MCT

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DEPARTMENT OF INFORMATION TECHNOLOGY

EXPERIMENT NO: 1

Introduction:

PURPOSE

The purpose of this source is to describe the railway reservation system, which provides the train timing details, reservation, billing and cancellation on various Types of reservation namely. In addition, This Railway reservation service will not only enhance the reservation but will also help the commuters in getting support, refunds and other real time fixes.

- Confirm Reservation for confirm Seat.
- Reservation against Cancellation.
- Waiting list Reservation.
- Online Reservation.
- Tatkal Reservation

SCOPE

Technology has transformed many aspects of life in the 21st century, including the way many of us make train reservations. For example, to make ticketing more convenient for travellers, an online reservation system helps us in booking tickets from the comfort of our homes or offices. While this is convenient.

The various advantages of using the online reservation system are as follows:

- Convenient – You can book or cancel your tickets sitting in the comfort of your home or office.

- Saves Time and Effort - You can save the time needed to travel to the railway reservation office and waiting in the queue for your turn.
- Towards a greener planet – Instead of printing your ticket you can also choose to travel with the soft copy of your booked ticket in your laptop or even on your mobiles.

Problem Statement: -

Software has to be developed for automating the manual reservation system of railway. The system should be standalone in nature. It should be designed to provide functionalities like booking of tickets in which a user should be able to applied for tickets of any train and of any class. A limitation is imposed when the number of tickets for which user apply is greater than available seats or no seats are available. If seats are not available then put user transaction in the waiting queue. If the tickets are available then it is issued to the user and it must be updated in the database concurrently. The system generates the receipt for the same. The software takes the current system date and time as the date of issue and calculates the amount to be paid by theorist also provide the functionality of cancellation of tickets. If the user wants to cancel the tickets, he/she must enter the details. The system checks the records from the database if itis matched with the user entered details, then it cancels the tickets. The system also calculates the amount to be return to the user after deductions. The system must update the database for the same. After that system must check for waiting passenger for that train, if any then these tickets are issued to waiting passenger and update the database. The system displays the details of train of which user enter the name. The information is saved and the

corresponding updating take place in the database. In the enquiry, the system should be able to provide information like the availability of tickets of particular train, train schedule. The system should be able to reserve a ticket for a particulariser if the tickets are not currently available. The corresponding print outs for each entry (issue/cancel) in the system should be generated.

There should be proper information if the waiting list ticket is confirmed, through mail or via SMS. It should tell us as to which all stations it halts and current status of the train should be informed. Security provisions like the login authenticity should be provided. Each user should have a user id and a password. Record of the users of the system should be kept in the logfile. Provision should be made for full backup of the system.

Functional Requirement: -

Functional requirements refer to the Functions, which were required before and covered in this system/ software we have developed. Mentioned below are the functions/ features of our newly fabricated software system:

Feature #1 – TR AIN DETA ILS:

Customers may view the train timing at a date their name and number of tickets.

Feature #2 – RESERVATION:

After checking the number of

seats available the customers reserve the tickets.

Feature #3 – BILLING:

The payment information must be shown to the user once the booking has been taken place.

Feature #4 – CANCELLATION:

Once the user cancels the ticket, he or she must get the refund and the allotted seat must be free for other.

NON-FUNCTIONAL REQUIREMENTS:

Non-functional requirements make up a significant part of the specification. They are important as the client and user may well judge the product on its non-functional properties. Provided the product meets its required amount of functionality, the non-functional properties -- how usable, convenient, inviting and secure it is -- may be the difference between an accepted, well-liked product, and an unused one.

1. Performance: This system helps in increasing the overall performance of the Railway Reservation functionality by shifting a large chunk of load online causing innless hassle in ticket booking, cancellation or querying. This System is 22hours Live per day giving us greater availability time as compared to that of9 hours offline activity.

2. Reliability: The Reliability of the overall project depends on the reliability of the separate components. The main pillar of reliability of the system is the backup of the database which is continuously maintained and updated to reflect the most recent changes. Also, the system will be functioning inside a container. Thus, the overall stability of the system depends on the stability of container and its underlying operating system.

