","Rajadhani Express","Derby Express"};

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

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

int num1[32]={0};

int trno;

void bus();//for list of 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 cancle();

void login();

int main()

{

login();

int num,i;

do

{

system("cls");

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

printf("====================================== WELCOME TO BUS RESERVATION SYSTEM ======================================\n\n\n");

printf("\t\t\t\t\t[1]=> View Bus List\n");

printf("\n");

printf("\t\t\t\t\t[2]=> Book Tickets\n");

printf("\n");

printf("\t\t\t\t\t[3]=> Cancle Booking\n");

printf("\n");

printf("\t\t\t\t\t[4]=> Bus Status Board\n");

printf("\n");

printf("\t\t\t\t\t[5]=> Exit\n\n");

printf("===============================================================================================================\n\n");

printf("\t\t\tEnter Your Choice:: ");

scanf("%d",&num);

switch(num)

{

case 1:

bus();//for list of bus

break;

case 2:

booking();//for booking the tickets

break;

case 3:

cancle();

break;

case 4:

status();

break;

}

getch();

}

while(num != 5);

system("CLS");

printf("\t----------------------------------------------------------------------------------------------------------\n");

printf("\t\t\t\t\tThank You For Using This System\t\t\t\t\t\t\n");

printf("\t----------------------------------------------------------------------------------------------------------\n");

printf("\t\t\t Brought To You By B.Swarna,L.Arya,B.Indhu,M.Shiva Charan");

getch();

return 0;

}

void bus()

{

system("cls");

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

printf("=========================================== BUS RESERVATION SYSTEM ============================================\n\n\n");

printf("\t\t\t\t\t[1] => %s\n",ch[0]);

printf("\n");

printf("\t\t\t\t\t[2] => %s\n",ch[1]);

printf("\n");

printf("\t\t\t\t\t[3] => %s\n",ch[2]);

printf("\n");

}

void booking()

{

int i=0;

char numstr[100];

system("cls");

printf("=========================================== BUS RESERVATION SYSTEM ============================================\n\n\n");//for entering train number

bus();//for seeing train least

printf("Enter the Bus number:--->");

scanf("%d",&trno);

system("cls");

printf("=========================================== BUS RESERVATION SYSTEM ============================================\n\n\n");//for selecting coach

printf("Your Bus Number is %d \*\*\*\*\*\*\*\*\*\* %s",trno,ch[trno-1]);

status\_1(trno);

FILE \*f1, \*fopen();//for reading the seats from the user.

char str1[80]="32",str2[4],str3[4];

int seat1,seat2,booking=0;

if(trno == 1)

{

f1 = fopen("tr1.txt","r+");

fgets(str1,80,f1);

fclose(f1);

}else if(trno == 2)

{

f1 = fopen("tr2.txt","r+");

fgets(str1,80,f1);

fclose(f1);

}else if(trno == 3)

{

f1 = fopen("tr3.txt","r+");

fgets(str1,80,f1);

fclose(f1);

}

else if(trno == 4)

{

f1 = fopen("tr4.txt","r+");

fgets(str1,80,f1);

fclose(f1);

}

else if(trno == 5)

{

f1 = fopen("tr5.txt","r+");

fgets(str1,80,f1);

fclose(f1);

}

seat1=atoi(str1);//covert the string into number

if(seat1 <= 0)

{

printf("There is no blank seat in this bus ");

}else

{

printf("\n\n\n\t\t\t\tAvailable Seats:------>%d\n",seat1);

printf("\n\t\t\t\tNumber of Tickets:----->");

scanf("%d",&booking);

printf("\n");

seat1=seat1-booking;

itoa(trno,numstr,10);

name\_number(booking,numstr);

printf("\n\t\t\t\tThe Total booking amount is %d",200\*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

{

f1 = fopen("tr3.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;

FILE \*a,\*b;

int i=0;

strcat(numstr,".txt");

strcat(tempstr1,numstr);

strcat(tempstr2,numstr);

a = fopen(tempstr1,"a");//for open the file to write the name in the file

b = fopen(tempstr2,"a");//for open the file for writing the number in the file

for(i=0; i<booking; i++)//for entering the person name and seat number in the file

{

printf("============================Enter the details for ticket no %d============================\n\n\n",i+1);

printf("\t\t\t\tEnter the seat number:--->");

scanf("%d",&number);

printf("\t\t\t\tEnter the name of person:--->");

scanf("%s",name[number-1]);

printf("\n======================================================================================================\n\n");

printf("\n");

itoa(number, tempstr, 10);

fprintf(a,"%s ",name[number-1]);

fprintf(b,"%s ",tempstr);

}

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("=========================================== BUS RESERVATION SYSTEM ============================================\n\n\n");

int i,trno,index=0,j;

printf("Enter the number of bus:---->");

scanf("%d",&trno);

j=read\_number(trno);

read\_name(trno);

printf("\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\n");

printf(" Bus.no-->%d---->%s \n",trno,ch[trno-1]);

printf("\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\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 ","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("\t\t\t\t");

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

{

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

index++;

}

printf("\n");

}

}

void status\_1(int trno)

{

printf("Your Bus Number is %d \*\*\*\*\*\*\*\*\*\* %s",trno,ch[trno-1]);

system("cls");

printf("=========================================== BUS RESERVATION SYSTEM ============================================\n\n\n");

int i,index=0,j;

j=read\_number(trno);

read\_name(trno);

