PROJECT REPORT

ON

EMPLOYEE MANAGEMENT SYSTEM

Submitted by,

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ABSTRACT

In this world of growing technologies everything has been computerized. With the large number of work opportunities the Human workforce has increased. Thus there is a need of a system which can handle the data of such a large number of employees in an organization. This project aims to simplify the task of maintain records about the employees in an organization. The "EMPLOYEE MANAGEMENT SYSTEM" has been developed to override the problems existing in the manual system. This software is supported to reduce the hardships faced due to prevailing system.

Employee Management system is an application that enables users to create and store employee records. This application is developed for an employee manager where he is able to add new employees, update the employee data, view the employee details and delete the details from the database if needed. This application is helpful to a department of the organization which maintains data of employees related to an organization.

This project will allow admin to enter the homepage and perform operations only after proper authentication. Database will store all personal details of employees such as name, date of birth, contact number etc. and job details like business unit, location. Thus by all it proves as a user friendly system.

INTRODUCTION

Employee Management system is an application that allows users to create and store Employee records. It stores the entire employee's information in a database. It is an application developed in Java and the database used is MySQL. It contains employee information like employee id, first name, last name, age etc. It is easy to use this application and has a user-friendly interface. It is totally built at the administrative end which means that only the admin has access rights to change or modify any records. So this makes it a safe and reliable application to use.

This software package has been developed using the powerful coding tools of JAVA at Front End and Microsoft SQL Server at Back End. The software is very user friendly. The package contains different modules like Employee details. This version of the software has multi-user approach.

The main aim of developing this application was to reduce the errors that occur in the manual system. One can search the details easily by just entering employee id. In earlier systems, there was not such a facility to do so. All the details are stored in a MySQL database. It is easy to update or delete any employee details. All the employee records are integrated and so this makes it user-friendly and easy to use application.

Java is a platform independent language. Its created applications can be used on a standalone machine as well as on a distributed network. More over applications developed in java can be extended to Internet based applications. Thus java was chosen as the background to design this application. Spring is one of the most used Java EE Framework and Hibernate is the most popular ORM framework. That's why Spring Hibernate combination is used a lot in enterprise applications.

REQUIREMENT SPECIFICATION

For building and executing this software, these requirements have to be followed.

1. Java 1.8+

JDK is an acronym for Java Development Kit. The Java Development Kit (JDK) is a software development environment which is used to develop java applications and applets. It physically exists. It contains JRE + development tools. JDK is an implementation of any one of the below given Java Platforms released by Oracle corporation: Standard Edition Java Platform, Enterprise Edition Java Platform, Micro Edition Java Platform. The JDK contains a private Java Virtual Machine (JVM) and a few other resources such as an interpreter/loader (Java), a compiler (javac), an archiver (jar), a documentation generator (Javadoc) etc. to complete the development of a Java Application.

2. Tomcat Server 7.0 or above

Apache Tomcat (sometimes simply "Tomcat") is an open-source implementation of the Java Servlet, Java Server Pages, Java Expression Language and Web Socket technologies. Tomcat provides a "pure Java" HTTP web server environment in which Java code can run. Tomcat is developed and maintained by an open community of developers under the auspices of the Apache Software Foundation, released under the Apache License 2.0 license.

3. MySQL database 5.0 or above

MySQL is a relational database management system based on the Structured Query Language, which is the popular language for accessing and managing the records in the database.

4. Eclipse IDE / STS 2018-2019

Eclipse is an integrated development environment used in computer programming. It contains a base workspace and an extensible plug-in system for customizing the environment.
Spring Tool Suite is an IDE to develop Spring applications. It is an Eclipse-based development environment. It provides a ready-to-use environment to implement, run, deploy, and debug the application. It validates our application and provides quick fixes for the applications.

5. Maven 3.0 or above

Maven is a software project management and comprehension tool. Based on the concept of a project object model (POM), Maven can manage a project's build, reporting and documentation from a central place.

