BUS TICKET RESERVATION SYSTEM

Abstract

Traveling is a large growing business across all countries. Bus reservation system deals with maintenance of records of details of each passenger. It also includes maintenance of information like schedule and details of each bus. We observed the working of the Bus reservation system and after going through it, we get to know that there are many

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Description:

This code implements a bus ticket reservation system. It allows users to reserve tickets, view available buses, and cancel tickets. The system provides a login functionality to ensure security.

Code Overview:

The code is written in C programming language and consists of several functions to perform different tasks. Here is an overview of the functions and their purpose:

reservation():

This function handles the ticket reservation process. It prompts the user to enter their name, number of seats, and age. It then displays the available buses and asks the user to select a bus number. After confirming the ticket, it saves the reservation details to a file.

View details():

This function displays the details of all available buses. It shows the bus number, name, destination, charges, and departure time.

charge():

This function calculates the ticket charges based on the bus number, passenger's age, and the number of seats. It uses a series of if-else statements to determine the charges.

Print ticket():

This function prints the ticket after the reservation is confirmed. It displays the passenger's name, age, number of seats, bus number, specific bus details, and the charges.

Specific bus():

This function displays the details of a specific bus based on the bus number. It shows the bus name, destination, and departure time.

login():

This function implements the login functionality for the system. It asks the user to enter a username and password. If the credentials match the predefined values ("admin" and "pass" in this code), the login is successful.

Cancel Ticket():

This function allows users to cancel their tickets. It prompts the user to enter the passenger's name, age, bus number, and the number of seats. If a matching reservation is found, it cancels the ticket.

Additionally, the code contains the main() function, which serves as the entry point of the program. It displays a menu to the user, where they can choose different options such as reserving a ticket, viewing available buses, or exiting the system. The code uses switch-case statements to handle the user's choice.

Usage:

To use this code, you can copy and save it in a C programming environment. Ensure that you have the necessary header files included (stdio.h, conio.h, stdlib.h, string.h). Compile and run the code, and you will see the main menu of the bus ticket reservation system. Follow the on-screen instructions to perform various actions.

Code :

```c
#include <stdio.h>

#include <stdlib.h>

#include <string.h>

char ch[10][130]={"mulugu Express","Hanmakonda Express","Bhupalpally
Express","Parkal Express","warangal Express","karimnagar 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();
```

```c
    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;
```

```c
        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 code-projects.org");

    getch();

    return 0;

}


void bus()
```

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

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

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

    int num;

    int x=6;

    for (num=0;num<x;num++){

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

    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:--->");
```

```c
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);
```

```c
 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);
```

```c
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 if(trno == 3)

{

 f1 = fopen("tr3.txt","w");
```

```c
    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;
```

```c
    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);
```

```c
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++;

   }
```

```c
        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);
```

```c
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()

{
```

```c
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 "};
    for(i=0; i<j; i++)
    {
        strcpy(tempname[num1[i]],name[i]);
    }
    for(i=0; i<8; i++)
    {
        printf("\t\t\t\t");
```

```c
        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 "};

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

    {
```

```c
        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);
```

```c
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 ");
```

```c
        }

      }

    }

  }
  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");
```

```c
  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
```

```c
    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");

}
```

Result:

```
======================  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. View Bus List (or) Select Bus:

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

                        [1]  =>  mulugu Express

                        [2]  =>  Hanmakonda Express

                        [3]  =>  Bhupalpally Express

                        [4]  =>  Parkal Express

                        [5]  =>  warangal Express

                        [6]  =>  karimnagar Express
█
```

2.Book Tickets:

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

        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:----->█
```

```
                       Available Seats:------>32

                       Number of Tickets:----->2

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


                       Enter the seat number:--->1
                       Enter the name of person:--->ajay


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


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


                       Enter the seat number:--->2
                       Enter the name of person:--->pathipaka


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



                       The Total booking amount is 400
```

3.Cancle Ticket:

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


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

-------------------------------------------------------------------------------------------
                              Bus.no-->1---->mulugu Express
-------------------------------------------------------------------------------------------
                    1.ajay  2.pathipaka     3.         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
```

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


                    1.ajay          2.pathipaka     3.      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
Enter the seat number:--->2


============================================================================================
                    Your 200 rupees has been Returned
============================================================================================
```

4.Bus Status Board:

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


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

-------------------------------------------------------------------------------------------
                              Bus.no-->1---->mulugu Express
-------------------------------------------------------------------------------------------
                    1.ajay          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
```

Conclusion:

The Bus Ticket Reservation System code allows users to reserve tickets, view available buses, and cancel tickets (pending implementation). It includes a login feature for authentication. The code can be extended and enhanced to provide additional functionalities based on specific requirements.