SYNOPSIS

Report On

Railway Management System

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ABSTRACT

The purpose of Railway Management System is to automate the existing manual system by the help of computerized equipments and full-fledged computer software, fulfilling their requirements, so that their valuable data/information can be stored for a longer period with easy accessing and manipulation of the same. The software and hardware required are easily available and easy to work with.

Railway Management System can lead to error free, secure, reliable and fast management system. It can assist the user to concentrate on their other activities rather than concentrate on the record keeping. Thus it will help organization in better utilization of resources. The organization can maintain computerized records without redundant entries. That means that one need not be distracted by information that is not relevant, while being able to reach the information.

The aim of this project describes how to manage good performance and better services for the clients.

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INTRODUCTION

The "Railway Management System" has been developed to override the problems prevailing in the practicing manual system. This software is supported to eliminate and, in some cases, reduce the hardships faced by this existing system. Moreover, this system is designed for the particular need of the company to carry out operations in a smooth and effective manner.

The application is reduced as much as possible to avoid errors while entering the data. It also provides error messages while entering invalid data. No formal knowledge is needed for the user to use this system. Thus, through all this it proves it is user-friendly. Railway Management System, as described above, can lead to an error-free, secure, reliable and fast management system. It can assist the user to concentrate on their other activities rather than concentrate on the record keeping. Thus, it will help organization in better utilization of resources.

Every organization, whether big or small, has challenges to overcome and manage the information's of Ticket, Train, Customer, Seat, Payment. Every Railway Management System has different Train needs; therefore, we design exclusive employee management systems that are adapted to your managerial requirements. This is designed to assist in strategic planning and will help you ensure that your organization is equipped with the right level of information and details for your future goals. Also, for those busy executives who are always on the go, our systems come with remote access features, which will allow you to manage your workforce anytime, at all times. These systems will ultimately allow you to better manage resources.

Project / Research Objective

The main objective of the Project on Railway Management System is to manage the details of Train (Train number, Train name, Destination, source, Departure time, Arrival Time). It manages all the information about Train. The project is totally built at administrative end and thus only the administrator is guaranteed the access. The purpose of the project is to build an application program to reduce the manual work for managing the Train details. It tracks all the details about the train number, train name, departure, arrival.

Functionalities provided by Railway Management System are as follows:

1. Provides the searching facilities based on various factors.
2. Shows the information and description of the Train.
3. To increase efficiency of managing the Train details.
4. It deals with monitoring the information and transfers train details to Customer.
5. Manage the information of Train.
6. Editing, adding and updating of Records is improved which results in proper resource management of Train data.

Research Methodology

Input Data and Validation of Project on Railway Management System:

i. Input Data for user input:

1. All the fields such as:

A. Train number

B. Train Name

C. Source

D. Destination

E. Departure time

F. Arrival time

G. Distance etc. are validated and does not take invalid values

2. Avoiding errors in data

3. Controlling amount of input

4. Integration of all the modules/forms in the system.

5. Preparation of the test cases.

6. Preparation of the possible test data with all the validation checks.

7. Actual testing done manually

8. Recording of all the reproduced errors.

9. Modifications done for the errors found during testing.

10. Prepared the test result scripts after rectification of the errors.

11. Functionality of the entire module/forms.

ii. Validations for user input:

1. Checking of the Coding standards to be maintained during coding.
2. Testing the module with all the possible test data.
3. Testing of the functionality involving all types of calculations etc.
4. Commenting standard in the source files.

Features of the project Railway Management System:

1. Add train details

2. Update train details

3. Show train details

4. Delete train details

5. Accuracy in work.

6. Easy& Fast retrieval of information.

7. Well designed reports.

8. Decrease the load of the people involved in the existing manual system.

9. Access of any information individually.

10. Work becomes very speedy.

11. Easy to update information

12. User Accounts to control access and maintain security

Software Requirement Specification

The Software Requirements Specification is produced at the culmination of the analysis task. The function and performance allocated to software as part of system engineering are refined by establishing a complete information description, a detailed functional and behavioral description, an indication of performance requirements and design constraints, appropriate validation criteria, and other data pertinent to requirements.

The proposed system has the following requirements:

1. System needs store information about new entry of Train.
2. System needs to help the internal staff to keep information of Ticket and find them as per various queries.
3. System needs to maintain quantity record.
4. System needs to keep the record of Booking.
5. System needs to update and delete the record.
6. System also needs a search area.
7. It also needs a security system to prevent data.

