

# Software Requirements Specification

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# **1. Introduction**

## **1.1. Purpose**

The purpose of this document is to build an employee management system to help businesses track their active projects and manage employees. The system will allow business owners to register their companies and all employees. Apart from this, they will be able to get statistics for all projects and teams and change employees' rights, roles, and compensations.

## **1.2. Intended audience and reading suggestions**

The document describes a system for business management. Therefore, it will be helpful for companies with difficulties managing their employees. This application will help organize people into teams and distribute work among employees. The intended audience is small or medium companies working on a few active projects.

## 2. Overall Description

### 2.1. Product Perspective

The employee management system offers such features:

- **Business owner can add an employee to the company** – this feature allows the business owner to register a new employee and assign one for existing projects. Moreover, this feature includes functions to set employees' rights, salary, and position.
- **Business owners can fire an employee from the company** – this feature allows a business owner to unassign an employee from all existing projects and delete one's corporate account.
- **Statistics of all projects for a business owner** – this feature allows the business owner to have flexible statistics about every team's velocity to keep track of the status of each project.
- **Create teams for the organization of the working process** – this feature allows users to organize people by creating teams, and inviting or removing other employees to those teams.
- **Manage tasks** – this feature allows users to create and configure tasks. It will help to distribute work along the team and keep track of completed work.
- **Personal statistics** – this feature allows an employee to fill in one's work statistics and to monitor the progress of completed tasks.

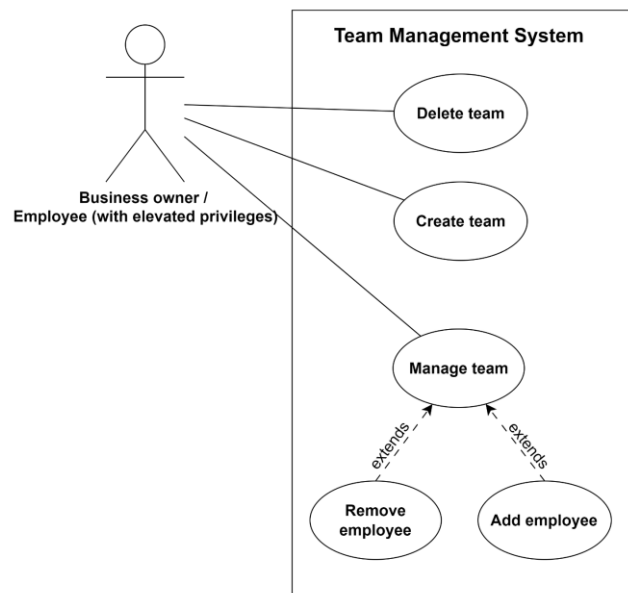
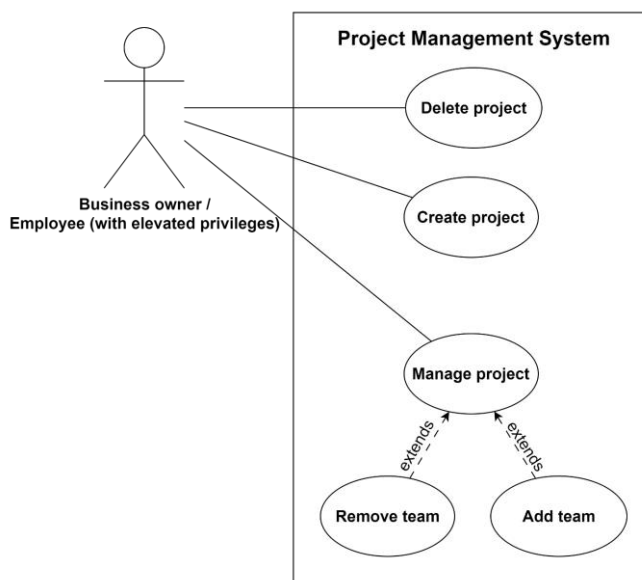
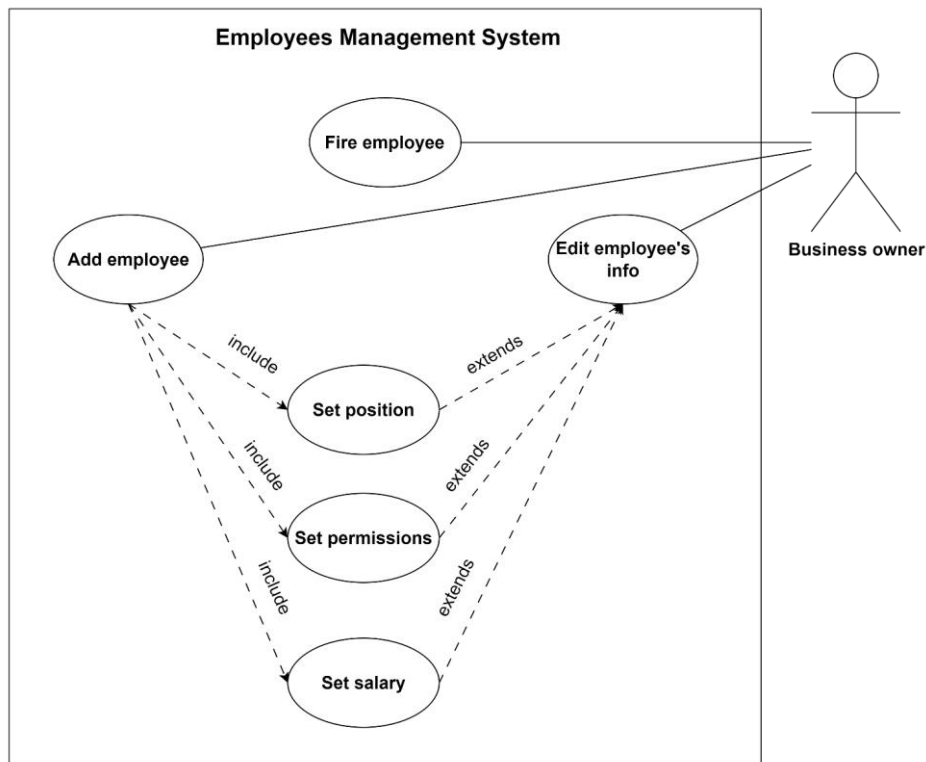
## 2.2. Product features

