Web SR Development with Touch Screen System

Bannaravuri Prathima[#1], M.Nalini Sri[#2], V. Deva Kumar[#3]

[#1]*B.TECH(1V/1V),*

E.C.M, K.L.University

Vaddeswaram, INDIA.

[#2]*Assistant Professor*

E.C.M, K.L.University

Vaddeswaram, INDIA

[#3]*Project Manager in SCR, WWO*
S/w training and development centre

Vijayawada, INDIA

Abstract— **Indian Railways is the golden era to our nation. Indian Railways is an Indian state-owned enterprise, owned and operated by the government of India through the Ministry of Railways. . Our Railways were first introduced to India in 1853 from Bombay to Thane. Indian Railways is the world's ninth largest commercial or utility employer, by number of employees, with over 1.4 million employees. The basic intention of the project "Web SR Development with Touch Screen System" is to maintain the PRTF details of employee working in Vijayawada division of South Central Railways where P stands for promotion, R stands for reversions, T stands for transfers and F stands for fixations. These details are in database by creating a user interface and touch screen using J2EE architecture.**

Personnel department maintains the details of employees in a book called service register. Firstly the employee will be given a PF.No by the personnel department. Then those details will be given to the Personal department and clerk will regularly update. By using this application, if the employee wants to know his details, the employee can view them only. The employee has no right perform any changes .If the employee wants anything to be corrected; he can just give feedback in the column provided. This application includes various users like employees and clerks in the welfare department. The project includes to find the employee details based on designations and department. It is also used to find the age profile in different departments based on PRTF. The project is also used to see the employee status using Touch Screen application.

Keywords— **employee, PF.No, PRTF details, service register, Touch Screen System.**

I.INTRODUCTION

A. Purpose

The project is mainly useful for Monitoring employee details, Evaluating PRTF Details (Promotion, Reversion, Transfer, Fixations), Computing pay of employees, to find the Age profile.

B. Scope

The scope of the project is as follows:

The project is used to find the service information including the promotions, reversions and trainings, find the salary fixations, mode of pay, settlement, pensions and property of the employees of the different departments of south central railway and find the performance appraisal of each employee of different departments. It also includes the vacancy list of each department based on the designations.

The project is also used to give the complaints, which are meant for the service information from different departments of Vijayawada division through online. It is also used to find the status of the complaint in every department. It is used to rectify the employee complaints very easy and faster. The project also includes the welfare section activities and clearance details of the complaints given by the employees of different departments from different stations of Vijayawada division.

C. Overview

In "Web SR Development with Touch Screen system" project, the system is made ONLINE. In this the administrator maintains the entire details of the employee in the database. The accessing rights will be with admin only. He only can make updations or deletions in the database. The administrator will give PFNO and password for all the employees. If the employee wants to know about his details he can view the data online but cannot perform any changes to the data by giving his name and password. If any modifications or requests are there then the employee can give Feedback form also. The feedback given by employees or any benefits etc is viewed by officers.

II EXISTNG SYSTEM & PROPOSED SYSTEM

A. Existing system

If the employees want to know about details, he has to place a letter to the personnel department. In order to know his

details the employee has to wait for few weeks since it has to pass through different sections. Another thing is if any promotions, benefits etc are to be given the department has to check entire service register.

1). Limitations in existing system:

1. It needs lot of manual work.
2. It is time consuming process.
3. In case of missing the SR there is no backup of the data.
To overcome all these problems we need to develop a software system, which tracks all the above activities. This system is very helpful to store all the details and also reduces the time and manpower.

B. Proposed system

The proposed system is made online. In this the administrator maintains the entire details of the employee in the database. The accessing rights will be with admin only. He only can make updations or deletions in the database. The administrator will give login name and password for all the employees.

Now if the employee want to know his personnel details he enters the PF.No then all the details will be displayed in the screen. If the details are entered wrongly, employee send reports to the Administrator. The administrator verifies the details.

