

Overview

Company-X wants to replace its google documents based timesheet management to more robust web based time management system. This will greatly benefit the company in terms of effectively tracking the hours logged against its ongoing projects and for audit purpose. This document provides an overview of the requirement.

Terminologies

Project: Project is an organization level task which has some budget associated. Every project has a timeline i.e., a start date and an end date, budget and . For example, BisTrack Release 6.0, Planned Leave 2022, Corporate Training, Townhall, etc. Every project will have a project manager associated with it.

Task: A Task is a work that employees perform as part of a project. For example, Development, Testing etc. A project may have zero or more tasks. Each task represents certain time spent on a project.

Timesheet: It's a place where an employee logs his time against a project/task on all working days in a week. Timesheet starts on Monday of every week and ends on Sunday.

Employee: A person who is using the system to log the time against project/task. An employee can be a manager to whom one or more employees report to. An employee can also be a project manager.

Admin: A person responsible for managing project, tasks and employee like adding, editing, and deleting the records.

Workflows

Authentication: An employee logs into the application using his Gmail. If the logged in user is an admin, the system will enable him access to manage projects, tasks, and employees. Non-admins are all employees, and they should only be able to access timesheet and submit the timesheet. The system should be flexible enough to replace Gmail login with other identity providers like Okta, Azure AD or Our own identity provider in future.

Admin Workflow: When admin logs in, he will be landed into management page wherein he will have options to manage Projects, Tasks, and employees.

1. **Manage Projects option** – This page by default displays all the active projects with an option to view inactive projects. In this page, he can create new project. Once a project is created, an email/sms notification is sent to corresponding project manager containing project details. He admin can also edit the project details and he can delete a project. Delete is a soft delete operation which changes the status of the project to be inactive.
2. **Manage Tasks** – Upon selecting a project, it displays all tasks under that project. Admin can add, update, or delete (soft delete) the tasks.
3. **Manage Employees** – This page by default shows paginated view of all employees sorted by Employee ID. Admin can create a new employee, update the details of existing employees (including roles) and delete employees (soft delete)

Employee Workflow:

1. When an employee logs in, he will be landed into timesheet page with current week view. If the timesheet of current week is already submitted, it will be in readonly view. Otherwise, it will be editable. Users can enter the time details and submit. A submitted timesheet will be locked and cannot be edited and re-submitted. However, a manager or an admin user can unlock the timesheet in which case it can be edited and re-submitted. Once the employee submits timesheet, an email notification is sent to his/her manager.
2. If the logged in employee is a manager, he will have options to view timesheets submitted by his reportees (Consolidated or individual). Consolidated view displays timesheet status of all his reportees for previous week. Individual view displays selected reportees timesheets for last 10 weeks with an option to 'Unlock' any timesheet.

Reporting:

We need need below reports

1. Taskwise aggregated time logged for each project for last week. This report is only for corresponding project manager preferably Pie/Bar chart.
 - a. Task Name
 - b. Total Hours logged
2. Consolidated time reporting for all projects. It is only for admins
 - a. Project Name
 - b. Manager
 - c. Total Employees
 - d. Total hours logged

The reports need to be generated every Monday morning automatically by a job and sent as a PDF to be sent to concerned people.

Technology

Company X is a Microsoft Gold Partner and has invested heavily in .NET technologies. So, the expectation is to develop this application using .NET Backend with Angular front end.

Next Steps

Company-X wants to Develop an AI based system to analyze the vacation trends to better plan the future projects and make efficient use of employee availability.