Software Requirements Specification

for

Project

Version 1.0 approved

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SOFTWARE REQUIREMENT

SPECIFICATIONS

FOR

RAILWAY RESERVATION SYSTEM

**OBJECTIVE:**

Our project introduces railway reservation system with an objective to make the reservation system more efficient, easier and fast. This project explores how computer technology can be used to solve the problem of user.

The main objectives provided by this software are as follows:

* We can enquire about availability of trains
* We can reserve and cancel their seats
* We can modify the information related to

a) Trains

1. Timetable
2. Train Name
3. Train Number

b) Ticket Fare

This project is dedicated to model existing railway reservation systems that aim at development of Railway Reservation System that facilitates the railway customer to manage their reservations and the railway administrator to modify the backend database in a user-friendly manner

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**INTRODUCTION:**

In this emerging world of computers, almost all-manual system has switched to automated and computerized system. Therefore, we are developing the software for “Railway Reservation System” to model the present system and to remove the drawbacks of the present system. This project explores how computer technology can be used to solve the problem of user. This being a big step in terms of improvement in the railway system it is widely accepted across the country. Rather than designing manually, we have made use of computer. Use of computer has solved many problems, which are faced during manual calculation. Once data are fed, it can perform accurate functions. Therefore, to reduce the complexity and efficiency a versatile and an outsourcing railway reservation system has been developed. This project introduces railway reservation system. It explains how reservation is being done in Pakistan Railways. The systematic procedure is explained. This project is developed in C# language. All most all the header files have been used in this project. Proper comments have been given at desired locations to make the project user friendly. Various functions and structures are used to

make a complete use of this language. The customers are required to register on the server for getting access to the database and query result retrieval. Upon registration, each user has an account that is essentially the ‘view level’ for the customer. The account contains comprehensive information of the user entered during registration and permits the customer to get access to his/her past reservations, enquire about travel fare and availability of seats, make fresh reservations, and update his account details. Each passenger is allotted a unique PNR no. through which one can access his/her account.

The railway administrator is another member involved in the transactions. The administrator is required to login using a master password, once authenticated as an administrator, one has access and right of modification to all the information stored in the database. This includes the account information of the customers, attributes and statistics of stations, description of the train stoppages and physical description of coaches, all the reservations that have been made. The railway administrator has the right to modify any information stored at the server database.

1.5.OVERVIEW:

**OVERVIEW:**

This project aims at development of a Railway Reservation System that facilitates the Railway customers to manage their reservations and the Railway administrators to modify the backend databases in a User-Friendly manner.

This project includes the following functions:

1) Create new database

2) Add new Record

3) Modify

4) Display record

5) Ticket reservation

6) Ticket Modification

7) Ticket Cancellation

8) Ticket printing

**CONSTRAINTS:**

There is no maintainability of back up so availability will get affected. Real-life credit card validation and Banking system is not implemented. No multilingual support. Given below is an overall picture of the system, as depicted in the above

Administrator:

Database Management:

* + Control the database customers and keep track of all records of customers.
  + Control the database of trains and keep track of all records of train.
  + Control fare management.
  + View the details of all orders and control the whole application.

Customers:

Login:

* Customers must have a valid login id (PNR number) to enter into the site.

Registration:

* New users can sign up by creating new ID.

Cancel Details:

* Can cancel his reservation details.

**FUNCTIONAL REQUIREMENTS:**

In software engineering, a functional requirement defines a function of a software-system or component. A function is described as a set of inputs, the behavior and outputs. Functional requirements may be calculations, technical details, data manipulation and processing and other specific functionality that show how a use case to be fulfilled. Typically, a requirements analyst generates functional requirements after building use cases. However, this may have exceptions since software development is an iterative process and sometime certain requirements are conceived prior to the definition of the use case. Both artifacts (use cases documents and requirements documents) complement each other in a bidirectional process. A typical functional requirement will contain a unique name and number, a brief summary, and a rationale. This information is used to help the reader understand why the requirement is needed, and to track the requirement through the development of the system. The core of the requirement is the description of the required behavior, which must be a clear and readable description of the required behavior. This behavior may come from organizational or business rule, or it may be discovered through elicitation sessions with users, stakeholders and other experts within the organization. Software requirements must be clear, correct unambiguous, specific and verifiable

**RESERVATION OF TICKET:**

* REQUEST TIME TABLE:

Passenger requests database to display railway timetable.

* DISPLAY TIMETABLE:

Database displays timetable to the customer.

* REQUEST TO RESERVE TICKET:

Passenger requests the clerk to reserve his/her ticket.

* INPUT DETAILS:

Clerk asks customer to enter details for the reservation of ticket.

* CALCULATE FARE:

Clerk calculates the total fare of the journey according to the number of passengers and tells the customer.

* RESERVE TICKET:

Ticket is reserved and customer pays the fare.

* REQUEST TO PRINT:

Customer requests to print the ticket.

* PRINT TICKET:

Ticket is been printed and handled to the customer

**CANCELLATION OF TICKET:**

* REQUEST TO CANCEL TICKET:

Customer requests to cancel his/her ticket for which he/she has to give the PNR number.

* CANCEL TICKET:

Once the PNR number is received, the ticket is cancelled.

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