JAYPEE INSTITUTE OF INFORMATION TECHNOLOGY, NOIDA, SECTOR-62

SDF-1 MINI PROJECT
PROJECT DOCUMENTATION

RAILWAY RESERVATION SYSTEM

SUBMITTED TO:

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BY   :

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   (BTECH – CSE 2nd SEMESTER)

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ABSTRACT OF THE PROJECT

In this project, we are focusing on the concepts of C++ programming to create a Railway Reservation System .This project uses C++ language to program the logic of the said system and create a user-friendly interface. We are using the topics that we have studied in SDF 2 .
It is also used to ease the task of Railway Users.

INTRODUCTION

Railway Management System is a software used to manages train bookings. This helps to keep the records of tickets available to people . Railway Management System which is very easy to use and fulfills all the requirement of a booking clerk. There are many features which help the clerks to keep records of available tickets as well as reserved tickets. Here is a list of some features of Railway Management System.

> *Keep record of different categories like reservation, cancellation, enquiry etc.*
> *Can also be used to add train details.*
> *Easy way to enter passenger details .*
> *Keep record of complete information of a passenger , user id and password, train information, boarding point and destination point, Date of departure, ticket fare.*
> *Easy way to make a check-out.*
> *Easy way to make a check-in.*
> *Automatic discount calculation for different categories.*
> *Easy way to know how many tickets are booked to a particular passenger.*
> *Easy way to know the status of a train and much more.*

BACKGROUND OF THE PROJECT

E-Railway Management System is an application which refers to Railway systems which are generally small or medium in size. It is used by clerks to manage the Railway using a computerized system where

he/she can add train details and passenger details. Tickets and passengers maintenance modules are also included in this system which would keep track of the people using the Railway system and also a detailed description about the train a Railway contains. With this computerized system there will be no loss of ticket records or member record which generally happens when a non -computerized system is used. All these modules are able to help booking clerks to manage the Railway with more convenience and in a more efficient way as compared to Railway systems which are not computerized.

OBJECTIVE OF THE PROJECT

Railway Management System is a system which maintains the information about the available trains in the Railway, their timings , the passengers to whom the tickets are booked, Railway staff and all. This is very difficult to organize manually. Maintenance of all this information manually is a very complex task. Owing to the advancement of technology, organization of an Online Railway becomes much simple. The Online Railway Management has been designed to computerize and automate the operations performed over the information about the passengers, ticket bookings and returns and all other operations. This computerization of Railway helps in many instances of its maintenances. It reduces the workload of management as most of the manual work done is reduced. The system deals with the all the requirements needed for managing the Railway. It deals with the process of managing data about the available seats in the Railway. Railway management System maintains the record of seats . Here we are primarily concerned with management of seats of Railway. In this project we identify the need for computer based Railway Management System.

TOPICS OF SDF USED

> - *Basics of C++ language.*
> - *Data types*
> - *Operators*
> - *If else*
> - *Arrays*
> - *Function*
> - *Structure*
> - *Loops*
> - *Data file handling*
> - *Pointers*
> - *Oops concept like classes*

MODULES USED

The various modules used in the projects are:
1. User Module: *It covers all the needs of a user:-*
> - *Reservation Of Tickets.*
> - *Cancellation Of Tickets.*
> - *Enquiry Of Train.*

2. Admin Module: *This module covers all the requirements of administrative staff like maintaining user database, adding new Trains, modifying user details etc.*
> - *Add Train Details.*
> - *Display Train Details.*

- Create User ID Database.
- Display Passenger Details.

Note- New Modules can be added as per the requirement of the management system.

PROJECT CATEGORY

This Project comes under file handling management category in C++ language. File handling is done using concept of array in C++ language. It is console based and user interactive. The UI is interactive and easily understandable.

