

**K L UNIVERSITY**  
**FRESHMAN ENGINEERING DEPARTMENT**

**A Project Based Lab Report**

**On**  
**TRAIN TICKET**

**SUBMITTED BY:**

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## DEPARTMENT OF BASIC ENGINEERING SCIENCES



### CERTIFICATE

This is to certify that the project based laboratory report entitled “TRAIN TICKET” submitted by Mr./Ms. **B. NAVYA** bearing Regd. No. 160030094 to the **Department of Basic Engineering Sciences, KL University** in partial fulfillment of the requirements for the completion of a project based Laboratory in “C PROGRAMMING & DATA STRUCTURES-2 LAB” course in I B Tech II Semester, is a bonafide record of the work carried out by him/her under my supervision during the academic year 2016 – 2017.

PROJECT SUPERVISOR

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G.MURUGAN

Dr. D.HARITHA

## ACKNOWLEDGEMENTS

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I express sincere gratitude to our Coordinator **Dr. D.Haritha** for her leadership and constant motivation provided in successful completion of our academic semester.

I record it as my privilege to deeply thank our pioneer **Dr. D.Haritha**, HOD-BES for providing us the efficient faculty and facilities to make our ideas into reality.

I express my sincere thanks to our project supervisor DR.G.MURUGAN for his/her novel association of ideas, encouragement, appreciation and intellectual zeal which motivated us to venture this project successfully.

Finally, it is pleased to acknowledge the indebtedness to all those who devoted themselves directly or indirectly to make this project report success.

Name: B. NAVYA

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## **ABSTRACT**

People usually travel in trains in our country. As the number of people who want to plan ahead and travel with reserved seats is increasing, demand for an efficient system of booking tickets is also increasing. The manual system of booking tickets with long queues is long gone.

In this project, we attempt to write a program that would display to a passenger, details like its times and places of arrival and departure, fare for respective classes i.e. first, second and third. One could even avail concessions if possible in this process. From these displayed options one could select a train of their convenience. After the ticket is booked a ticket is displayed which contains all the details of train.

This code is written in C language and graphics are added to it through VDU to make this more interesting. Booking tickets in this manner is far more efficient than manually doing it.

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## **INTRODUCTION**

This system is basically concerned with the reservation and cancellation of railway tickets to the passengers. The need of this system arose because as is the known fact that India has the largest railway network in the whole of the world and to handle it manually is quite a tough job. By computerizing it, we will be able to overcome many of its limitations and will be able to make it more efficient. The handling of data and records for such a vast system is a very complex task if done manually but it can be made much easier if the system is computerized. To be more specific, our system is limited in such a way that a train starting from a particular source will have a single destination. The basic functions being performed by our system are :

1. RESERVATION MANAGEMENT
2. FARE MANAGEMENT
3. TIMETABLE MANAGEMENT

## **AIM OF THE PROJECT**

The main objective of Railway Ticket Reservation system is to enhance and upgrade the existing system by increasing its efficiency and effectiveness. The software improves the working methods by replacing the existing manual system with the computer-based system.

### **Advantages:-**

The software Railway Ticket Reservation system has a very user-friendly interface. Thus the users will feel very easy to work on it. The software provides accuracy along with a pleasant interface. Make the present manual system more interactive, speedy and user friendly.

### **Disadvantages:-**

This is a basic way of using computers in booking of tickets.

This can be further developed and its time complexity can be reduced.

### **Future enhancements:-**

Future enhancements can be made so that it takes lesser amount of time and space. More number of options can also be included.

## **SYSTEM REQUIREMENTS**

### **➤ SOFTWARE REQUIREMENTS:**

The major software requirements of the project are as follows:

Language : Turbo-C

Operating system: Windows XP or later.

