SWE 4633 PROJECT PROPOSAL

TOPIC:

Employee Management System | https://thompsonswe.com/EmployeeManagementSystem/

PROPOSED GROUP MEMBERS

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DESCRIPTION AND GOALS

BACKGROUND

Employees and managers have numerous items, such as attendance, payroll, schedules, etc., that need to be logged and tracked. However, using different platforms for each need can be confusing and disorganized. That is where our Employee Management System comes into play. This cloud-based platform allows employees and managers to do all their necessary tasks in one organized place. We hope this platform allows for easier and better organization of employees and managers.

CONTEXT

This web application is a group project for Kennesaw State University's Cloud Software Development (SWE 4633) course.

PROBLEM STATEMENT

Numerous things need to be tracked when working in a company; however, following those things on different platforms can make things disorganized and make it harder to manage employees.

GOALS

This project aims to create a platform that tracks necessary things work by taking in employee and manager data, storing it, and using that data to develop organized reports to be utilized by employees and managers to track things such as pay, hours worked, etc.

CLOUD PLATFORM

Backend: MongoDB Realm serverless functions.

Database: MongoDB Cloud NoSQL

Website hosted on GitHub Pages.

MAJOR DELIVERABLES AND TASKS

DELIVERABLES

1. Cloud Platform Development: Setting up MongoDB Realm serverless functions, MongoDB Cloud NoSQL, and hosting the website on GitHub Pages.
2. Database Creation & Management: Designing and implementing the database schema, ensuring proper connections and security.
3. User Interface Development: Designing and developing a user-friendly and designer-appropriate interface.
4. Feature Implementation: Coding functionalities to meet both functional and non-functional requirements.
5. Testing: Rigorous testing of the entire platform, including unit tests, integration tests, and user acceptance tests.

REQUIREMENTS

Functional Requirements

Authentication
- The system shall allow both managers and employees to create an account.
- The system shall authenticate users (managers and employees) to ensure they can successfully log into the platform.
- The system shall provide a password reset functionality for users who forget their credentials.

Managers
- The system shall allow managers to log hours worked for themselves and their employees.
- The system shall permit managers to update their attendance records as well as the attendance records of their employees.
- The system shall allow managers to create, modify, and delete employee work schedules.
- The system shall provide managers with a summary view to see the total hours worked by each employee within a specified date range.
- The system shall provide a report generation feature where managers can generate and download reports related to attendance, hours worked, and schedules.
- The system shall provide a searchable and sortable employee directory for managers, showcasing all employees.

Employees
- The system shall allow employees to log their hours worked.
- The system shall provide employees with the capability to update their attendance records.
- The system shall grant employees access to an employee directory showcasing all employees, excluding sensitive managerial information.
- The system shall display an employee's work schedule for the current and upcoming weeks.
- The system shall provide a feature where employees can view their scheduled pay, including a breakdown of hours worked, overtime, and any deductions.

Non-Functional Requirements

- The system shall ensure that all user data is stored securely and encrypted.
- The system should have a response time of no more than 2 seconds for all user interactions.
- The system shall be accessible from various devices, including desktops, tablets, and smartphones.
- The system shall provide user-friendly error messages in case of invalid inputs or failed operations.
- The system should be scalable to support increasing users over time.

TASKS

The main tasks that must be completed are creating the cloud platform, creating a database, updating the UI to be user-friendly and designer-appropriate, creating code that meets the requirement, and ensuring that the database is connected to the cloud platform so that users can complete any desired tasks, and testing all the code to ensure that the platform is working as intended.

OBJECTIVES

The software developers are to develop a cloud platform with multiple pages that can be separated based on whether the user is a manager or an employee. These pages must be user-friendly and complete one or more of the requested requirements.

FUNCTIONALITIES

- Payroll Management
- Worked Hours Log
- Attendance Tracker
- Employee Directory
- Scheduling
- Report Generators