Software used:
- Software apps like Code blocks or visual studio code are used in creating in the project.
- Code blocks: Is an IDE used for C++ language. It has inbuilt compiler.
- Visual Studio Code: It is same like Code blocks but a compiler like mingw or any has to be installed for compilation of the code.
- System can be any 32/62 bit.
- Ram should be greater than or equal to 2 GB.

CONCLUSION AND FUTURE SCOPE

This C++ Program provides a computerized version of railway Management System which will benefit the people boarding on train

and to those working in railway department. This Railway Management System Project in C++ can perform functions such as add details, creating databases ,reserve ,enquiry ,cancellation ,passenger details and more. File handling has been extensively used in this project for almost all functions. It also has facility for user login where people can login and see status of their train as well as request for ticket booking.

Scope:

The different areas where this program can be used are :

> Any railway department can make use of it for maintaining the records of tickets reserved by people and providing information of ticket available to the people.

> It can be used in metro and modifications can be easily done according to requirements.

DESIGN OF THE PROJECT / OUTPUTS

STAR

Print the intro

Print the wel - come screen

Print the main menu with 3 option

Declare a string for password Its check the password if correct program will execute further orther wise renter the passowrd

Print the Administrator menu with 6 option
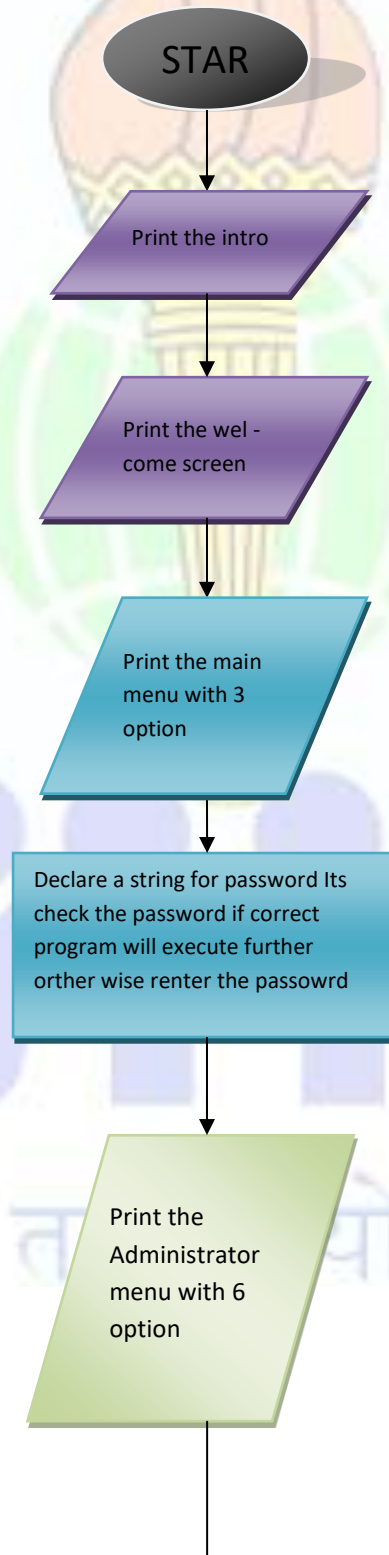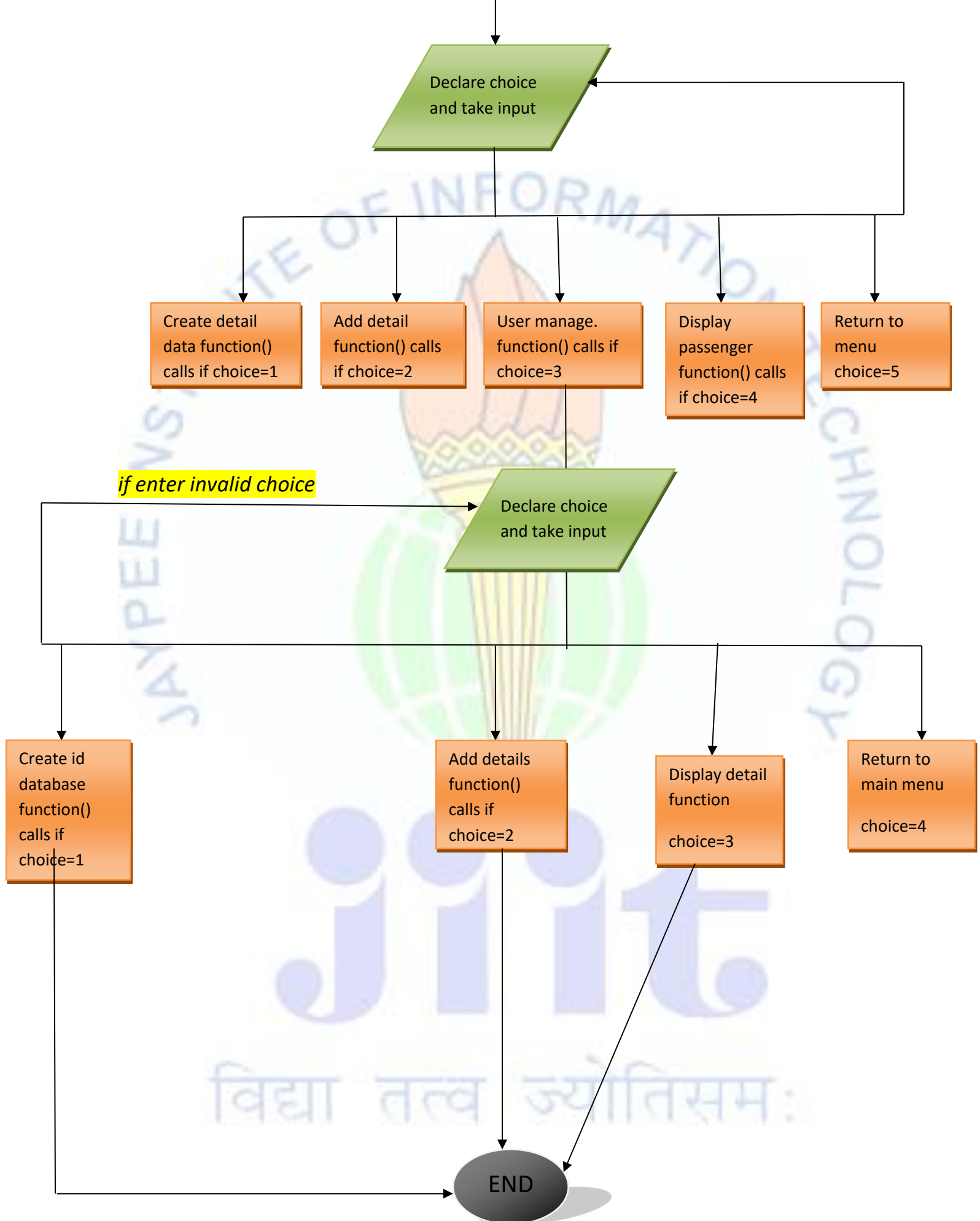
```
###################################################################################
###########                                                  ###########
###########     ----- RAILWAY RESERVATION SYSTEM IN CPP-----  ###########
###########                                                  ###########
###################################################################################
-----------------------------------------------------------------------------------

Date : May 19 2022                                     Time : 00:52:10

                            CREATED BY :
                            ----------