### **➤ HARDWARE REQUIREMENTS:**

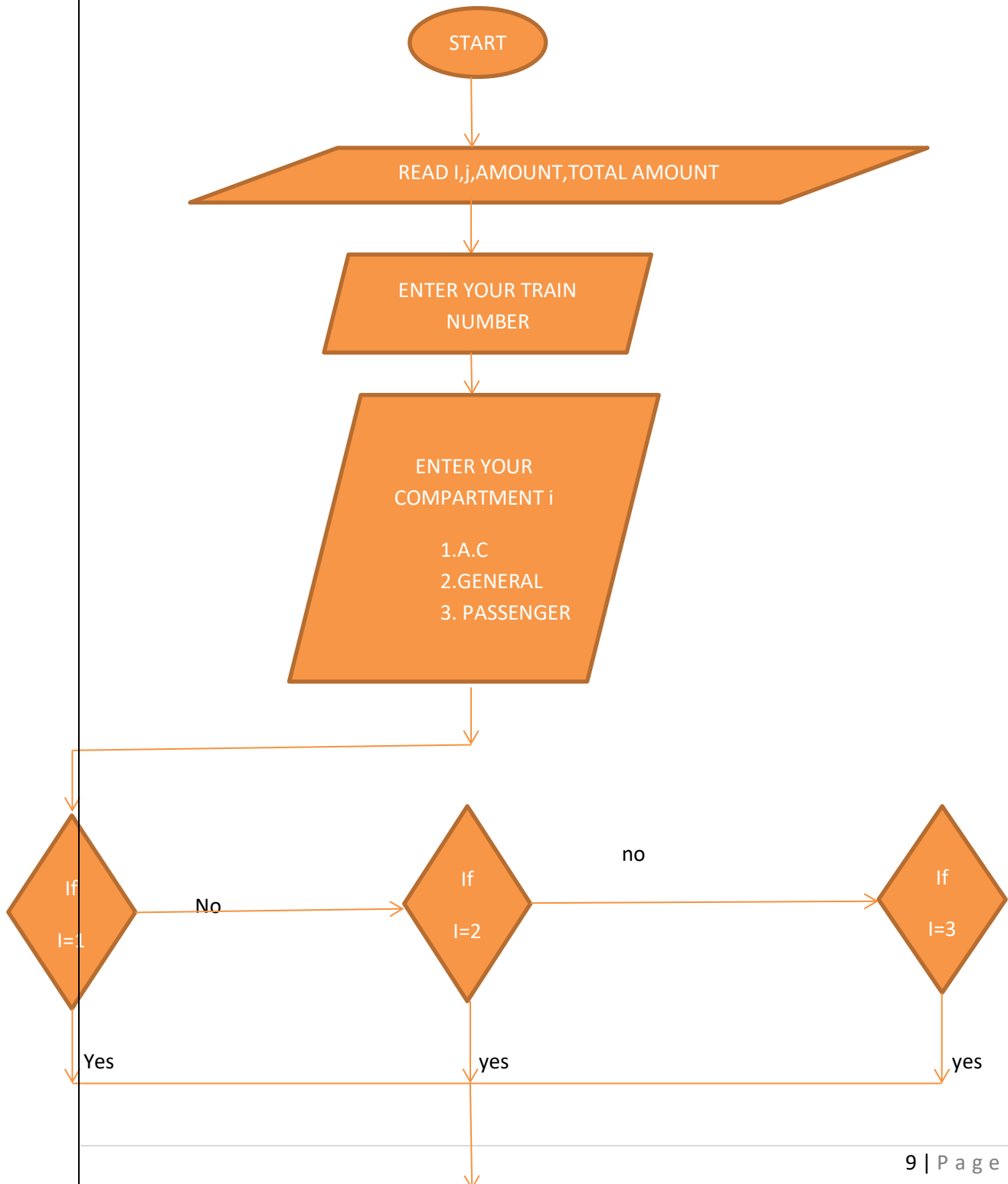
The hardware requirements that map towards the software are as follows:

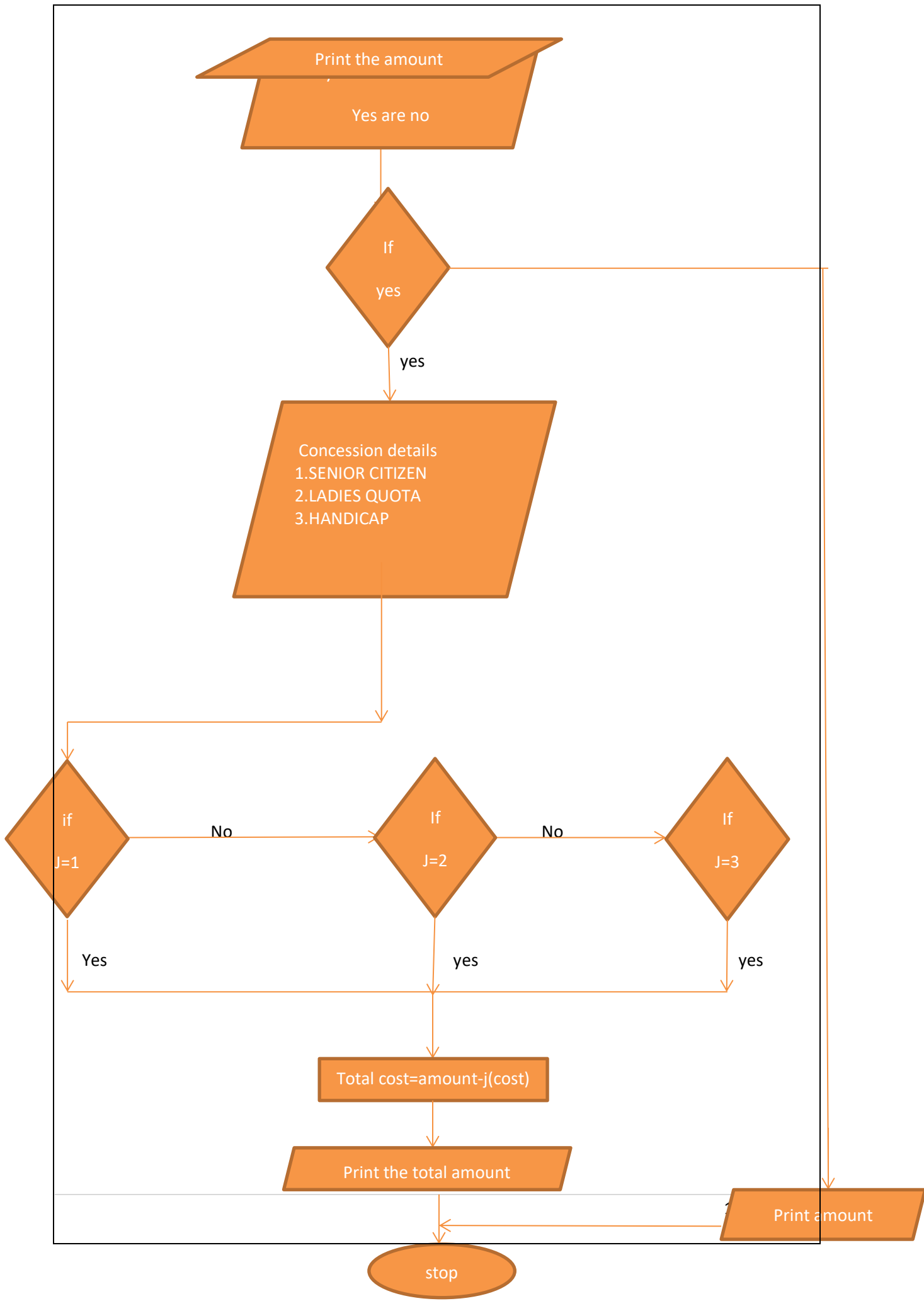
RAM : 8 GB

Processor : I5



## DATA FLOW DIAGRAM





## ALGORITHM

Step-1: Start

Step-2: Read the type of citizens

Step-3: Read the proof is there or not and the type of concession

Step-4: if ( $q==1$ )

Step-5: calculate  $f=f-f*0.2$

Step-6: otherwise

Step-7: if( $q==2$ )

Step-8: calculate  $f=f-f*0.1$

Step-9: otherwise

Step-10: if( $q==2$ )

