Project Report

on topic: Employee Management System

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GitHub link : https://github.com/anujdhiman28/Employee-Management-System-.github

1. Introduction:

Everything has been digitized in our age of ever-increasing technology. The human workforce has grown as a result of the abundance of job options. As a result, a system that can handle the data of such a vast number of people in a company is required. Because of its user-friendly design, this project makes the process of keeping records easier. The "EMPLOYEE MANAGEMENT SYSTEM" was created to address the issues that plagued the previous manual system. This program is designed to eliminate, and in some cases, decrease, the problems that the current system has.

2. Aim:

To eliminate data entry mistakes, the software is kept as simple as possible. When inputting incorrect data, it also displays an error notice. The user doesn't require any formal expertise to operate this system. The admin will be able to add new employees to this project. Employee data may also be seen and printed by the administrator. Admins can also remove an employee and change their details.

3. Objective:

The objective of this work is to give a complete approach to personnel information management. This will be accomplished by developing and deploying an HR management system that will result in a significant shift in the way employee data is managed. This system's objectives include the following: 1. Design of an HR management system to meet needs such as adding and deleting employees, viewing and printing employee data, and updating employee information.

2. Employee data is stored in a well-designed database.

3. An easy-to-use interface that will let user interact with the system.

4. Programming Language used:

Below are the important concepts on which the work has been done and with the support of these I was able to work on my project.

NET BEANS- NetBeans is a Java-based integrated development environment (IDE). NetBeans enables the creation of applications using a set of modular software components

known as modules. NetBeans is compatible with Windows, Mac OS X, Linux, and Solaris. It also allows other programming languages to be extended. In addition to Java programming, Third-party developers can expand NetBeans-based applications, including the NetBeans IDE.

JAVA- High-level, Object-Oriented programming language which help programmers to run their applications efficiently. JAVA is the programming language which comes into our minds when we talk about android application. By using JAVA as a programming language, programmer can develop any type of android application easily. JAVA also provides many libraries which also helps in making efficient android application. Swing is a Java GUI widget toolkit. It's part of Oracle's Java Foundation Classes (JFC), which provides an API for creating graphical-user- interfaces for Java programs.

SWING- Swing is a Java GUI widget toolkit. It's part of Oracle's Java Foundation Classes (JFC), which provides an API for creating-graphical-user-interfaces for Java programs. Swing was created to give a more advanced collection of graphical user interface components than the previous Abstract Window Toolkit (AWT). Swing offers a pluggable look and feel that allows applications to have a look &feel that is unconnected to the underlying platform, as well as a look & feel that emulates the look & feel of numerous platforms.

SQL- SQL (Structured Query Language) is a computer language that is used to manage data in a relational database management system (RDBMS) or for stream processing in a relational data stream management system (RDSMS). It's especially beneficial for dealing with structured data, or data that has relationships between entities and variables.