                    1. AASHUTOSH PRADHAN - B10 - 21103242
                    2. ARYAMAN VISHNOI - B10 - 21103260
                    3. HIMANSHU DIXIT - B10 - 21103262_
```

```
        **-**-**-**-**-**-**-**-**-**-**-**-**-**-**-**-**-**-**

        =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
        =                 WELCOME                =
        =                   TO                    =
        =                 RAILWAY                 =
        =               RESERVATION               =
        =                 SYSTEM                  =
        =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=

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

Enter any key to continue.....
```

```
Enter any key to continue.....
                            ------------
                            | MAIN MENU |
                            ------------

                            1.Admin mode
                            2.User mode
                            3.Exit

                            Enter your choice : 1

                            Enter the Admin Password: Password
```

```
        ------------------------
        | ADMINISTRATOR MENU |
        ------------------------
        1. Create detail Database
        2. Add details
        3. Display details
        4. User Management
        5. Diplay Passenger details
        6. Return to Main Menu


        Enter your choice :
```

```
        ------------------
        | ADD NEW DETAILS |
        ------------------
        Train no : 1
        Train Name : Tejas
        Boarding point : Kanpur
        Destination pt : Lucknow
        No of seats in first class & fare per ticket : 300 3000
        No of seats in second class & fare per ticket : 500 2000
        Date of travel
        Day : 12
        Month : 06
        Year : 2022

        Do you want to add one more record?
        y-for Yes
        n-for No
        n
```

```
Enter your choice : 3

|Train No. ---> 1|
|Train Name ---> Tejas|
|Boarding pt. ---> Kanpur|
|Destination pt. ---> Lucknow|
|F-Class ---> 300|
|F-Class Fare ---> 3000|
|S-Class ---> 500|
|S-Class Fare ---> 2000|
|Day - Month - Year ---> 12 - 6 - 2022|

-------------------
```

```
Enter your choice : 4

-------------------------------------------
| WELCOME TO THE USER MANAGEMENT MENU |