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 "};

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

{

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

}

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

{

printf("\t\t\t\t");

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

{

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

index++;

}

printf("\n");

}

}

void cancle()

{

int seat\_no,i,j;

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

printf("Enter the bus number:---->");

scanf("%d",&trno);

itoa(trno,numstr,10);

strcat(numstr,".txt");

strcat(tempstr1,numstr);

strcat(tempstr2,numstr);

read\_number(trno);

read\_name(trno);

status\_1(trno);

printf("Enter the seat number:--->");

scanf("%d",&seat\_no);

FILE \*a,\*b;

a = fopen(tempstr1,"w+");

b = fopen(tempstr2,"w+");

for(i=0; i<32; i++)

{

if(num1[i] == seat\_no)

{

for(j=0; j<32; j++)

{

if(num1[j] != seat\_no && num1[j] != 0)

{

fprintf(b,"%d ",num1[j]);

fprintf(a,"%s",name[j]);

}

else if(num1[j] == seat\_no && num1[j] != 0)

{

strcpy(name[j],"Empty ");

}

}

}

}

fclose(a);

fclose(b);

printf("\n\n");

printf("======================================================================================================\n");

printf("\t\t\t\tYour 200 rupees has been Returned\t\t\t\n");

printf("======================================================================================================\n");

}

void login()

{

int a=0,i=0;

char uname[10],c=' ';

char pword[10],code[10];

char user[10]="user";

char pass[10]="pass";

do

{

system("cls");

printf("\n ========================= LOGIN FORM ========================= ");

printf(" \n ENTER USERNAME:-");

scanf("%s", &uname);

printf(" \n ENTER PASSWORD:-");

while(i<10)

{

pword[i]=getch();

c=pword[i];

if(c==13)

break;

else

printf("\*");

i++;

}

pword[i]='\0';

//char code=pword;

i=0;

//scanf("%s",&pword);

if(strcmp(uname,"user")==0 && strcmp(pword,"pass")==0)

{

printf(" \n\n\n WELCOME TO OUR SYSTEM !!!! LOGIN IS SUCCESSFUL");

printf("\n\n\n\t\t\t\tPress any key to continue...");

getch();//holds the screen

break;

}

else

{

printf("\n SORRY !!!! LOGIN IS UNSUCESSFUL");

a++;

getch();//holds the screen

}

}

while(a<=2);

if (a>2)

{

printf("\nSorry you have entered the wrong username and password for four times!!!");

getch();

}

system("cls");

}

**SOURCE CODE [HEADER FILE]:**

stdio.h , stdlib.h , string.h header files are used.

**RESULTS:**

**========================= LOGIN FORM ======================**

**ENTER USERNAME:-user**

**ENTER PASSWORD:-\*\*\*\***

**WELCOME TO OUR SYSTEM !!!! LOGIN IS SUCCESSFUL**

**Press any key to continue...**

**========= WELCOME TO BUS RESERVATION SYSTEM =============**

**[1]=> View Bus List**

**[2]=> Book Tickets**

**[3]=> Cancle Booking**

**[4]=> Bus Status Board**

**[5]=> Exit**

**=============================================================**

**Enter Your Choice:: 1**

**======================= BUS RESERVATION SYSTEM ===================**

**[1] => Super Luxury Express**

**[2] => Rajadhani Express**

**[3] => Derby Express**

**Enter Your Choice:: 2**

**======================= BUS RESERVATION SYSTEM ===================**

**[1] => Super Luxury Express**

**[2] => Rajadhani Express**

**[3] => Derby Express**

**Enter the Bus number:--->1**

**======================= BUS RESERVATION SYSTEM ===================**

**1.Empty 2.Empty 3.shiva 4.Empty**

**5.Empty 6.Empty 7.Empty 8.indhu**

**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:------>28**

**Number of Tickets:----->4**

**======================Enter the details for ticket no1 =====================**

**Enter the seat number:--->1**

**Enter the name of person:--->Aryan**

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

**Enter the seat number:--->5**

**Enter the name of person:--->Swarna**

**======================Enter the details for ticket no 3 =====================**

**Enter the seat number:--->7**

**Enter the name of person:--->Indhu**

**======================Enter the details for ticket no 4 =====================**

**Enter the seat number:--->3**

**Enter the name of person:--->Shiva**

**The Total booking amount is 800**

**Enter Your Choice:: 3**

**Enter the bus number:---->1**

**======================= BUS RESERVATION SYSTEM ===================**

**1.Aryan 2.Empty 3.Shiva 4.Empty**

**5.Swarna 6.Empty 7.Indhu 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:--->5**

**=============================================================**

**Your 200 rupees has been Returned**

=============================================================

**Enter Your Choice:: 4**

**======================= BUS RESERVATION SYSTEM ===================**

**Enter the number of bus:---->1**

**-------------------------------------------------------------------------------------------------------------------**

**Bus.no-->1---->Super Luxury Express**

**-------------------------------------------------------------------------------------------------------------------**

**1.Aryan 2.Empty 3.Shiva 4.Empty**

**5. Empty 6.Empty 7.Indhu 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 Your Choice:: 5**

**-------------------------------------------------------------------------------------------------------------------**

**Thank You For Using This System**

**-------------------------------------------------------------------------------------------------------------------**

**Brought To You By B.Swarna.**