5. Implementation:

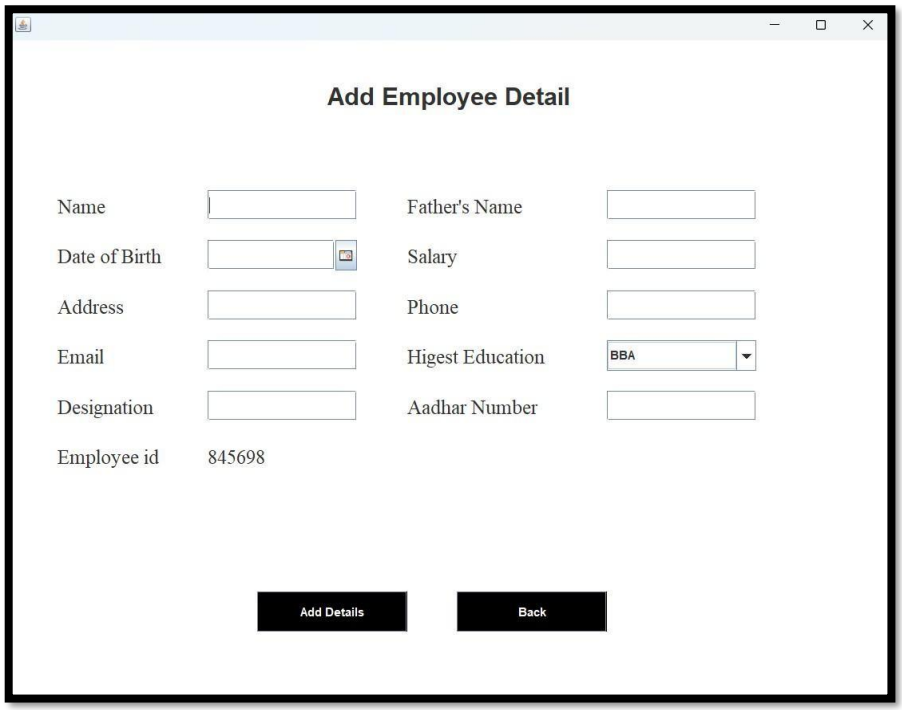
Following are the screens of the Employee Management System where you can see all the features of this system in use and you can also see the GUI of the system:

1. **Splash frame**- This frame contains the topic of the project and a “click here to continue” button which redirects the page to the login frame.

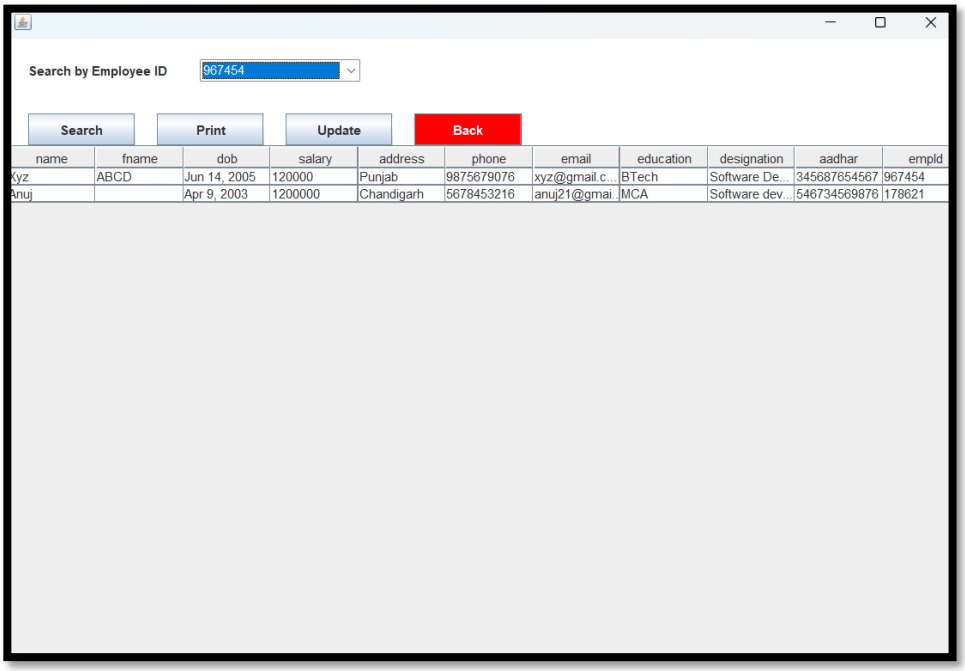
2. **Login frame**- This is the login frame of this system where user have to enter the required credentials to have access for the main dashboard.

3. **Main Dashboard**- After login in, user is directed to the main dashboard of this system where user can perform various operations like adding an employee, viewing an employee, updating an employee, and deleting an employee.