-------------------------------------------
1. Create id database
2. Add details
3. Display details
4. Return to the main menu

Enter your choice: 1

Enter your id:user1
Enter the Password: 12345

Do you want to add one more record
y-Yes
n-No
n
```

```
1. Create id database
2. Add details
3. Display details
4. Return to the main menu

Enter your choice: 3

|User ID:          |Password
|user1             |12345
```

```
 ------------
| MAIN MENU |
 ------------

1.Admin mode
2.User mode
3.Exit

Enter your choice : 2

-----Login User-----
Enter your ID : user1
Enter your Password : 12345
```

```
1.Reserve
2.Cancel
3.Enquiry
4.Return to the main menu
Enter your choice:1

1.Reserve
2.Return to the main menu
Enter your choice:1

Enter the details as follows

Train no : 1
Train name : Tejas
Boarding point : Kanpur
Destination pt : Lucknow
No of seats required : 1
Passenger name : Aashutosh
Passenger age : 19
Enter the class f-first class s-second class : f
Date of travel : 12 6 2022
```

```
Enter the concession category
1.Military
2.Senior citizen
3.Children below 5 yrs
4.None

Enter your Choice : 4
......END OF GETTING DETAILS......
You cannot get any concession

Pnr no: 11824
Train no: 1
Train name: Tejas
Boarding point: Kanpur
Destination pt: Lucknow
No of seats reserved: 1
Passenger name: Aashutosh
Passenger age: 19
Your class: f
```

```
Date of reservation: 12-6-2022
Your concession category: 4
You must pay: 3000
**************************************

-----Your ticket is reserved-----
!
```

```
**********CANCELLATION MENU*********
Enter the details as follows

Pnr no : 11824
Date of cancellation : 10 5 2022
......END OF GETTING DETAILS.......
You are cancelling one month before the date of departure

1.Reserve
2.Cancel
3.Enquiry
4.Return to the main menu
Enter your choice:2


**********CANCELLATION MENU*********
Enter the details as follows

Pnr no : 15689
Date of cancellation : 10 5 2022
......END OF GETTING DETAILS.......
Enter the correct pnr no
```

<div style="text-align: center">

REFERENCES

</div>

➢ *E Balagurusamy , Programming In ANSI C++, the Tata McGraw-Hill Companies*

➢ *https://www.geeksforgeeks.org/e-Railway-Reservation-system/*

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THANKING YOU

IN ANTICIPATION

BY...

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