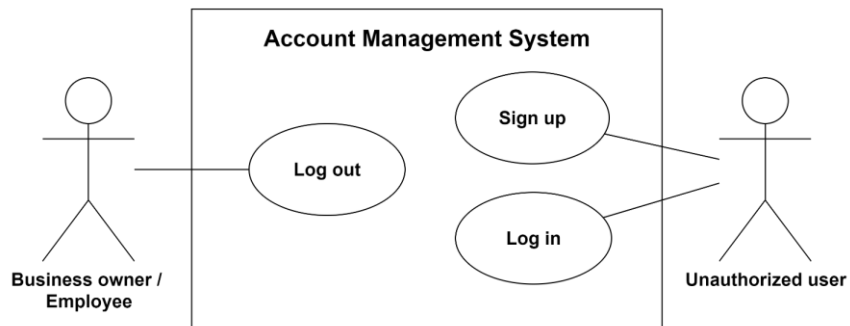
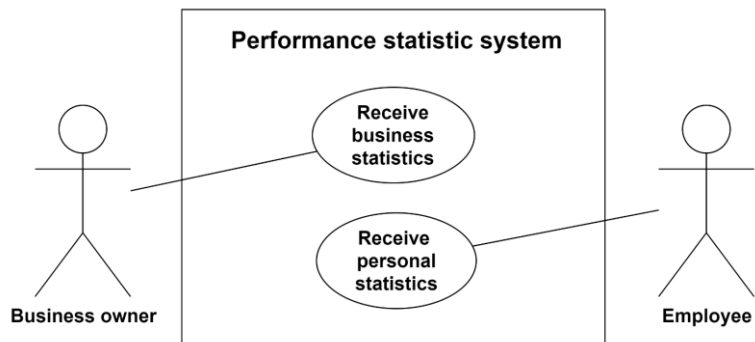
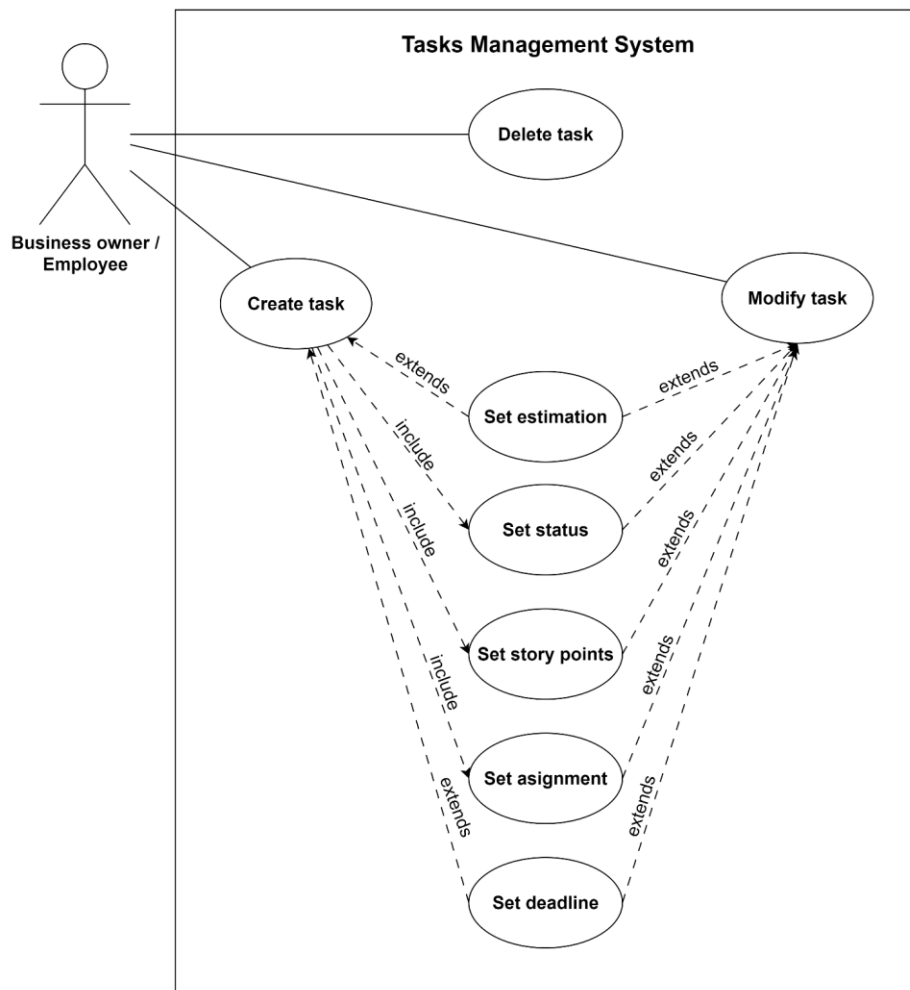
- Unregistered users can sign up in the system as business owners. During this process, the user has to choose a phone number, full name, e-mail, and password.
  - When the user chooses an existing e-mail, username, or phone number, he will be notified and forced to use another e-mail, phone number, or password.
  - User enters a new username/e-mail/phone number and in case of entering the correct sign-in data user is logged in.
- Registered users can sign in both as an owner and employees. To do this, the user has to enter their email and password.
  - In case of entering the wrong e-mail or password user will be notified about it and asked to check his credentials.
  - In case of entering the correct credentials user is logged in.
- Owner can create projects for his business.
  - To do this, the owner chooses a name and description for his project.
- Owner can register employees in his business.
  - To do this owner has to know the additional e-mail and full name of an employee.
  - Owner enters the e-mail and the full name of the user, then the system automatically sends an auto-generated business account on this e-mail.
- Owner can see the velocity of the teams among the projects.
  - This information is located on the “Home” tab
  - By clicking on the “Team” dropdown button owner can change the team
  - By clicking on the “Project” button owner can change the current observable project.
- Owner can see his projects, get complete information about a particular project and get information about teams and team members on this project.
  - For this owner should click on one of the buttons in the list of all projects located on the “Home” tab.
- Employee can manage his tasks.
  - To do this, the employee can click on one of the buttons on the right side of his screen.
  - In case of clicking on the “Create new task” button, the user has to enter task info, user will be notified and forced to change fields in case they are incorrect
  - User can start the task by clicking on the “Start task” button, that will change task status to “In progress”

