#include<stdio.h>

#include<string.h>

#define n 3

int ar[n];

int f=-1;

int r=-1;

int code;

int ch;

struct info

{

char name[20];

long int tel;

char email[50];

}s[n];

void show()

{

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

printf(" CODE ROUTES TIMINGS Avg FARE");

printf("\n 1021 Panipat to Mumbai 06:30 1500");

printf("\n 1024 Panipat to kolkata 12:00 1300");

printf("\n 1098 Panipat to Amritsar 14:30 600 ");

printf("\n 1987 Panipat to Banglore 18:00 2400");

printf("\n 1576 Panipat to chennai 20:00 2100\n");

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

menu();

}

void menu()

{

int i;

printf("ENTER\n\n1.TO SHOW THE TIMINGS AND ROUTES OF THE TRAIN\n\n2.RESERVE A TICKET\n\n3.CANCEL A TICKET\n\n4.DISPLAY THE INFORMATION\n\n5.EXIT\n");

scanf("%d",&i);

switch(i)

{

case 1: show();

break;

case 2: reserve();

menu();

break;

case 3: cancel();

menu();

break;

case 4: display();

menu();

break;

case 5: exit(0);

break;

default:printf("WRONG CHOICE\nENTER THE CORRECT CHOICE\n");

menu();

break;

}

}

void check(int code,int r)

{

if(code==1021||code==1024||code==1098||code==1987||code==1576)

{

printf("\n !!YOUR TICKET IS CONFIRMED!!\n\n");

}

else

{

printf("\n BUT YOUR TICKET IS NOT CONFIRMED!\n PLEASE ENTER THE CORRECT CODE\n\n");

printf("VALID CODES ARE\n1021 1024 1098 1987 1576\nCODE:");

scanf("%d",&code);

ar[r]=code;

check(code,r);

}

}

void reserve()

{

if((f==0&&r==n-1)||(f==r+1))

{

printf("The Queue is full wait until the queue is empty\n");

menu();

}

if(f==-1)

{

f=r=0;

}

else if(r==(n-1))

{

r=0;

}

else

{

r+=1;

}

printf("Enter your details\n");

printf("\nEnter your name:\n");

scanf("%s",s[r].name);

printf("\nTelephone number:\n");

scanf("%ld",&(s[r].tel));

printf("\nEnter the email:\n");

scanf("%s",s[r].email);

printf("\nEnter the Code of the Train:\n");

scanf("%d",&ar[r]);

code=ar[r];

printf("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Ticket types\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n\n");

printf("Enter\n1.First Class\n2.Second Class\n3.Third Class\n4.Sleeper\n");

scanf("%d",&ch);

switch(ch)

{

case 1: printf("\*\*\*\*\*\*\*\*\*\*\*\*Your fare is 2200rs\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");

break;

case 2: printf("\*\*\*\*\*\*\*\*\*\*\*\*Your fare is 1500rs\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");

break;

case 3: printf("\*\*\*\*\*\*\*\*\*\*\*\*Your fare is 950rs\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");

break;

case 4: printf("\*\*\*\*\*\*\*\*\*\*\*\*Your fare is 575rs\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");

break;

default:printf("WRONG CHOICE\n");

break;

}

check(code,r);

menu();

}

void amount\_cancel(int ch)

{

if(ch==1)

printf("You have booked FIRST CLASS ticket\nYour booking amount was 2200rs\n1800rs will be returned to you\n");

else if(ch==2)

printf("You have booked SECOND CLASS ticket\nYour booking amount was 1500rs\n1200rs will be returned to you\n");

else if(ch==3)

printf("You have booked THIRD CLASS ticket\nYour booking amount was 950rs\n700rs will be returned to you\n");

else

printf("You have booked SLEEPER CLASS ticket\nYour booking amount was 575rs\n400rs will be returned to you\n");

}

void display\_delete(char name[],long int tel,char email[],int code)

{

printf("THE INFORMATION OF THE CUSTOMER WHO CANCELED THE TICKET IS:\n");

printf("\nName: %s\n",name);

printf("\nTelephone number: %ld\n",tel);

printf("\EMAIL\_ID: %s\n",email);

printf("\nCode of the Train: %d\n\n",code);

amount\_cancel(ch);

}

void cancel()

{

int count=0;

char name[20];

long int tel;

char email[20];

int code;

if(f==-1)

{

printf(" WARNING!!NO TICKET IS RESERVED YET!!\n");

}

strcpy(name,s[f].name);

tel=s[f].tel;

strcpy(email,s[f].email);

code=ar[f];

if(f==r)

{

printf(" !!ONLY ONE TICKET WAS RESERVED!!\n");

strcpy(name,s[f].name);

tel=s[f].tel;

strcpy(email,s[f].email);

code=ar[f];

printf("THE INFORMATION OF THE CUSTOMER WHO CANCELED THE TICKET IS\n");

printf("\nName: %s\n",name);

printf("\nTelephone number: %ld\n",tel);

printf("\nEMAIL\_ID: %s\n",email);

printf("\nCode of the train: %d\n\n",code);

amount\_cancel(ch);

f=r=-1;

count++;

}

else if(f==(n-1))

{

f=0;

}

else

{

f+=1;

}

if(count==0)

{

display\_delete(name,tel,email,code);

}

menu();

}

void amount\_is(int ch)

{

if(ch==1)

printf("You have booked FIRST CLASS ticket\nYour booking amount is 2200rs\n");

else if(ch==2)

printf("You have booked SECOND CLASS ticket\nYour booking amount is 1500rs\n");

else if(ch==3)

printf("You have booked THIRD CLASS ticket\nYour booking amount is 950rs\n");

else

printf("You have booked SLEEPER CLASS ticket\nYour booking amount is 575rs\n");

}

void display()

{

if(f==-1)

{

printf(" WARNING!!No ticket is reserved yet!!\n");

menu();

}

else

{

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

printf("INFORMATION OF THE CUSTOMERS WHOSE TICKET ARE CONFIRMED\n");

if(f<=r)

{

int i;

for(i=f;i<=r;i++)

{

printf("\nName: %s\n",s[i].name);

printf("\nTelephone Number: %ld\n",s[i].tel);

printf("\nEMAIL\_ID: %s\n",s[i].email);

printf("\nCode of the Train: %d\n\n",ar[i]);

amount\_is(ch);

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

}

}

else if(f>r)

{

int i;

for(i=f;i<=(n-1);i++)

{

printf("\nName: %s\n",s[i].name);

printf("\nTelephone Number: %ld\n",s[i].tel);

printf("\nEMAIL\_ID: %s\n",s[i].email);

printf("\nCode of the Train: %d\n\n",ar[i]);

amount\_is(ch);

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

}

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

{

printf("\nName: %s\n",s[i].name);

printf("\nTelephone Number: %ld\n",s[i].tel);

printf("\nEMAIL\_ID: %s\n",s[i].email);

printf("\nCode of the Train: %d\n\n",ar[i]);

amount\_is(ch);

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

}

}

}

}

int main()

{

printf("\n\*\_\*\_\*\_\*\_\*\_\*\_\*\_\*\_\*\_\*\_Welcome to Railway Reservation System\_\*\_\*\_\*\_\*\_\*\_\*\_\*\_\*\_\*\_\*\n\n");

menu();

return 0;

}