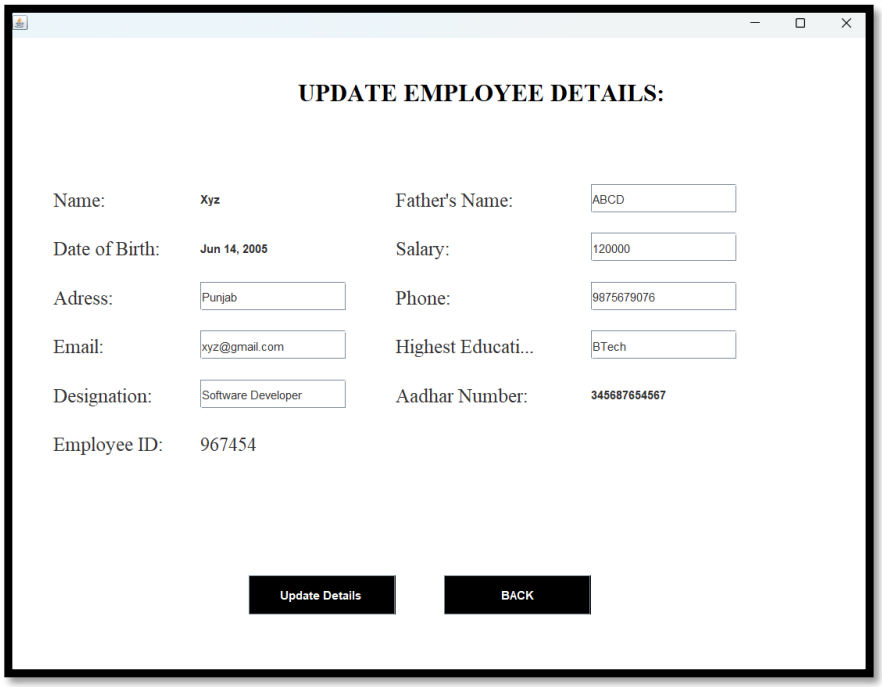
4. **Add Employee**- Here user have to enter all the required credentials to add a new employee to the system.



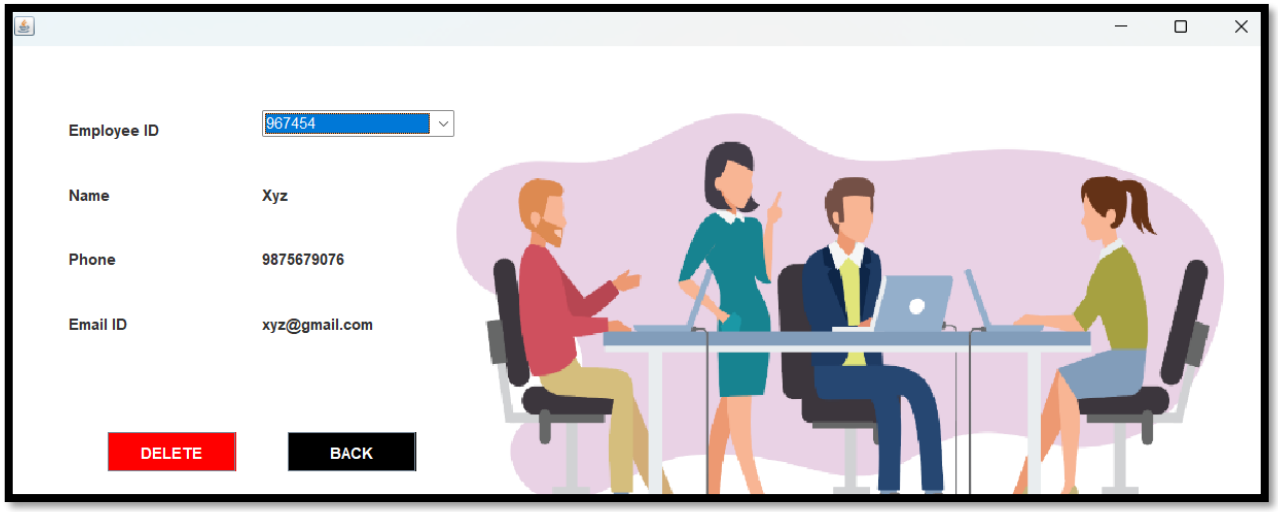
5. **View Employee**- User can view all the stored employee's information.