- Both owner and Employee can see information about the team.
  - For this both of them have to choose the “Teams” option on the specific project page.
- Owner and employees with permissions can manage employees
  - To do this, they should choose a specific user in the list and click on the triple-dot button, then all the fields of the specific user in the list will become updatable.

### 2.3. User class and characteristics

User class and characteristics can be demonstrated with use case UML diagrams:





Use case description:

**Roles:**

Role	Description
Business Owner	Log out, register/delete an employee, manage tasks, manage teams, view business statistics
Employee with elevated privileges	Log out, manage tasks, manage teams, view personal statistics
Employee	Log out, manage tasks, view personal statistics
Unauthorized user	Sign up or log in

Employees Management System:

№	Role	Use case	Description
1	Business owner	Add employee	Creates a new account for an employee in the owner's company. Includes creation of new credentials.
2		Fire employee	Deletes employee's account
3		Edit employee's info	Changes employee's position, rights, or salary.

Team Management System:

№	Role	Use case	Description
1	Business owner/ Employee	Create a team	Create a new team for employees in the company
2		Delete a team	Delete an existing team
		Manage a team	An ability to add/remove employees to the team
3		Add employee	Add an employee to the existing team
4		Remove employee	Remove an employee from the team

Performance Statistics System:

№	Role	Use case	Description
1	Business owner	Receive business statistics	Provides total information about business statistics for each month. Statistics is based on story points
2	Employee	Receive personal statistics	Provides personal statistics based on the number of completed tasks



### Account Management System:

№	Role	Use case	Description
1	Business owner/ Employee	Log out	Exit from an account
2	Unauthorized user	Log in	User can access the personal account by providing credentials for the account
3		Sign up	User can create a new account only as a business owner

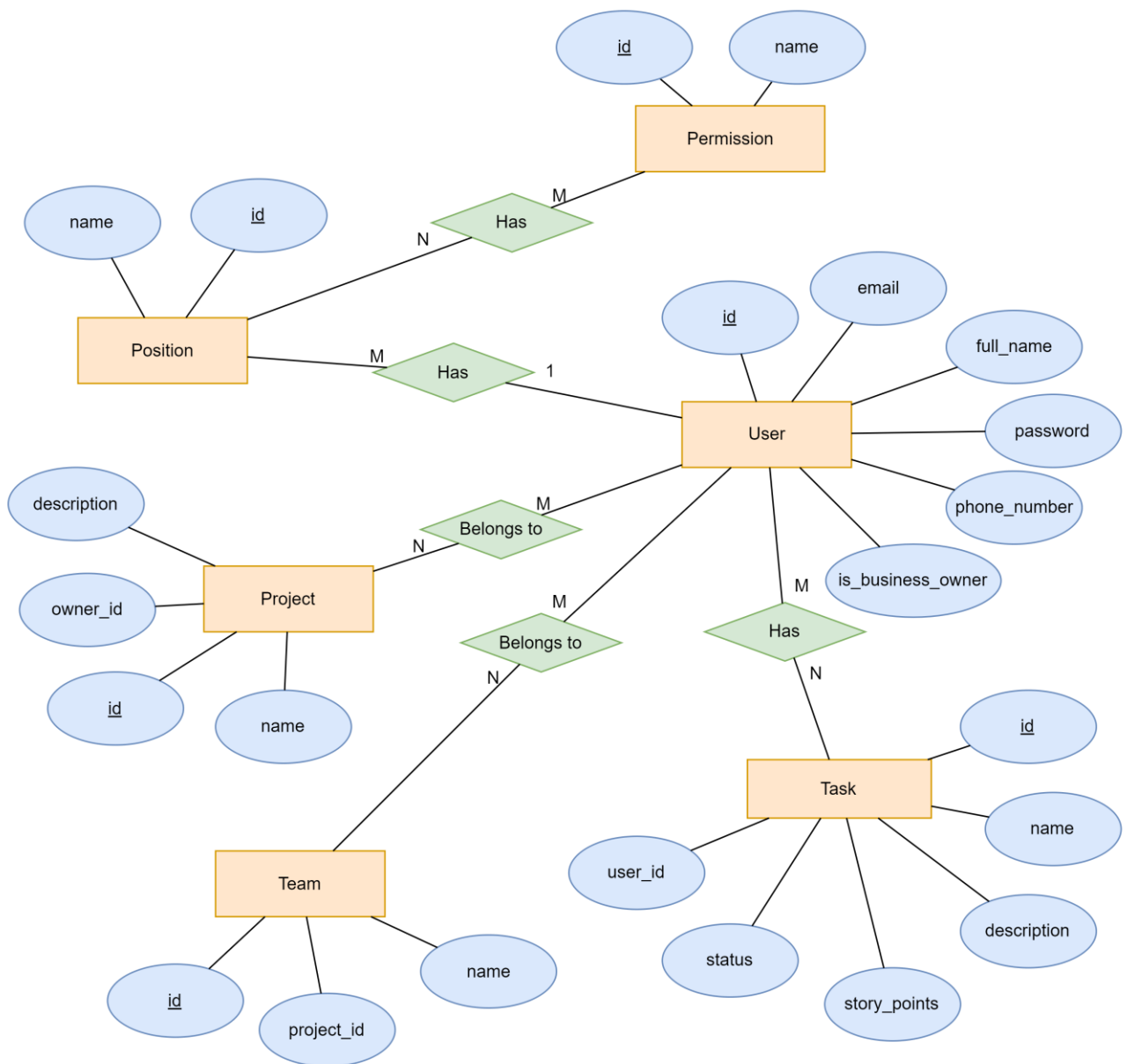
### Tasks Management System:

