EMS – Employee Management System
Project Proposal

Team Members: NASHSHA ISLAM & RAHMATUL ISLAM

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1 Problem Analysis and Motivation

In many organizations, managing employee records manually leads to inefficiencies and data loss.

- Employee data is scattered across spreadsheets or paper files.

- Attendance and salary tracking is error-prone and time-consuming.

- No centralized system exists for managing employee profiles and operations.

Therefore, we propose **EMS – Employee Management System**, where administrators can add, search, update, and delete employee records in a secure and organized platform. This will improve operational efficiency and data integrity.

2 Literature Review

There are existing tools like Excel, Google Sheets, and ERP systems. However:

- Spreadsheets lack security and scalability.

- ERP systems are expensive and complex for small organizations.

Hence, a lightweight, admin-friendly system is necessary, focusing solely on **employee record management and operational control**.

3 Methodology

The proposed system will consist of the following modules:

- **Login System:** Admins log in with secure credentials.

- **Add Employee:** Insert new employee details into the database.

- **Search Employee:** Search functionality based on ID or name.

- **Update Employee:** Modify existing employee information.

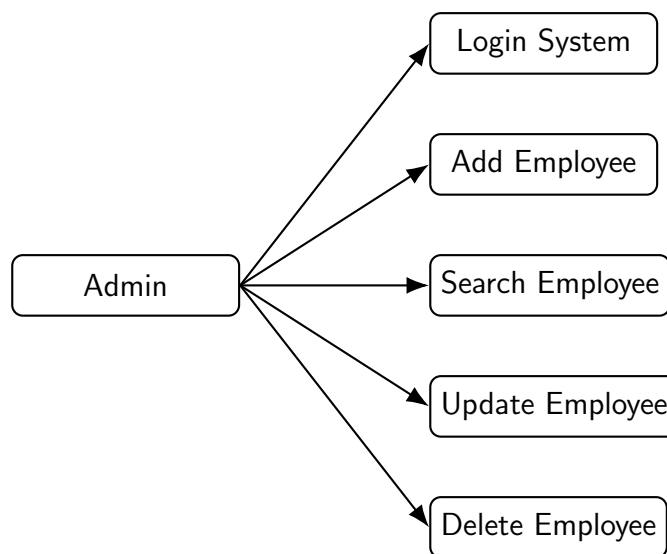- **Delete Employee:** Remove employee records.

Employee Management Use Case

Figure 1: Use Case Diagram of the EMS System

4 Feasibility Study

4.1 Economic Feasibility

The system requires no additional cost since free tools (Java, MySQL) will be used.

4.2 Technical Feasibility

- Frontend: Java Swing (for GUI).

- Backend: MySQL database.

- Secure, scalable, and beginner-friendly.

4.3 Operational Feasibility

- Simple dashboard with intuitive buttons.

- Easy to learn and use for HR/Admin staff.

5 Main Phases

1. Requirement specification.

2. System design (DFD and UML diagrams).

3. Implementation in Java.

4. Testing and debugging.

5. Deployment and report preparation.

SL	Task	Required Week	Responsible Person	Phase
1	Requirement Specification and Data Collection	week 1	Project Manager and Team Members	Research and Planning
2	Finalize Requirements	week 2-3	Project Manager and Team Members	Analysis
3	System Design , Use Case Diagram, Sequence Diagram	week 4-7	System Designer and Project Manager	Design
4	System Development	Week 7-14	Developers	Implementation
5	Beta Release for Users (students , teachers test system)	Week 15-16	Project Manager and Developers	Testing
6	Feedback Analysis and Requirement Update	Week 17-18	Project Manager and Team Members	Testing
7	Final Deployment and Documentation	Week 19-20	All Team Members	Deployment and Maintenance

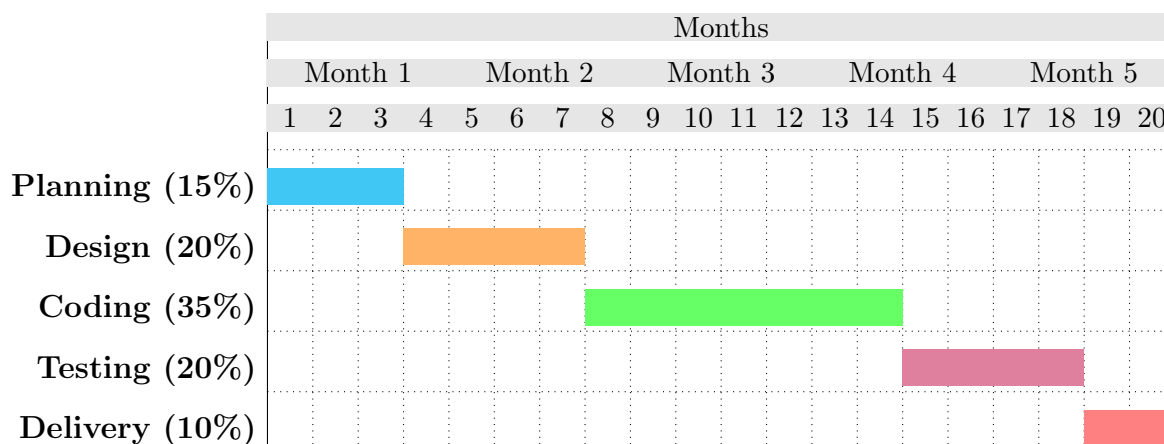Table 1: Main Phases and Work Distribution

6 Work Plan

Figure 2: Work Plan of the Project (EMS – Employee Management System)

7 Budget

SL	Category	Item	Existing (Tk)	New (Tk)
1	Human Resources	Developer	20,000	20,000
2		Designer	20,000	20,000
3		Software Engineer	35,000	35,000
4	Hardware	Laptops	100,000	80,000
5	Software	Design Tools	4,000	3,000
6		Collaboration Tools	5,000	3,000
6		Collaboration Tools	5,000	3,000
7	Training	Sessions	3,000	2,000
8	Promotion	Social Media Ads	2,000	1,000
9	**Total Cost**		**189,000**	**164,000**

Table 2: Compact Budget Overview for EMS System

8 Conclusion

The proposed system **EMS – Employee Management System** aims to provide a simple, secure, and efficient way for organizations to manage employee records. With functionalities such as login, add, search, update, and delete, the system will significantly improve administrative workflows.

References

@articlerahman2021ems, author = M. Rahman and T. Ahmed, title = Design and Implementation of a Lightweight Employee Management System Using Java and MySQL, journal = International Journal of Computer Applications, volume = 183, number = 29, pages = 15–20, year = 2021, month = dec

Contribution of Team Members

The development of the project **"EMS – Employee Management System"** was completed collaboratively by two team members. Both members actively participated in different phases of the project as follows:

NASHSHA ISLAM

- Took the responsibility of preparing the Work Plan and Budget Estimation.

- Designed the Gantt chart showing project timeline.

- Ensured that the cost estimation and scheduling of different phases were properly addressed.

RAHMATUL ISLAM

- Contributed to the Problem Analysis, Literature Review, Methodology, Feasibility Study, System Design, Coding, Testing, and Documentation.

- Worked on writing the main body of the project proposal.

- Implemented the functional details of the system (login, add, search, update, delete).

Summary

- **NASHSHA ISLAM:** Mainly focused on project planning and budgeting (50% of total work).

- **RAHMATUL ISLAM:** Mainly focused on system development, design, and documentation (50% of total work).

Thus, the project outcome was achieved successfully by combining the planning expertise of **NASHSHA ISLAM** with the development and implementation efforts of **RAHMATUL ISLAM**.