6. Junit4

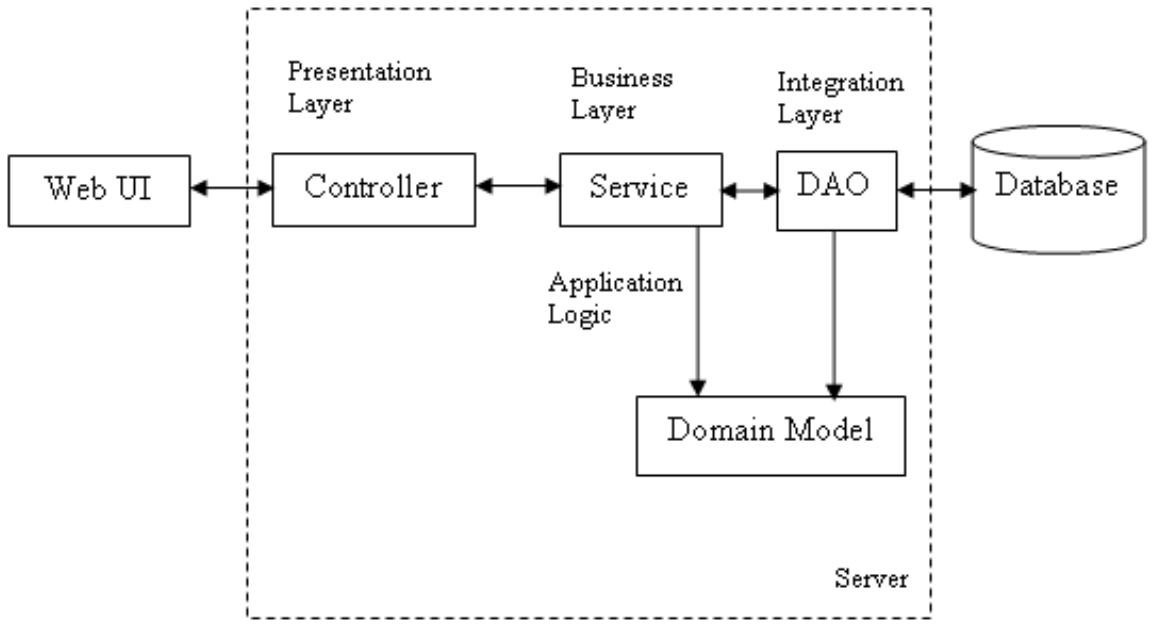
JUnit is a unit testing framework for the Java programming language. JUnit has been important in the development of test-driven development, and is one of a family of unit testing frameworks. Its main use is to write repeatable tests for our application code units.

ARCHITECTURE DESIGN

The Web-UI provides presentation of content to the end user through GUI. This can be accessed through any type of client device like desktop, laptop, tablet, mobile, thin client, and so on. For the content to be displayed to the user, the relevant web pages should be fetched by the web browser or other presentation component which is running in the client device. To present the content, it is essential for Web-UI to interact with the other tiers that are present preceding it.

The middle tier is server. This is the tier in which the business logic of the application runs. Business logic is the set of rules that are required for running the application as per the guidelines laid down by the organization. The components of this tier typically run on one or more application servers.
The server section consists of three layers such as presentation layer, business layer and integration layer. Presentation layer have the controller class. A controller contains the business logic of an application. Here, the @Controller annotation is used to mark the class as the controller. Business layer consists of the service layer which provides logic to operate on the data sent to and from the DAO and the client. The @Service annotation is used for service class to mark the class as a service provider. Integration layer is the place where DAO class exists. Service layer provides code modularity, the business logic and rules are specified in the service layer which in turn calls DAO layer, the DAO layer is then only responsible for interacting with DB.
The application data is typically stored in a database server, file server, or any other device or media that supports data access logic and provides the necessary steps to ensure that only the data is exposed without providing any access to the data storage and retrieval mechanisms.

