

Part A: Micro-Project Proposal

Employee Record Management System

1. Introduction:

The Employee Record Management System powered by Java Swing is a practical solution for businesses seeking an efficient and user-friendly way to manage their employee records. By providing the ability to add, view, edit, and search employee details, our application empowers organizations to maintain accurate records and make informed HR decisions. With the constant evolution of this system, we aim to further enhance its functionality and contribute to improved workforce management practices.

2. Aims/Benefits of the Micro-Project

To develop employee record management system using Database, Awt and Swing components which will be able to add, update, display and search employee related information.

3. Course Outcomes Addressed:

- a) Develop program using GUI framework (AWT and Swing).
- b) Handle events of AWT and Swing Components.
- c) Develop programs using Database.

4. Literature Review:

- a. Employee Record Management System Using Java and MySQL by Deepak Saini and Nitesh Kumar (2020): This paper presents the design and implementation of an ERMS in Java that uses JavaFX for the user interface and MySQL for the database management system. The system includes features such as employee registration, attendance tracking, leave management, and salary processing. The system was tested, and the results showed that the system is efficient and user-friendly.
- b. Java-Based Human Resource Management System by R.N. Saranya, A. Santhoshkumar, and S. Saravanan (2019): This paper presents the design and implementation of a Java-based HRMS that includes modules for employee information management, attendance tracking, leave management, and payroll processing. The authors used Java Server Faces (JSF) and MySQL for the web-based interface and database management system, respectively. The system's performance was evaluated, and the results showed that the system is efficient and user-friendly.
- c. Employee Management System in Java by Amit Kumar (2018): This paper proposes an ERMS in Java that uses Java Server Pages (JSP) and MySQL for the web-based interface and database management system, respectively. The

system includes features such as employee registration, attendance tracking, and leave management. The system's performance was evaluated, and the results showed that the system is scalable and efficient.

- d. Java Employee Record Management System (JERMS) by Anuja P. and Chavan S. (2016): This paper presents the design and implementation of JERMS, a Java-based ERMS. The system includes modules for managing employee details, salary information, attendance records, and performance evaluation. The authors used Java Swing for the user interface and MySQL for the database management system. The system was tested and evaluated, and the results showed that JERMS is a user-friendly and efficient ERMS.

5. Proposed Methodology:

In Employee Record Management System, we accept, display, search and update the data from the database.

Home Page with a Welcome message, Add Employee Details Button, View Employee Details Button, Search Employee Button, Update Employee Details button and an Exit Button.

To Add an Employee click on Add Employee button, then enter the details of Employee. Then enter Employee Details, enter Employee ID, Name, Phone Number, Email Address, Age, Gender, Designation and Salary of Employee and click on Submit button. If all the details are valid then data will be saved successfully in the Database.

To View all Employee Details, click on View Employee Details. Once clicked, all the Employee Details in the Database will be shown in Table Format.

To Edit Details, click on Edit Employee Details. Then enter the Employee ID of Employee whose details you want to edit. If the employee with entered employee id does not exist in the database, a popup of "Invalid Employee ID" will be displayed. If the entered employee id is valid a popup with a combo-box to select the field you want to edit will be displayed, you can select a field from Name, Phone Number, Email Address, Age, Gender, Designation and Salary. After selecting field, click on next button and enter the details and click on submit button, if the details are valid then it will be updated/saved in the database else an invalid message will be displayed.

To Search any Employee's Details, click on Search Employee button and enter the Employee ID of employee. If Employee with entered employee id exist in the database then it's all details will be displayed in table format, else an "Employee does not exist" message will be displayed.

To Exit from the Employee Management System, click on Exit button.

6. Resources Required:

Sr. No.	Name of Resource/Material	Specification	Quantity	Remark
1	Computer System	OS: Windows Processor: Intel i3 RAM: 2 GB	1	-
2	Software	jdk 1.8 or greater	1	-

7. Action Plan:

Sr. No.	Details of Activity	Planned Start Date	Planned Finish Date	Name of Responsible Team Members
1	Data Collection			Badgujar Mohit Hemant
2	Analysis			Bhatt Atharva Yogesh
3	Design			Deore Samarthya Ravindra
4	Development (Program Coding)			Makhija Dhruv Harish
5	Report Writing			Makhija Dhruv Harish