C. Touch Screen System

A touch screen is an input device that allows users to operate a pc or any display device by simply touching the display screen.

1.)Advantages over the Existing System

1. 1 It reduces manual work and also time can be saved.
1.2 Service records will be updated regularly through office order.
1.3 Faster and accurate report generation.

III. SYSTEM DESIGN

A. Promotion, Reversion, Transfer, and Fixations
This module is used to maintain the promotion, reversion, transfer and fixations details of the employee and it maintains the issued letter no, date of issue Current Working Position , Department, Designation, Scale ,Date Of Increments, Debarkation Details etc., using this module the promotion details will be on the finger tips of personal department.

B. Property and Nomination

This model module is used to maintain the property details of the employees and it includes the property type,

item, location of the property, registration details of the property and many more details are included. And the nominee module includes the nominee details of the employee and how much the PF percentage they carry are all included.

C. Advances

This module is used to maintain the advance details of the employee and the type of advance, the letter number, the letter date and also what penalty he carries if he is not ready to pay the advances time to time.

D. Feedback

This module is used to maintain the feedback details of the employee to the administrator about his details modification then admin will modify those details.

E. Training

In this module the training details regarding new job sessions are maintained and what are his remarks in that training and date from and to details are maintained. And this application also includes all the type of reports that are needed to the personnel department and for this custom search is provided to sort the records in the service register.

F. To Finding the Employee Age Profile

This module represents the age of employee's in pictorial Format and is categorized to four types (20-30, 30-40, 40-50, and 50-60). Employees are listed by these age profiles and Percentage of Employees is also displayed.

G.Touch Screen system

Using this module, every employee information can be accessed by them easily through the touch screen system. Time can be saved accessing for the data.

IV.FRONT END:

A. Hyper Text Mark Up Language (HTML):

HTML is a static language used to create hypertext documents that have hyperlinks embedded in them. You can build web pages. It is only formatting language and not a programming language. Hyperlinks are underlined or emphasized words or locations in a screen that lead to other documents. WWW is a global, interactive, graphical, hypertext information system
The behind hypertext is that instead of reading text in rigid linear structure you can easily jump from point to another point. You can navigate through the information based on your interest and preferences.

1). Advantages of HTML

A HTML document is small and hence easy to send over the net. It is small because it does not include format information.

HTML documents are cross platform compatible and device independent. You only need HTML readable browser to view them. Font names, locations etc are required.

B. Java Script

Java Script is popular scripting language that lets you embed your programs and run these in a web browser. These programs can be places in a <SCRIPT> tag with a language property setting to "JAVASCRIPT", which is in either <HEAD> of <BODY> tag. It makes the static web page that is developed using static HTML tags to dynamic by using java language syntax and its attributes. So it is the case sensitive. Java Script is used to perform the client side validations dynamically at run time.

It is said to be an Object Based programming language where it has a rich support of predefined objects, which can be used directly without any creation of an instance. Some of these objects are document, form, frame, history, window, location…etc. Each of the objects will have their own methods and properties. Methods can be used to perform some actions with that object. Besides performing actions using methods one can also read and change settings in those objects using properties.

1). Uses of Java Script

Java Script provides a fairly complete set of built-in functions and commands, enabling you to perform Math calculations, manipulate strings, play sounds, open new windows and new URLs, access and verify user input to your web forms.

Code to perform these functions can be embedded in a page and executed when the page is loaded. We can also write functions containing code that is triggered by events you specify. You can write a java script method that is called when the user clicks submit button of a form, for example or one that is active when the user clicks a hyperlink on the active page.

Java script commands are embedded in HTML documents. Embedding java script in your pages requires only one new HTML element. The <SCRIPT> element takes the attribute '**LANGUAGE**' which the scripting language to use when evaluating the script and '**src'** which can be used to load script from an external source.

C. Java Server Pages (JSP)

A *JSP page* is a text document that contains two types of text: static data, which can be expressed in any text-based format (such as HTML, SVG, WML, and XML), and JSP elements, which construct dynamic content.