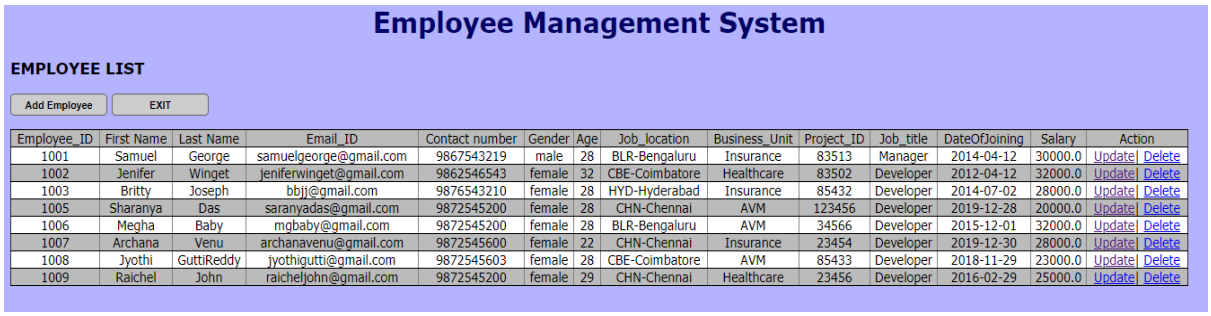
Outline of the Project



PROJECT SCREENSHOTS

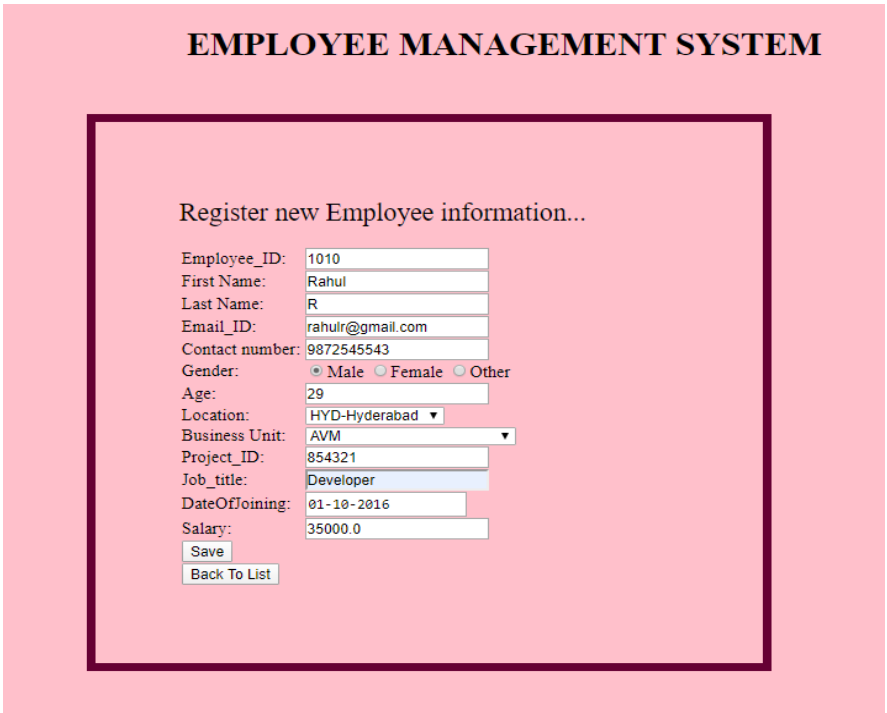
Login page

Employee list

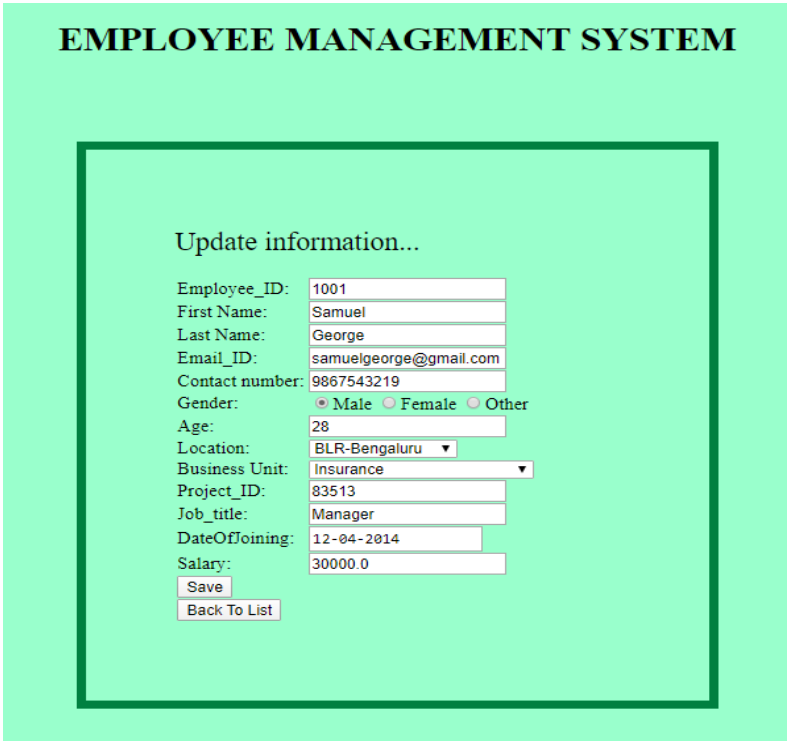


Employee_ID	First Name	Last Name	Email_ID	Contact number	Gender	Age	Job_location	Business_Unit	Project_ID	Job_title	DateOfJoining	Salary	Action
1001	Samuel	George	samuelgeorge@gmail.com	9867543219	male	28	BLR-Bengaluru	Insurance	83513	Manager	2014-04-12	30000.0	Update| Delete
1002	Jenifer	Winget	jeniferwinget@gmail.com	9862546543	female	32	CBE-Coimbatore	Healthcare	83502	Developer	2012-04-12	32000.0	Update| Delete
1003	Britty	Joseph	bbjj@gmail.com	9876543210	female	28	HYD-Hyderabad	Insurance	85432	Developer	2014-07-02	28000.0	Update| Delete
1005	Sharanya	Das	saranyadas@gmail.com	9872545200	female	28	CHN-Chennai	AVM	123456	Developer	2019-12-28	20000.0	Update| Delete
1006	Megha	Baby	mgbaby@gmail.com	9872545200	female	28	BLR-Bengaluru	AVM	34566	Developer	2015-12-01	32000.0	Update| Delete
1007	Archana	Venu	archanavenu@gmail.com	9872545600	female	22	CHN-Chennai	Insurance	23454	Developer	2019-12-30	28000.0	Update| Delete
1008	Jyothi	GuttiReddy	jyothigutti@gmail.com	9872545603	female	28	CBE-Coimbatore	AVM	85433	Developer	2018-11-29	23000.0	Update| Delete
1009	Raichel	John	raicheljohn@gmail.com	9872545200	female	29	CHN-Chennai	Healthcare	23456	Developer	2016-02-29	25000.0	Update| Delete

Add form



Update form



Login failed page

CONCLUSION AND FUTURE WORK

Every organization big or small has human resource challenges to overcome. This project is designed to assist in strategic planning, and will help to ensure that the organization is equipped with the right level of human resources for future goals. These systems will ultimately allow bettering managing resources. The application is reduced as much as possible to avoid errors while entering the data. It also provides error message while entering any invalid data. No former knowledge is required for the user to use this system.

In future this project will be extended to higher levels with the integration of personal, educational, experience and organizational details. I would also try to implement some extra features like employee working hours, shifts and allowances, medical details etc. Also modification would be made on current UI to make it a more attractive UI by using angular in the future.

REFERENCES

[1]. https://docs.spring.io/spring/docs/current/spring-framework-reference/

[2]. https://maven.apache.org/guides/getting-started/index.html

[3]. https://docs.spring.io/spring/docs/current/spring-framework-reference/web.html

[4]. https://hibernate.org/orm/documentation/5.0/

[5]. https://docs.spring.io/spring/docs/current/spring-framework-%20reference/core.html#spring-core