Step-11: calculate  $f=f-f*0.25$

Step-12: otherwise

Step-13:  $f=f$

Step-14: display “concession invalid” and return “f”

Step-15: Read the  $n, c, f, d, gd=DETECT, gm$  values

Step-16: display “WELCOME TO INDIAN RAILWAYS”

Step-17: Read the train code, train name , travel from where to where, arrival  
and departure time

Step-18: select the train code and display the value of “n”

Step-19: check whether  $case=18463$  then go to step 20

Step-20: Read it is 1.A/C or 2.sleeper or 3. General

Step-21: if(c=1) then f=2300

Step-22: display 1 to “concession valid”

Step-23: otherwise 0

Step-24: if (d=1)

Step-25: f= concession(f) and display “f”

Step-26: if(c=2) then f=1500

Step-27: then go to step 22, step 23,step 24,step 25

Step-28: if(c=3) then f=1200

Step-29: then go to step 22, step 23,step 24,step 25

Step-30: otherwise

Step-31: if( f=0) then display “wrong entry”

Step-32: display train code : 18463,train name: PRASANTHI EXP , travel from BHUBANESWAR to BANGALORE , arrival : 05:30 and departure :12:00

Step-33: if(f!=0) then display “f”

Step-34: other wise

Step-35: display “booked failed”

Break

Step-36: check whether case= 12805 then go to step 20

Step-37: if(c==1) then f=2300

Step-38: then go to step 22, step 23,step 24,step 25

Step-39: if(c==2) then f=1500

Step-40 : then go to step 22, step 23,step 24,step 25

Step-41: if(c==3) then f=1000

Step-42: then go to step 22, step 23,step 24,step 25

Step-43: otherwise then go to step 31

Step-44: display train code : 12805,train name: JANMABHUMI EXP , travel from SECUNDERABAD TO:VIZAG , arrival : 07:10 and departure :07:30

Step-45: then go to step-33,step-34.step-35

Step-46: check whether case= 12713 then go to step 20

Step-47: if(c==1) then f=2000

Step-48: then go to step 22, step 23,step 24,step 25

Step-49: if(c==2) then f=1200

Step-50: then go to step 22, step 23,step 24,step 25

Step-51: if(c==3) then f=900

Step-52: then go to step 22, step 23,step 24,step 25

Step-53: otherwise then go to step 31

Step-54: display train code : 12713,train name: SATAVAHANA EXP , travel from SECUNDERABAD to VIJAYAWADA , arrival : 04:15 and departure: 09:50

Step-55: then go to step-33,step-34.step-35

Step-56: check whether case= 12712 then go to step 20

Step-57: if(c==1) then f=1200

Step-58: then go to step 22, step 23,step 24,step 25

Step-59: if(c==2) then f=900

Step-60: then go to step 22, step 23,step 24,step 25

Step-61: if(c==3) then f=500

Step-62: then go to step 22, step 23,step 24,step 25

Step-63: otherwise then go to step 31

Step-64: display train code : 12712,train name: PINKINI EXP , travel from CHENNAI to VIJAYAWADA, arrival : 02:10 and departure : 09:10

Step-65: then go to step-33,step-34.step-35

Step-66: end

## IMPLEMENTATION

```
#include<stdio.h>

#include<conio.h>

#include<graphics.h>

int concession(int f)
{
int q;
setcolor(4);
setbkcolor(9);
printf("\n1.SENIOR CITIZEN\n2.LADIES QUOTA\n3.HANDICAP");
printf("\nPROOF MANDATORY");
printf("\nSelect the type of cocession:");
scanf("%d",&q);
if(q==1)
f=f-f*0.2;
else if(q==2)
f=f-f*0.1;
else if(q==3)
f=f-f*0.25;
else
```

```

{
f=f;

printf("\nconcession invalid");

}

return f;

}

void main()

{

int n,c,f,d,gd=DETECT,gm;

clrscr();

initgraph(&gd,&gm,"c:\\turbo3\\bgi");

setbkcolor(3);

setcolor(8);

printf("\n\t\t\tWELCOME TO INDIAN RAILWAYS");

printf("\nTRAIN CODE  TRAIN NAME    FROM      TO      ARR.
DEP.");

printf("\n18463    PRASHANTI EXP  BHUBANESWAR  BANGALORE
05:30   12:00");

printf("\n12805    JANMABHUMI EXP  SECUNDERABAD  VIZAG
07:10   07:30");

printf("\n12713    SATAVAHANA EXP  SECUNDERABAD
VIJAYAWADA 04:15   09:50");

printf("\n12712    PINAKINI EXP   CHENNNAI    VIJAYAWADA
02:10   09:10");

printf("\nEnter 0 to exit\nSelect the train code carefully:");

scanf("%d",&n);

