

A PROJECT REPORT  
ON  
**RAILWAY RESERVATION**

*Submitted in partial fulfillment  
For the award of  
Bachelor of Engineering  
In*  
**COMPUTER SCIENCE AND ENGINEERING**



Submitted by  
**RAHUL**  
**1NH16CS085**

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# NEW HORIZON COLLEGE OF ENGINEERING

Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC  
Accredited by NAAC with 'A' Grade, Accredited by NBA

## Certificate

*This is to certify that the mini project work titled*

**RAILWAY RESERVATION**

*Submitted in partial fulfillment of the degree of Bachelor of  
Engineering*

**RAHUL  
(1NH16CS085)**

*During the academic year  
2017-2018*

Signature of Guide

Signature of HOD

### **Semester End Examination**

Name of the Examiner

Signature with date

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.....

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**RAHUL**  
**1NH16CS085**

## ABSTRACT

India, majority population of it is contributed by the middle-class people. For journey of longer distances though we have airways most of the people use the railways, which is most convenient, affordable means of transport in India.

So keeping this in view, the reservation of railways is a most important task and it must be faster and efficient as the demand (travelers) is very high. In order to meet this demand, manual reservation is completely ruled out and it requires an efficient program to implement the reservation.

This project is a simple console application built without the use of graphics. Named railway reservation system project in C, this program features two modes (admin and user), password protection and some basic file handling operations to add and display train inquiry and reservation records. This project is complete and totally-error free, and I have presented the source code in a very understandable manner.

This program enables user to choose the train even there is no necessary to fill a form at the railway reservation counter, i.e. we can directly select from the choices provided for us with train numbers and date of travelling. A user can cancel or enquire his/her ticket by providing allotted PNR no.

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## CHAPTER - 1

### INTRODUCTION

#### 1.1 GENERAL

This project will give us the information about railway reservation. This system is basically concerned with the reservation and cancellation of railway tickets to the passengers. 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 reservation and cancellation.

Customers can find the proper and correct information about the railway and shows the

1. It reserves and cancels seats for the passenger.
2. It contains information about the trains.
3. It contains information about the Seat Availability
4. Railway time table
5. Reservation Possibilities.
6. Train Ticket booking,
7. Booked Railway Ticket Status

#### 1.2 SCOPE

The benefits of this program include:

- This can be used in different railway stations.
- User will get to know that seats are either full or not at any particular date.
- Cancel reservation in a fix period of time.
- Reliable and accurate.
- User Friendly

## 1.3 REQUIREMENTS

### 1.3.1 HARDWARES

- Processor: Intel Premium IV or V/AMD Athlon or Higher
- RAM: 512 MB
- Hard disk-100 GB

### 1.3.2 SOFTWARES

- Operating System: Windows 7 or any updated version of windows
- Data structure used: Queue
- Language: C
- Compiler: DEV C++



## CHAPTER – 2

### SYSTEM DESIGN

There are two modes in this project:

#### 2.1 Administrator mode

Administrator mode is password protected, so that data can be secured. The password is “**rahul**”. If you enter the wrong password, it displays the message – “Incorrect Password”.

In Admin mode, you can perform given function:

1. Add data to new train
2. Display all trains details
3. Modify Train Details
4. Delete train details
5. Check all PNR information

### 2.1.1 Add data to new train

Function name	train_detail()
Work	Store data of train in database
Input	Train detail like Train_no, Name, From, Destination, Fare
Process	Stores data in database
Output	N/A

### 2.1.2 Display all Trains Details

Function name	train_display()
Work	Display data of all trains from database.
Input	N/A
Process	Reads data from database
Output	Display data of all trains

### 2.1.3 Modify Train Details

Function name	train_modify()
Work	Update data of train in database
Input	Train_no <ul style="list-style-type: none"> <li>• If train_no matches with database takes new data for train.</li> <li>• Else it will print – ‘Train not found’</li> </ul>
Process	Update database
Output	N/A

### 2.1.4 Delete Train Details

Function name	train_delete()
Work	Delete data of train from database
Input	Train_no <ul style="list-style-type: none"> <li>• If train_no matches with database takes new data for train.</li> <li>• Else it will print – ‘Train not found’</li> </ul>
Process	Update database
Output	Train’s Data deleted