6. **Update Employee**- User can update the employee details by selecting the Employee id by clicking on the dropdown box in the view employee frame.



7. **Remove Employee**: User has to select the employee id in order to delete his information from the system.



8. **Connection Frame**- It has provided this whole projects connection with the MySQL database which shows all the details stored in it.

i) Login Page- This stores the login credentials such as Username and Password to login a user.

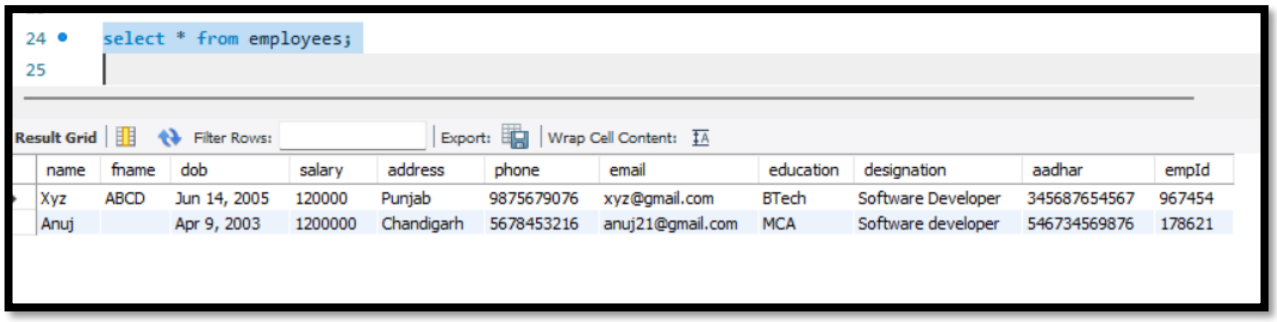
ii) Add Employee- This stores the details of every added employee in a table.

6. Dependencies:

- **SQL Connector:** This is a software library that enables the Java application to communicate with the SQL database. Since the application uses SQL to store and retrieve employee data, this connector is essential for the application to function.
- **J-Calendar**: This is a Java component for handling date-related operations. It provides a graphical calendar interface, likely used in the application for selecting dates of birth, hire dates, or other date-related information for employees.
- **RS2XML jar:** This is a Java library used to convert data from a Result Set (the data retrieved from a database query) into XML format. This might be used for data exchange, reporting, or other purposes within the application.
- **Default JDK**: This refers to the Java Development Kit (JDK). The JDK provides the tools necessary to compile and run Java applications. The "default" JDK simply means the standard version of the JDK used, which is essential for any Java-based application.

7. Output:

The Output after adding or updating the employees is stored in the MySQL database as:



```
24 •  select * from employees;
25
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

name	fname	dob	salary	address	phone	email	education	designation	aadhar	empId
Xyz	ABCD	Jun 14, 2005	120000	Punjab	9875679076	xyz@gmail.com	BTech	Software Developer	345687654567	967454
Anuj		Apr 9, 2003	1200000	Chandigarh	5678453216	anuj21@gmail.com	MCA	Software developer	546734569876	178621

8. Conclusion:

The goal of the initiative is to digitize personnel databases in businesses and provide administrators access to computers. Employees and administrators use software as an information system. The user can store his or her database safe and secure for an indefinite amount of time here. Adding, deleting, accessing, and changing employee information is simple and easy using the Employee Management System.

9. Learning Outcomes:

- Designing and implementing an employee management system.
- Developing a user-friendly interface for interacting with the system.
- Storing employee data in a well-designed database.
- Utilizing Java and SQL for application development.
- Managing employee information, including adding, deleting, viewing, and updating records.

10. Future Scope:

The GUI and the features added to this system are the basic ones. In future, there will be a better Graphical User Interface and there will be more features added to this system. If Graphical User Interface is improved then this system will be more user friendly and more features added will make this system a lot better and HR will be able to perform more operations.