№	Role	Use case	Description
1	Business owner/ Employee	Create task	Creates a new task. Add description, estimation, and deadline. Set an assignee to the task
2		Delete task	Deletes the existing task
3		Modify task	Provide an ability to change name, description, estimation, deadline or assignees for the task

### Project Management System:

№	Role	Use case	Description
1	Business owner	Create project	Creates a new project for the business. Add description and teams.
2		Delete project	Deletes the existing task
3		Manage project	An ability to add/remove teams from the project.
4		Add team	Add existing team to the project
5		Remove team	Remove existing team from the project

## 2.4. Entity Relationship Diagram



## **2.5. Operating environment**

Operating environment for the employee management system is listed below:

- Database: PostgreSQL
- IDE: Microsoft Visual Studio 2019
- UI: Figma
- Version control: Git, Github
- Project management: Github Board

## **2.6. Assumptions and dependencies**

The main assumption before this project starts is the complexity of managing large groups of people for businesses. It is hard to organize people into teams, establish their communication and keep track of real progress on different projects. Therefore, this software could be helpful for small businesses, as for large companies.

The software will be self-contained without any dependence on third-party vendors.

## **3. System Features**

### **3.1. Description and priority**

“Employeeest” - is a multipurpose versatile employee managing system that makes it easier to manage your business.

It allows business owners to set up their “virtual” businesses, fire/promote employees, manage tasks, and view statistics.

For employees, it provides an all-in-one service for tracking their working time, viewing statistics, managing tasks.

Therefore, this software could be popular among any business type from small companies to large ones.

### **3.2. Stimulus/response sequences**

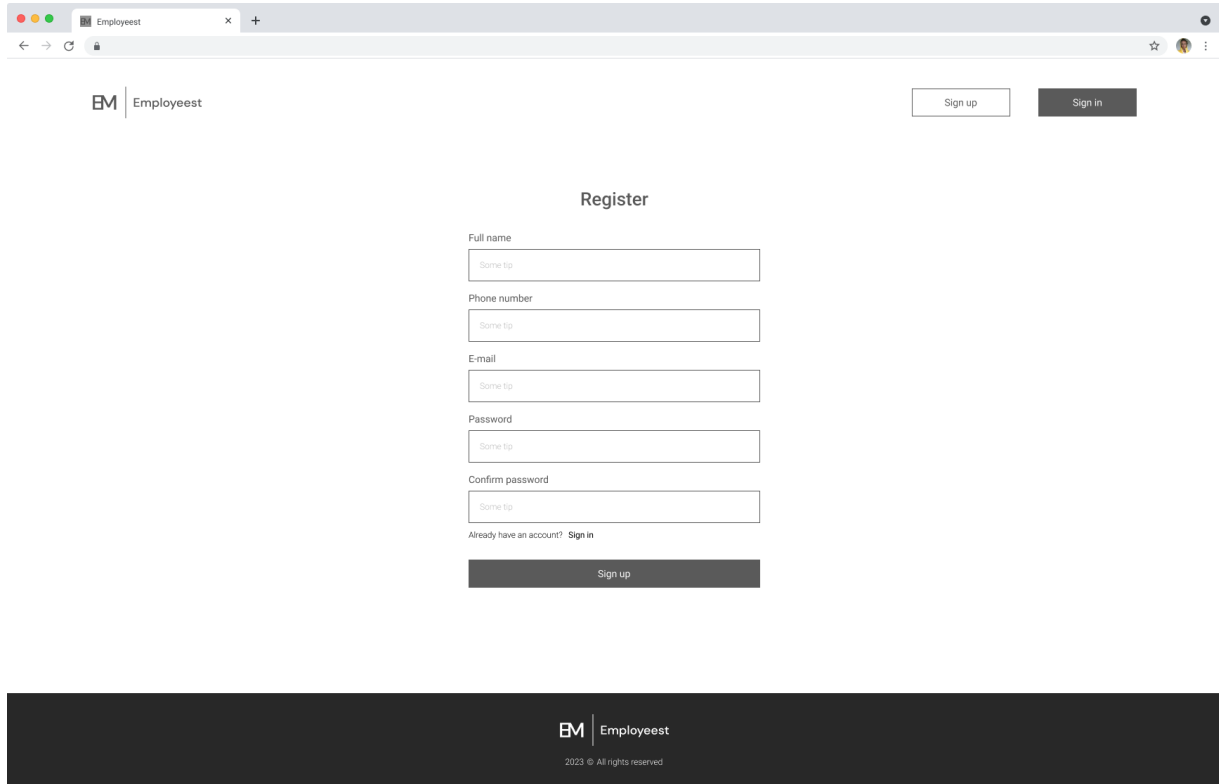
User creates a new business account and fills it with relevant information. The user takes to his account via email and password. The business owner can add, remove and set employee information.