### 2.1.5 Check all PNR information

Function name	display_reservation()
Work	Display all reservation details from database
Input	N/A
Process	Reads data from database
Output	Display data of all reservations

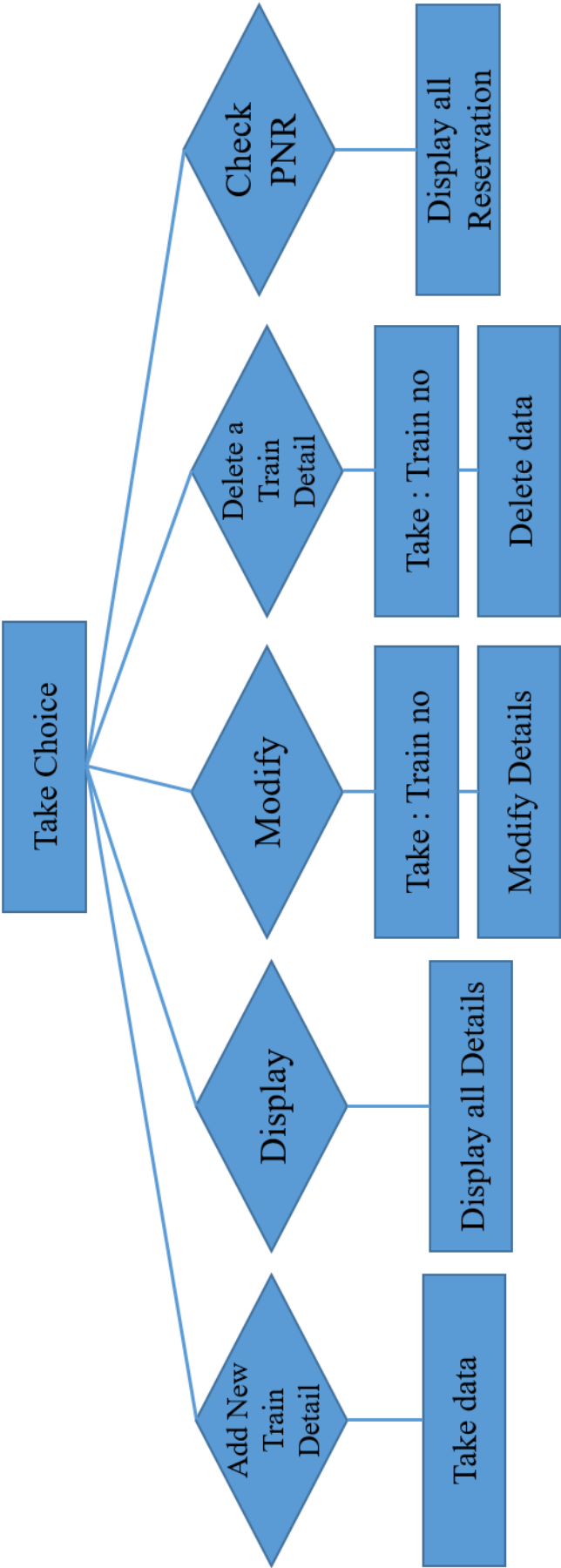


Fig 2.1

### 2.2 User mode

User mode is not password protected. Anyone can come for reservation

Users can get the train details. The details to be provided for train are train no., train name, boarding point, destination point, and no. of seats and fare per ticket.

In User mode, you can perform given function:

1. Display all Trains details
2. Check Seat Availability
3. Book Ticket (Reservation)
4. PNR Enquiry
5. Cancellation of Ticket
6. Fare Enquiry

### 2.2.1 Display Trains Details

Function name	train_display()
Work	Display data of all trains from database.
Input	N/A
Process	Reads data from database
Output	Display data of all trains

### 2.2.2 Seat Availability

Function name	seat_availability()
Work	Display no of seat available.
Input	Train no and Date to travel
Process	Count no of seats available.
Output	Display no of seats available.