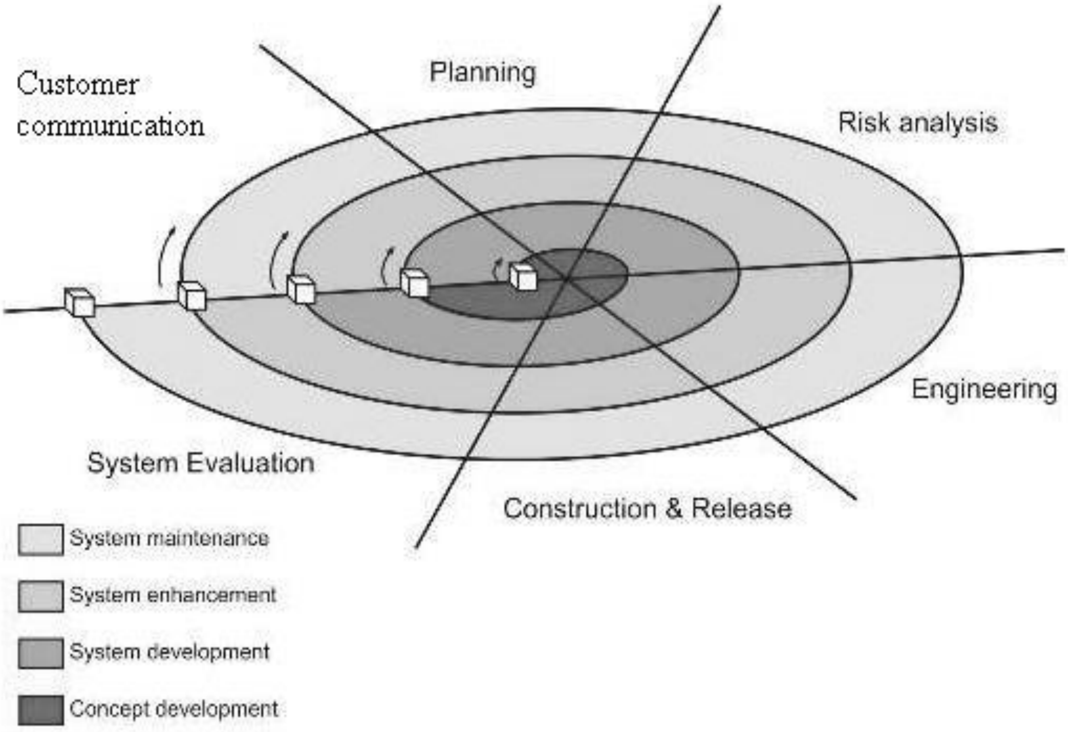
3. Availability: The system should be available at all times, meaning the user can access it using a web browser, only restricted by the down time of the server on which the system runs. A customer friendly system which is in access of people around the world should work 24 hours. In case of a hardware failure or database corruption, a replacement page will be shown. Also, in case of a hardware failure or database corruption, backup of the database should be retrieved from the server and saved by the Organizer. Then the service will be restarted. It means 24x7 availability.

4. Security: This system should work under 3-Level Architecture combining DB-Class-Front end with different security facilities and encryption. The System uses in all transactions that include any confidential customer information. The system must automatically log out all customer after a period of inactivity of those users respectively. The system should not leave any cookies on the customer's computer containing the user's password. The system's back-end servers shall only be accessible to authenticated management.

5. Maintainability: A commercial database is used for maintaining the database and the application server takes care of the site. In case of a failure, a re-initialization of the project will be done. Also the software design is being done with modularity in mind so that maintainability can be done efficiently.

6. Supportability: The code and supporting modules of the system will be well documented and easy to understand. Online user Documentation and Help system requirements.

PROCESS MODEL: THE SPIRAL MODEL



- The spiral model, originally proposed by Barry Boehm [1988], is an evolutionary software process model that couples the iterative nature of prototyping with the controlled and systematic aspects of the linear sequential model.

- It provides the potential for rapid development of incremental versions of the software. Using the spiral model, software is developed in a series of incremental releases.

- During early iterations, the incremental release might be a paper model or prototype. During later iterations, increasingly more complete versions of the engineered system are produced.

- A spiral model is divided into a number of framework activities, also called task regions. Typically, there are between three and six task regions.