Identification of need:

The old manual system was suffering from a series of drawbacks. Since the whole system was to be maintained with hands the process of keeping, maintaining and retrieving the information was very tedious and lengthy. The records were never used to be in a systematic order. There used to be lots of difficulties in associating any particular transaction with a particular context. If any information was to be found it was required to go through the different registers, documents there would never exist anything like report generation. There would always be unnecessary consumption of time while entering records and retrieving records. One more problem was that it was very difficult to find errors while entering the records. Once the records were entered it was very difficult to update these records.

The reason behind it is that there is a lot of information to be maintained and it has to be kept in mind while running the business. For this reason, we have provided features Present system is partially automated (computerized), actually existing system is quite laborious as one has to enter same information at three different places.

The following points should be well considered:

1. Documents and reports that must be provided by the new system: there can also be few reports, which can help management in decision-making and cost controlling, but since these reports do not get required attention, such kind of reports and information were also identified and given required attention.
2. Details of the information needed for each document and report.
3. The required frequency and distribution for each document.
4. Probable sources of information for each document and report.
5. With the implementation of computerized system, the task of keeping records in an organized manner will be solved. The greatest of all is the retrieval of information, which will be at the click of the mouse. So the proposed system helps in saving time in different operations and making information flow easy, giving valuable report

Feasibility Study:

After doing the project, study and analyzing all the existing or required functionalities of the system, the next task is to do the feasibility study for the project. All projects are feasible - given unlimited resources and infinite time.

Feasibility study includes consideration of all the possible ways to provide a solution to the given problem. The proposed solution should satisfy all the user requirements and should be flexible enough so that future changes can be easily made based on the future upcoming requirements.

A. Economical Feasibility

This is a very important aspect to be considered while developing a Project. We decided the technology based on minimum possible cost factor.

a. All hardware and software cost has to be borne by the organization.
b. Overall we have estimated that the benefits the organization is going to receive from the proposed system will surely overcome the initial costs and the later on running cost for system.

B. Technical Feasibility

This included the study of function, performance and constraints that may affect the ability to achieve an acceptable system. For this feasibility study, we studied complete functionality to be provided in the system, as described in the System Requirement Specification (SRS), and checked if everything was possible using different type of frontend and backend planform.

C. Operational Feasibility

No doubt the proposed system is fully GUI based that is very user friendly and all inputs to be taken all self-explanatory even to a layman. Besides, proper training has been conducted to leave the essence of the system to the users so that they feel comfortable with the new system. As far as our study is concerned the clients are comfortable and happy as the system has cut down their loads and doing.

System Design of Railway Management System

In this phase, a logical system is built which fulfils the given requirements. Design phase of software development deals with transforming the clients' requirements into a logically working system. Normally, design is performed in the following two steps:

1. Primary Design Phase:

In this phase, the system is designed at block level. The blocks are created on the basis of analysis done in the problem identification phase. Different blocks are created for different functions emphasis is put on minimizing the information flow between blocks. Thus, all activities which require more interaction are kept in one block.

2. Secondary Design Phase:

In the secondary phase the detailed design of every block is performed.

The general tasks involved in the design process are the following:

1. Design various blocks for overall system processes.
2. Design smaller, compact and workable modules in each block.
3. Design various database structures.
4. Specify details of programs to achieve desired functionality.
5. Design the form of inputs, and outputs of the system.

6. Perform documentation of the design.
7. System reviews.

User Interface Design

User Interface Design is concerned with the dialogue between a user and the computer. It is concerned with everything from starting the system or logging into the system to the eventually presentation of desired inputs and outputs. The overall flow of screens and messages is called a dialogue.

The following steps are various guidelines for User Interface Design:

1. The system user should always be aware of what to do next.
2. The screen should be formatted so that various types of information, instructions and messages always appear in the same general display area.
3. Message, instruction or information should be displayed long enough to allow the system user to read them.
4. Use display attributes sparingly.
5. Default values for fields and answers to be entered by the user should be specified.
6. A user should not be allowed to proceed without correcting an error.
7. The system user should never get an operating system message or fatal error.

References and Bibliography:

- Google for problem solving
- http://www.jdbc-tutorial.com/
- https://www.tutorialspoint.com/java/
- http://www.javatpoint.com/java-tutorial
- http://www.wampserver.com/en/
- http://www.tutorialspoint.com/mysql/
- httpd.apache.org/docs/2.0/misc/tutorials.html