### 2.2.3 Book Ticket (Reservation)

Function name	reservation()
Work	Book 1 ticket at a time
Input	Train no, Passenger name, Passenger age & date of travel
Process	Stores reservation data in database
Output	Stores reservation data in database

### 2.2.4 PNR Enquiry

Function name	pnr_enquiry()
Work	Display reservation details from database
Input	PNR <ul style="list-style-type: none"> <li>• If PNR matches with database then display data.</li> <li>• Else it will print – ‘PNR not found’</li> </ul>
Process	Reads data from data
Output	Display data of reservations.

### 2.2.5 Cancellation of Ticket

Function name	cancel_reservation()
Work	Cancel the reservation.
Input	PNR <ul style="list-style-type: none"> <li>• If PNR matches then delete the data</li> <li>• Else it will print – ‘PNR not found’</li> </ul>
Process	Delete data of reservation.
Output	Update database and waiting list.

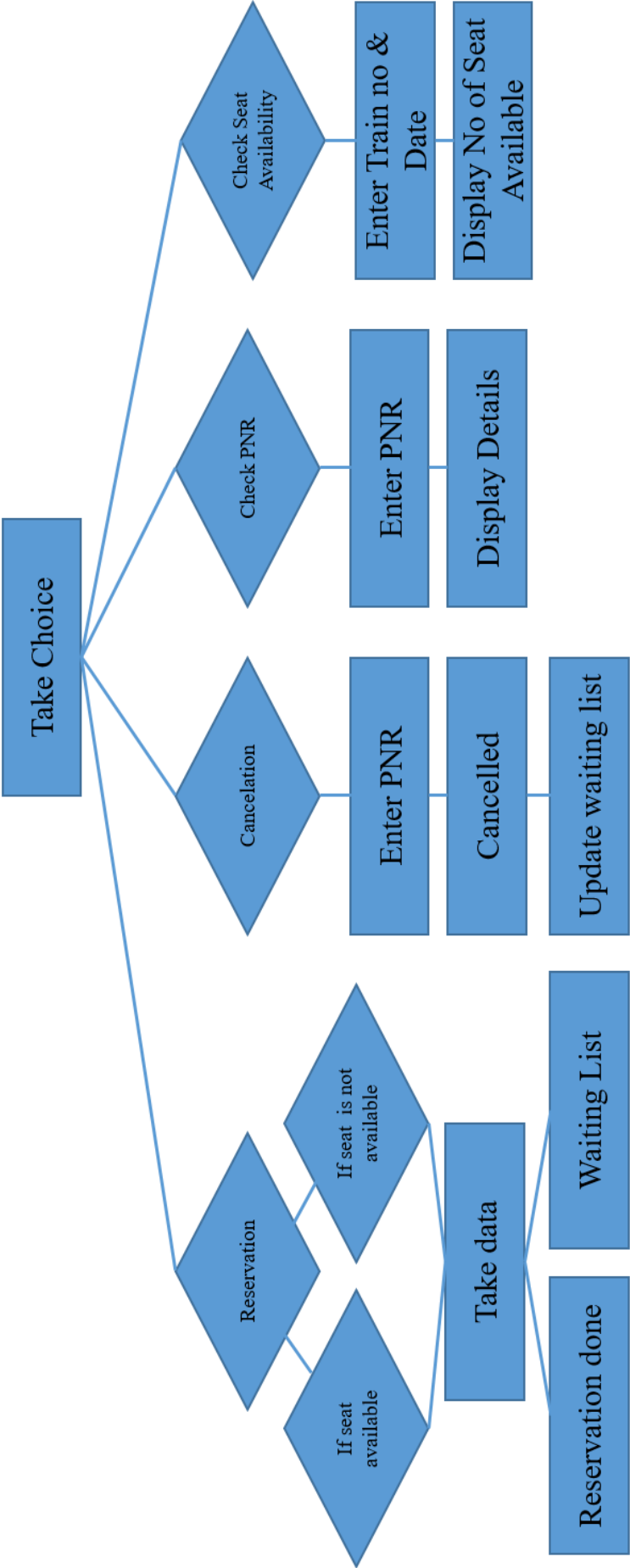


Fig 2.2





```
if(tr.tno==r.tno)

{

    strcpy(r.tname,tr.tname);

    strcpy(r.from,tr.from);

    strcpy(r.dest,tr.dest);

    printf("Train name           : %s",r.tname);

    printf("\nFrom           : %s",r.from);

    printf("\nDestination       : %s",r.dest);

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

    scanf("%s",r.pname);

    printf("Enter your age       : ");

    scanf("%d",&r.age);

    if(r.age<=10)

        r.fare=500;

    else if(r.age>10 && r.age<60)

        r.fare=1000;

    else

        r.fare=650;
```

## RAILWAY RESERVATION

```
printf("Fare          : %d\n",r.fare);
```

```
printf("\nDate Of Travelling (DD MM YYYY)\n\n");
```

```
printf("\tEnter Day (DD) : ");
```

```
scanf("%d",&r.d);
```

```
printf("\tEnter Month (MM) : ");
```

```
scanf("%d",&r.m);
```

```
printf("\tEnter Year (YYYY) : ");
```

```
scanf("%d",&r.y);
```

```
n=((r.tno*100)+r.d)*100+r.m;
```

```
get_seat_no=seatno(n);
```

```