```



```
switch(n)
{
case 18463: printf("\n1:A/C\n2:sleeper\n3:general\nEnter no.:");
    scanf("%d",&c);
    if(c==1)
    {
        f=2500;
        printf("print 1 to avail concession else 0:");
        scanf("%d",&d);
        if(d==1)
        f=concession(f);
        printf("Fare=%d",f);
    }
    else if(c==2)
    {
        f=1800;
        printf("print 1 to avail concession else 0:");
        scanf("%d",&d);
        if(d==1)
        f=concession(f);
        printf("Fare=%d",f);
    }
    else if(c==3)
    {
        f=1200;
```

```

printf("print 1 to avail concession else 0:");

scanf("%d",&d);

if(d==1)

f=concession(f);

printf("Fare=%d",f);

}

else

{

f=0;

printf("\nWrong Entry");

}

clrscr();

printf("\nTRAIN CODE:18463\nTRAIN NAME:PRASANTHI
EXP\nFROM:BHUBANESWAR TO:BANGALORE");

printf("\nARR:05:30 DEP:12:00");

if(f!=0)

printf("\nFARE=%d",f);

else

printf("\nBOOKING FAILED");

break;

case 12805: printf("\n1:A/C\n2:sleeper\n3:general\nEnter no.:");

scanf("%d",&c);

if(c==1)

{

f=2300;

```

```
printf("print 1 to avail concession else 0:");  
scanf("%d",&d);  
if(d==1)  
f=concession(f);  
printf("Fare=%d",f);  
}  
else if(c==2)  
{  
f=1500;  
printf("print 1 to avail concession else 0:");  
scanf("%d",&d);  
if(d==1)  
f=concession(f);  
printf("Fare=%d",f);  
}  
else if(c==3)  
{  
f=1000;  
printf("print 1 to avail concession else 0:");  
scanf("%d",&d);  
if(d==1)  
f=concession(f);  
printf("Fare=%d",f);  
}  
else
```

```

{
    f=0;

    printf("\nWrong Entry");
}

clrscr();

printf("\nTRAIN CODE:12805\nTRAIN NAME:JANMABHUMI
EXP\nFROM:SECUNDERABAD TO:VIZAG");

printf("\nARR:07:10 DEP:07:30");

if(f!=0)

printf("\nFARE=%d",f);

else

printf("\nBOOKING FAILED");

break;
case 12713: printf("\n1:A/C\n2:sleeper\n3:general\nEnter no.:");

scanf("%d",&c);

if(c==1)

{

f=2000;

printf("print 1 to avail concession else 0:");

scanf("%d",&d);

if(d==1)

f=concession(f);

printf("Fare=%d",f);

}

else if(c==2)

```

```
{  
f=1200;  
printf("print 1 to avail concession else 0:");  
scanf("%d",&d);  
if(d==1)  
f=concession(f);  
printf("Fare=%d",f);  
}  
else if(c==3)  
{  
f=900;  
printf("print 1 to avail concession else 0:");  
scanf("%d",&d);  
if(d==1)  
f=concession(f);  
printf("Fare=%d",f);  
}  
else  
{  
f=0;  
printf("\nWrong Entry");  
}  
clrscr();  
  
printf("\nTRAIN CODE:12713\nTRAIN NAME:SATAVAHANA  
EXP\nFROM:SECUNDERABAD TO:VIJAYAWADA");
```

```

printf("\nARR:04:15  DEP:09:50");

if(f!=0)

printf("\nFARE=%d",f);

else

printf("\nBOOKING FAILED");

break;

case 12712: printf("\n1:A/C\n2:sleeper\n3:general\nEnter no.:");

scanf("%d",&c);

if(c==1)

{

f=1200;

printf("print 1 to avail concession else 0:");

scanf("%d",&d);

if(d==1)

f=concession(f);

printf("Fare=%d",f);

}

else if(c==2)

{

f=900;

printf("print 1 to avail concession else 0:");

scanf("%d",&d);

if(d==1)

f=concession(f);

printf("Fare=%d",f);

