**ERP System for Organisation**

**Project Description**

The ERP system project aims to implement a comprehensive and centralized system for managing employee data and project assignments within the organization. The ERP system will streamline and automate various business processes, including employee management, project management, and data tracking.

The system will provide a secure employee login portal, where employees can access their personal profiles, attendance records, and salary slips. The admin personnel will be able to add new employees, holidays year-wise, projects and designations.

The project management module of the ERP system will allow the organization to effectively manage and track projects, including project title, description, project add and project assignments. The system will also provide real-time visibility into project progress, budget, and resources.

The ERP system will integrate with existing systems and databases to ensure a seamless transition and minimal disruption to business operations. It will also be scalable and customizable, to adapt to the changing needs of the organization.

The implementation of the ERP system will not only improve the efficiency and accuracy of business processes but also provide valuable insights and data for decision making. The project team will work closely with key stakeholders to ensure the ERP system meets the organization's specific requirements and goals.

**Project Scope:**

* The ERP system will provide a secure employee login portal for employees to access their personal profiles, attendance records, and salary slips.
* Admin personnel will have the ability to add new employees, holidays year-wise, projects, and designations.
* The project management module will allow the organization to effectively manage and track projects, including project title, description, project add and project assignments.
* The system will provide real-time visibility into project progress, budget, and resources.

**Project Objectives:**

* To streamline and automate employee management processes by providing a central system for employee data and access.
* To improve the accuracy and efficiency of tracking employee attendance and salary information.
* To provide admin personnel with the ability to easily add and manage employee data, holidays, projects, and designations.
* To improve project management by providing a centralized system for tracking project details, progress, budget and resources.
* To provide real-time visibility into project progress, budget, and resources to improve decision making.
* To integrate with existing systems and databases to ensure a seamless transition and minimal disruption to business operations.
* To improve scalability and adaptability of the system to meet the changing needs of the organization.
* To improve the overall efficiency and effectiveness of the organization by providing valuable insights and data.

**ERP System Analysis and approaches using (Unified Modelling Language)**

* A **class diagram** could be used to show the different classes and their relationships within the system. The classes could include Employee, Attendance, Salary Slip, Holiday, Project, and Designation. The relationships between these classes could include "has-a," "is-a," and "uses-a" relationships.
* A **use case diagram** could be used to show the different interactions between users and the system. The use cases could include "Employee Login," "View Personal Profile," "Track Attendance," "View Salary Slip," "Add Employee," "Add Holiday," "Add Project," "Add Designation," "Manage Projects," "View Project Progress," and "View Budget and Resources."
* An **activity diagram** could be used to show the flow of activities within the system, such as the process for an employee logging in, viewing their personal profile, and tracking their attendance.
* A **sequence diagram** could be used to show the interactions between the different classes and objects in the system, such as the process of an admin adding a new employee or project.
* **State diagrams** could be used to show the different states of the system, such as the state of an employee being logged in or logged out.
* It is also possible to use other diagrams such as **component diagrams** or **deployment diagrams** depending on the specific needs of the project.

**Tools to use to build the ERP system based on the project scope**

1. **Employee Management:** Tools such as ADP, Workday, and BambooHR can be used to manage employee data and automate processes such as employee onboarding and offboarding.
2. **Employee Login Portal:** Tools such as Okta, OneLogin, or Auth0 can be used to provide a secure login portal for employees to access their personal profiles, attendance records, and salary slips.
3. **Project Management:** Tools such as Asana, Trello, or Jira can be used to effectively manage and track projects, including project title, description, project add and project assignments.
4. **Real-Time Visibility:** Tools such as Tableau, Power BI, or Klipfolio can be used to provide real-time visibility into project progress, budget, and resources.
5. **Development Framework:** Popular frameworks such as Ruby on Rails, Laravel, Spring, Express.js, and Django can be used to develop the web application.
6. **Database management:** MySQL, PostgreSQL, MongoDB, Oracle, and SQL Server are some of the databases that can be used to store the data.
7. **Cloud Services:** Github,AWS, Azure, Google Cloud, and Heroku can be used for hosting the application.

It's important to note that the choice of tools depends on the specific needs of the project, the skills and expertise of the development team, and the budget of the project.