Employees can be assigned to projects and teams. The business owner can get statistics about all company projects and view teams’ velocity. There is a function to create new projects and assign workers to them.

## 4. External Interface Requirements

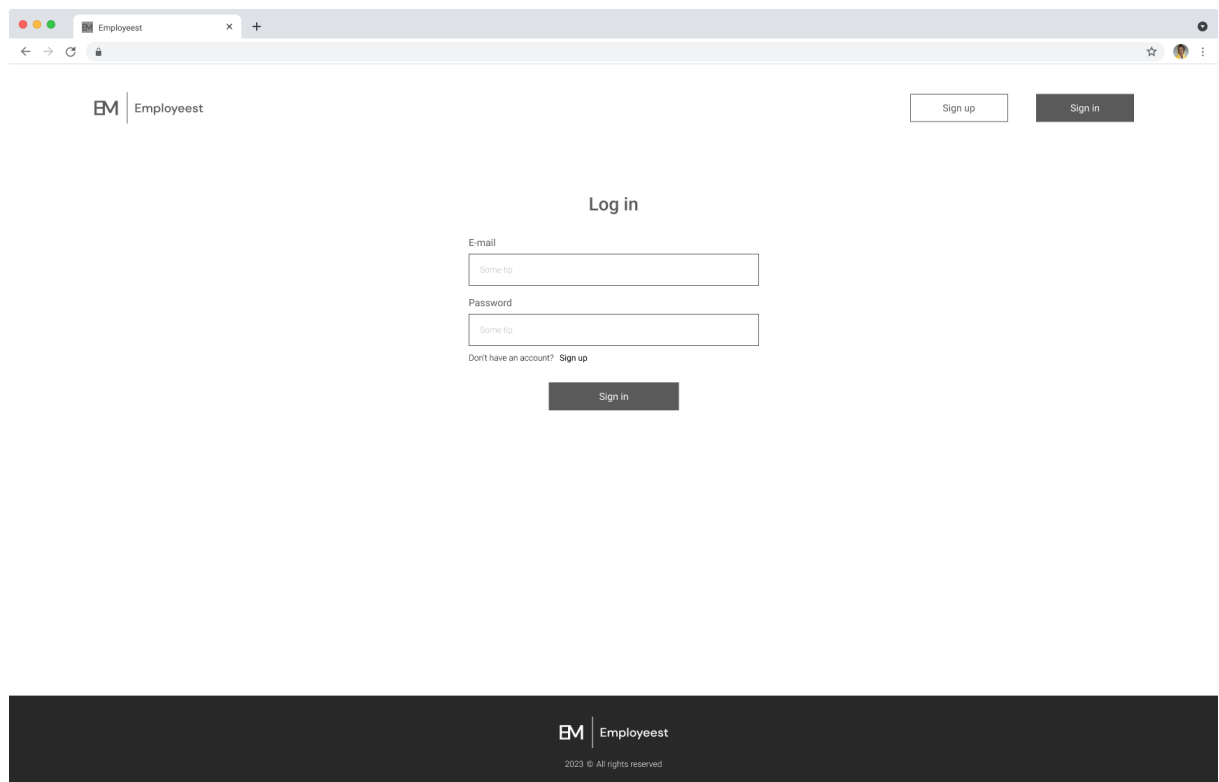
### 4.1. User Interfaces

#### Registration form



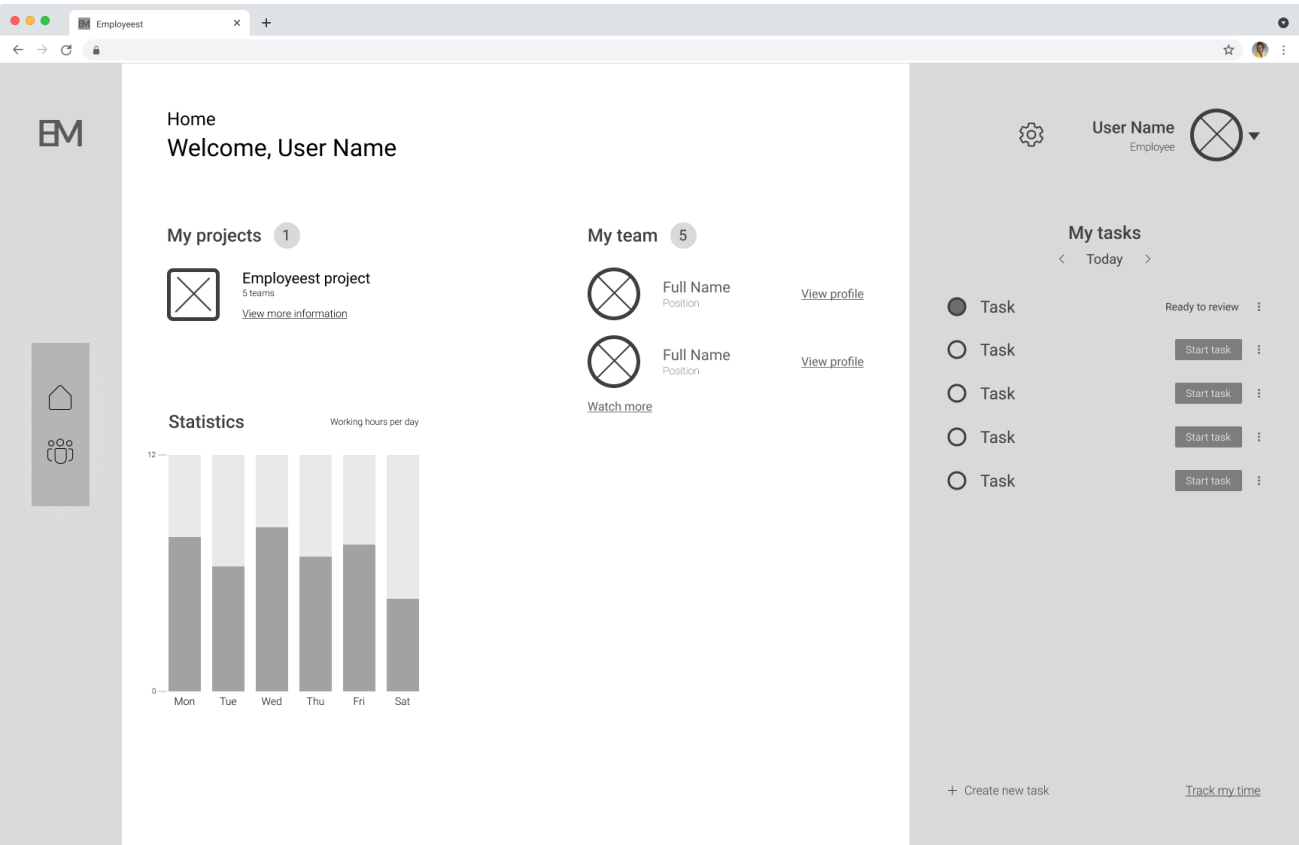
The screenshot shows a web browser window with the URL "Employeeest". The page features a header with the "BM Employeeest" logo on the left and "Sign up" and "Sign in" buttons on the right. The main content area is titled "Register" and contains a form with the following fields: "Full name", "Phone number", "E-mail", "Password", and "Confirm password". Each field has a placeholder text "Some tip". Below the form, there is a link "Already have an account? Sign in" and a large "Sign up" button. The footer is a dark bar with the "BM Employeeest" logo and the text "2023 © All rights reserved".