The recommended file extension for the source file of a JSP page is .jsp. The page can be composed of a top file that includes other files that contain either a complete JSP page or a fragment of a JSP page. The recommended extension for the source file of a fragment of a JSP page is .jsp.

The JSP elements in a JSP page can be expressed in two syntaxes--standard and XML--though any given file can use only one syntax. A JSP page in XML syntax is an XML document and can be manipulated by tools and APIs for XML documents.

Java Server Pages technology allows web developers and designers to easily develop and maintain dynamic web pages that leverage existing business systems. As part of the Java technology family, JSP enables rapid development of web-based applications that are platform-independent. JSP separates user interfaces from content generation, enabling designers to change the overall page layout without altering the underlying dynamic content.

So what exactly is a Java Server Page? In its basic form, a JSP page is simply an HTML web page that contains additional bits of code that execute application logic to generate dynamic content. This application logic may involve JavaBeans, JDBC objects, Enterprise Java Beans (EJB), and Remote Method Invocation (RMI) objects, all of which can be easily accessed from a JSP page.

For example, a JSP page may contain HTML code that displays static text and graphics, as well as a method call to a JDBC object that accesses a database; when the page is displayed in a user's browser, it will contain both the static HTML content and dynamic information retrieved from the database.

The separation of user interface and program logic in a JSP page allows for a very convenient delegation of tasks between web content authors and developers. It also allows developers to create flexible code that can easily be updated and reused.

Because JSP pages are automatically compiled as needed, web authors can make changes to presentation code without recompiling application logic. This makes JSP a more flexible method of generating dynamic web content than Java servlets, whose functionality Java Server Pages extend.

D. Java Technology

Initially the language was called as "oak" but it was renamed as "Java" in 1995. The primary motivation of this language was the need for a platform-independent (i.e., architecture neutral) language that could be used to create software to be embedded in various consumer electronic devices.

Java is a programmer's language.

Java is cohesive and consistent.

Except for those constraints imposed by the Internet environment, Java gives the programmer, full control.

Finally, Java is to Internet programming where C was to system programming.

E. JavaScript

JavaScript and Java are entirely different languages. A few of the most glaring differences are:

Java applets are generally displayed in a box within the web document; JavaScript can affect any part of the Web document itself.

While JavaScript is best suited to simple applications and adding interactive features to Web pages; Java can be used for incredibly complex applications.

There are many other differences but the important thing to remember is that JavaScript and Java are separate languages. They are both useful for different things; in fact they can be used together to combine their advantages.

1.) Advantages

JavaScript can be used for Sever-side and Client-side scripting. It is more flexible than VBScript.

JavaScript is the default scripting languages at Client-side since all the browsers supports it.

F. Java Virtual Machine (JVM)

Beyond the language, there is the Java virtual machine. The Java virtual machine is an important element of the Java technology. The virtual machine can be embedded within a web browser or an operating system. Once a piece of Java code is loaded onto a machine, it is verified. As part of the loading process, a class loader is invoked and does byte code verification makes sure that the code that's has been generated by the compiler will not corrupt the machine that it's loaded on. Byte code verification takes place at the end of the compilation process to make sure that is all accurate and correct. So byte code verification is integral to the compiling and executing of Java code.

V.BACK END
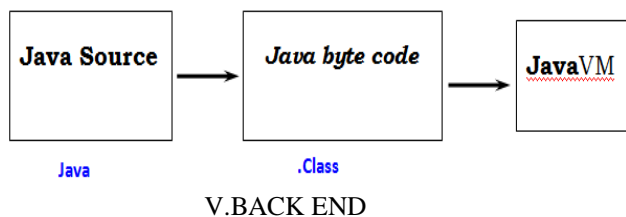
A.SQL Model Clause:

This will enhance SQL for calculations. SQL result sets can be treated like multidimensional arrays. HTML DB (previously known as Project Marvel) will be a RAD environment for web-based applications. PHP will be supported.