r.pnr=(n*100)+get_seat_no+1;
```

```
r.real_pnr=r.pnr;
```

```
p=fopen("rese.txt","a");
```

```
if(get_seat_no>=10)
```

```
{
```

```
    printf("\n\nSorry seats are full on required date.\n\nDo  
you want to Wating Seat\n\n1: Yes\n2: No\nEnter your choice : ");
```

```
    scanf("%d",&ch);
```

```
    if(ch==1)
```

```
{  
  
    printf("\n\n\t\tPNR : %lld\n",r.pnr);  
  
    fprintf(p,"%d\t",r.tno);  
  
    fprintf(p,"%s\t",r.tname);  
  
    fprintf(p,"%s\t",r.from);  
  
    fprintf(p,"%s\t",r.dest);  
  
    fprintf(p,"%s\t",r.pname);  
  
    fprintf(p,"%d\t",r.age);  
  
    fprintf(p,"%d\t",r.fare);  
  
    fprintf(p,"%d\t",r.d);  
  
    fprintf(p,"%d\t",r.m);  
  
    fprintf(p,"%d\t",r.y);  
  
    fprintf(p,"%lld\t",r.pnr);  
  
    fprintf(p,"%lld\n",r.real_pnr);  
  
    found=1;  
  
}  
  
else  
  
    printf("\nTry For Some Another Day\n");
```

```
}  
  
else  
  
{  
  
    printf("\n\n\tPNR : %lld\n",r.pnr);  
  
    fprintf(p,"%d\t",r.tno);  
  
    fprintf(p,"%s\t",r.tname);  
  
    fprintf(p,"%s\t",r.from);  
  
    fprintf(p,"%s\t",r.dest);  
  
    fprintf(p,"%s\t",r.pname);  
  
    fprintf(p,"%d\t",r.age);  
  
    fprintf(p,"%d\t",r.fare);  
  
    fprintf(p,"%d\t",r.d);  
  
    fprintf(p,"%d\t",r.m);  
  
    fprintf(p,"%d\t",r.y);  
  
    fprintf(p,"%lld\t",r.pnr);  
  
    fprintf(p,"%lld\n",r.real_pnr);  
  
    found=1;  
  
}
```

```
        fclose(p);  
  
    }  
  
}  
  
if(found==0)  
  
    printf("\nTrain Not found\n");  
  
    fclose(t);  
  
}
```

## 2.4 SCREENSHOT

```
*****
                                TRAIN RESERVATION
*****

1: Admin
2: User
3: Exit
Enter choice :
```

Fig 2.3: Login Page

```
*****
                                TRAIN RESERVATION
*****

1: Add train detail
2: Display train detail
3: Modify Train Details
4: Delete train details
5: Check PNR info
6: Exit

Enter Choice :
```