```

```

    }

    else if(c==3)

    {
        f=500;

        printf("print 1 to avail concession else 0:");

        scanf("%d",&d);

        if(d==1)

        f=concession(f);

        printf("Fare=%d",f);

    }

    else

    {

        f=0;

        printf("\nWrong Entry");

    }

    clrscr();

    printf("\nTRAIN CODE:12712\nTRAIN NAME:PINKINI
EXP\nFROM:CHENNAI TO:VIJAYAWADA");

    printf("\nARR:02:10  DEP:09:10");

    if(f!=0)

    printf("\nFARE=%d",f);

    else

    printf("\nBOOKING FAILED");

    break;

default : printf("\nWRONG ENTRY");

```

```
}  
getch();  
closegraph();  
}
```



## INTEGRATION AND SYSTEM TESTING

### OUTPUTS

Screen Shots:

```
WELCOME TO INDIAN RAILWAYS
TRAIN CODE  TRAIN NAME    FROM      TO        ARR.    DEP.
18463        PRASHANTI EXP  BHUBANESWAR  BANGALORE 05:30   12:00
12805        JANMABHUMI EXP SECUNDERABAD  VIZAG     07:10   07:30
12713        SATUAHANA EXP  SECUNDERABAD  VIJAYAWADA 04:15   09:50
12712        PINAKINI EXP   CHENNNAI     VIJAYAWADA 02:10   09:10
Enter 0 to exit
Select the train code carefully:
```

```
WELCOME TO INDIAN RAILWAYS
TRAIN CODE  TRAIN NAME    FROM      TO        ARR.    DEP.
18463        PRASHANTI EXP  BHUBANESWAR  BANGALORE 05:30   12:00
12805        JANMABHUMI EXP SECUNDERABAD  VIZAG     07:10   07:30
12713        SATUAHANA EXP  SECUNDERABAD  VIJAYAWADA 04:15   09:50
12712        PINAKINI EXP   CHENNNAI     VIJAYAWADA 02:10   09:10
Enter 0 to exit
Select the train code carefully:18463

1:A/C
2:sleeper
3:general
Enter no.:
```

TRAIN CODE:18463  
TRAIN NAME:PRASANTHI EXP  
FROM:BHUBANESWAR TO:BANGALORE  
ARR:05:30 DEP:12:00  
FARE=1999

```
WELCOME TO INDIAN RAILWAYS
TRAIN CODE  TRAIN NAME      FROM      TO      ARR.    DEP.
18463        PRASHANTI EXP  BHUBANESWAR  BANGALORE  05:30    12:00
12805        JANMABHUMI EXP SECUNDERABAD  VIZAG      07:10    07:30
12713        SATAVAHANA EXP SECUNDERABAD  VIJAYAWADA  04:15    09:50
12712        PINAKINI EXP   CHENNNAI     VIJAYAWADA  02:10    09:10
Enter 0 to exit
Select the train code carefully:18463

1:A/C
2:sleeper
3:general
Enter no.:1
print 1 to avail concession else 0:
```

TRAIN CODE:12805  
TRAIN NAME:JANMABHUMI EXP  
FROM:SECUNDERABAD TO:VIZAG  
ARR:07:10 DEP:07:30  
FARE=2300

## **CONCLUSION**

This project is an attempt at making a program in C language which displays the available trains list along with their starting and ending stations. Train arrival and departure times are also displayed. From this list, a required train can be chosen by the passenger. If any concession is available, it can also be availed.