2). SQL:

Regular expressions (finally), native numbers (based on IEEE 754), enhancements for LOBs enhancements for collections. It should be noted, however, that regular expressions were available through the own pattern package. Data Pump replaces EXP and IMP. It provides high speed, parallel, bulk data and metadata movement of Oracle database connects across platforms and database versions. If a data pump job is started and fails for any reason before it has finished, it can be restarted at a later time.

ASM: Automatic Storage Management.

Flashback Database: Old database block images are stored in a flash Recovery Area, which allow fast rollbacks of database (as online redo logs are required). Flash Back database makes it also possible to correct user errors: undraping tables. Automatic Shared Memory Management is another self-management enhancement to Oracle. It includes a new parameter: sga target.

ADDM: Automatic Database Diagnostic Monitor. ADDM enables Oracle to diagnose its own performance problems. For example, ADDM identifies the most resource intensive SQL Statements and passes that statement to the SQL tuning advisor.

AWR: Automatic Workload Repository. AWR repository gathers and stores system activity and workload data which is then analyzed by ADDM. Every layer of Oracle is now equipped with instrumentation that gathers information on workload which will then be make self-managing decisions. AWR is place where this data is stored. Trcsess is a tool that gathers SQL from sessions in a shared server environment.

B. Description of Web Server

Tomcat is an open source web server developed by Apache Group. Web Servers like Apache Tomcat support only web components while an application server supports web components as well as business components.

Apache Tomcat is a servlet container developed by the Apache Software Foundation (ASF). Tomcat implements the Java Servlet and the Java Server Pages (JSP) specifications from Sun Microsystems, and provides a "pure Java" HTTP web server environment for Java code to run.

Tomcat should not be confused with the Apache web server, which is a C implementation of an HTTP web server; these two web servers are not bundled together. Apache Tomcat includes tools for configuration and management, but can also be configured by editing XML configuration files.

- implements the Servlet 2.5 and JSP 2.1 specifications
- support for Unified Expression Language 2.1
- designed to run on Java SE 5.0 and later
- support for Comet through the Comet Processor interface is not packaged with an admin console as in past releases

C. External Libraries:

Web applications may require external libraries. To make some libraries in general available past them into the folder "lib". These libraries are then available for all web applications. You can also put libraries into sub-folders.

D. HTTP Server:

Apache tomcat contains also a HTTP connector which can be used to serve static HTML pages. The standard directory which will be served by Apache Tomcat is below the tomcat installation directory "webapps / ROOT". Place static content, which should be served by Tomcat into this directory.

VI.SCOPE FOR FUTURE ENHANCEMENTS:

The Web-SR Development System has the flexibility to extend many more features like, to place the project in the main server of the South Central Railway and can enhance these features to each and every department of the division. This Web-SR Development System has also the scope to develop like a mail application.

The Web-SR Development System has the flexibility to enhance its applications all over the India. Once if it is successful in the Vijayawada division we can implement this system in all the divisions of South Central Railway

Finally the applications have the maximum scope to emphasize their features in the future also and more over we can implement the new technologies over it.

VII.CONCLUSIONS:

The Web-SR Development System gives all the details of employee including current status of the employee and reports generation depends on requirement. The employee can know the details by just entering the PFNO and can generate reports.

The Web-SR Development System provides the authentication so that each and every employee can check the details through online, and can give feedback through online. The PRTF details can be entered easily. This project Web-SR Development System will be very helpful for the management team to provide better security for the better system.

VIII.REFERENCES:

- Pearson Education – Sun Microsystems

- Java Database Best Practices

- Core Java™ 2 Volume II – Advanced

- Head First Servlets & JSP

- Effective Java – Programming Language Guide

- Pearson Education – Sun Microsystems

- The Book of JavaScript 2nd Edition

- O'Reilly – SPD

- Core Java™ 2 Volume I – Fundamentals 7th Edition

- Java Database Best Practices