Fig 2.4: Admin Mode

## RAILWAY RESERVATION

```
*****
                        RESERVATION
*****
```

Train no	Train name	From	To	Name	Age	Fare	Date	PNR
12345	Bangalore_Express	Bangalore	Delhi	Rahul	19	1000	30-9-2017	12345300901
12345	Bangalore_Express	Bangalore	Delhi	Anupam	20	1000	30-9-2017	12345300902
12345	Bangalore_Express	Bangalore	Delhi	Riya	19	1000	30-9-2017	12345300903
12345	Bangalore_Express	Bangalore	Delhi	Diwansh	19	1000	30-9-2017	12345300904
12345	Bangalore_Express	Bangalore	Delhi	Tosh	19	1000	30-9-2017	12345300905
12345	Bangalore_Express	Bangalore	Delhi	Ayush	20	1000	30-9-2017	12345300906
12345	Bangalore_Express	Bangalore	Delhi	Richa	22	1000	30-9-2017	12345300907
12345	Bangalore_Express	Bangalore	Delhi	SP	22	1000	30-9-2017	12345300908
12345	Bangalore_Express	Bangalore	Delhi	RV	22	1000	30-9-2017	12345300909
12345	Bangalore_Express	Bangalore	Delhi	Rakesh	10	500	30-9-2017	12345300910

Fig 2.5: List of all Reservation

```
*****
                        TRAIN RESERVATION
*****

1: Train details
2: Seat Availabilty
3: Book Ticket
4: PNR Enquiry
5: Cancellation of Ticket
6: Fare Enquiry
7: Exit

Enter Choice :
```

Fig 2.6: User Mode



```

*****
                        TRAIN RESERVATION
*****

1: Train details
2: Seat Availabilty
3: Book Ticket
4: PNR Enquiry
5: Cancellation of Ticket
6: Fare Enquiry
7: Exit

Enter Choice : 2

Enter Train no : 12345
    Enter Day (DD) : 30
    Enter Month (MM) : 10

Seat Aval : 10

```

Fig 2.7: Checking Seat Availability

```

*****
                        RESERVATION
*****

Enter train no      : 12345
Train name          : Bangalore_Express
From                : Bangalore
Destination         : Delhi

Enter Passenger name : RAHUL
Enter your age       : 19
Fare                 : 1000

Date Of Travelling (DD MM YYYY)

    Enter Day (DD) : 17
    Enter Month (MM) : 11
    Enter Year (YYYY) : 2017

PNR : 12345171101

```

Fig 2.8: Booking a ticket (Reservation)

```
*****
                                RESERVATION
*****

Enter you PNR no : 12345171101

Train no       : 12345
Train Name     : Bangalore_Express
From           : Bangalore
Destination    : Delhi
Passenger Name : RAHUL
Passenger Age  : 19
Fare           : 1000
Date of Travel : 17-11-2017

Seat no        : 1
```

**Fig 2.9: PNR information**

**CHAPTER – 3****CONCLUSION**

This project titled “Railway Reservation” is a simple console application built without the use of graphics. This is designed to help the user as well as the authorities with the day to day progress of the railway details and that of the reservations and trains data. This project in C, this program features two modes, password protection and some basic file handling operations to add and display train inquiry and reservation records. This project is complete and totally-error free, and I have presented the source code in a very understandable manner.

Advantages:

- Easy Operability
- Flexibility
- Maintainability
- Portability
- Readability

**Future Enhancements**

In future this project can be modified using the future technology which would be easier and faster to use:

- The password can be biometric
- Users can have their separate account to login
- Add function to check Train Status

## **CHAPTER – 4**

### **REFERANCE**

- Programming with C (Schaum's Outlines Series)
- Programming in C and Data Structure (by A. Deepak Raj)
- [https://www.google.co.in/?gfe\\_rd=cr&dcr=0&ei=rPoOWs6jD\\_OK8Qet64mwAw](https://www.google.co.in/?gfe_rd=cr&dcr=0&ei=rPoOWs6jD_OK8Qet64mwAw)
- [http://www.indianrail.gov.in/inet\\_srcdest\\_clus.html](http://www.indianrail.gov.in/inet_srcdest_clus.html)