#### Log in form

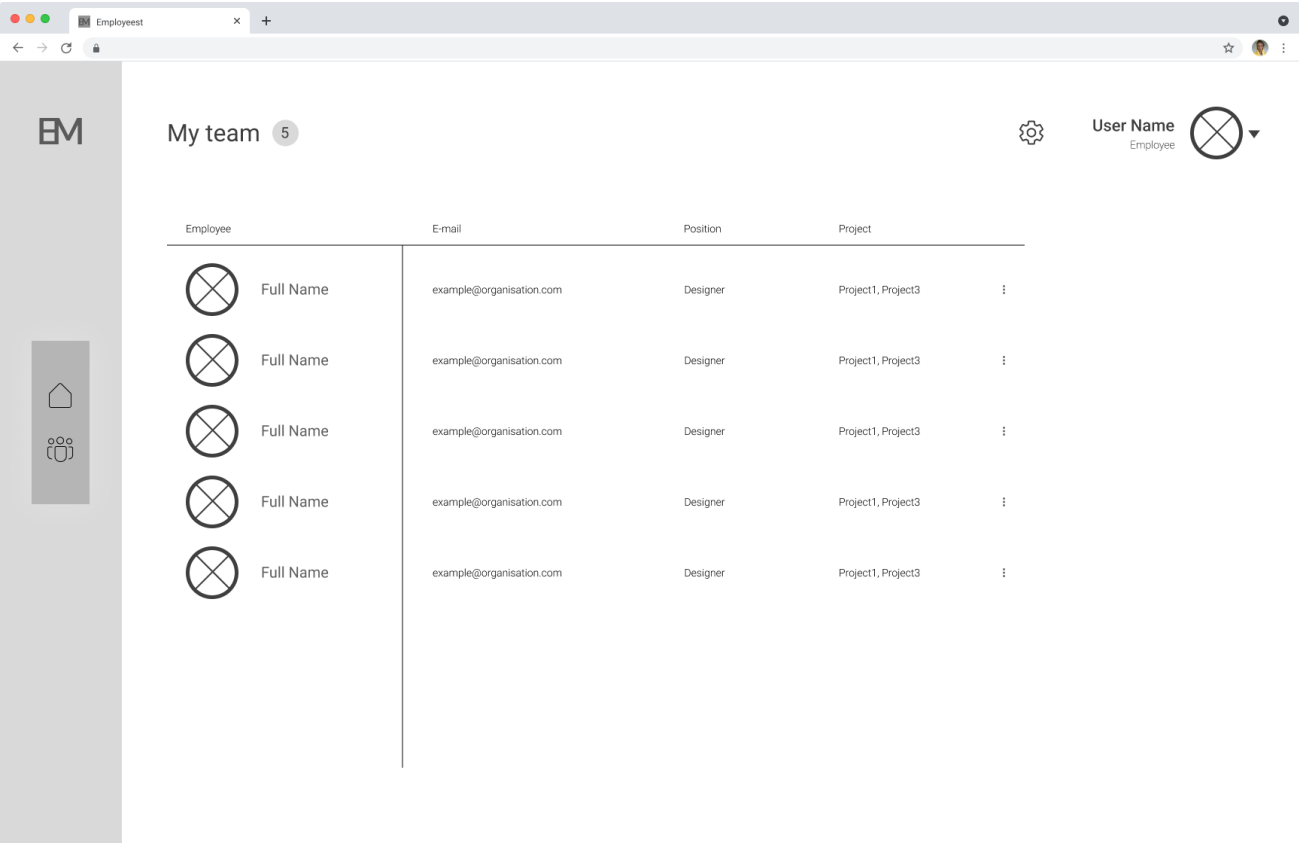


The screenshot shows a web browser window with the URL "Employeeest". The page features a header with the "BM Employeeest" logo on the left and "Sign up" and "Sign in" buttons on the right. The main content area is titled "Log in" and contains a form with the following fields: "E-mail" and "Password". Each field has a placeholder text "Some tip". Below the form, there is a link "Don't have an account? Sign up" and a "Sign in" button. The footer is a dark bar with the "BM Employeeest" logo and the text "2023 © All rights reserved".

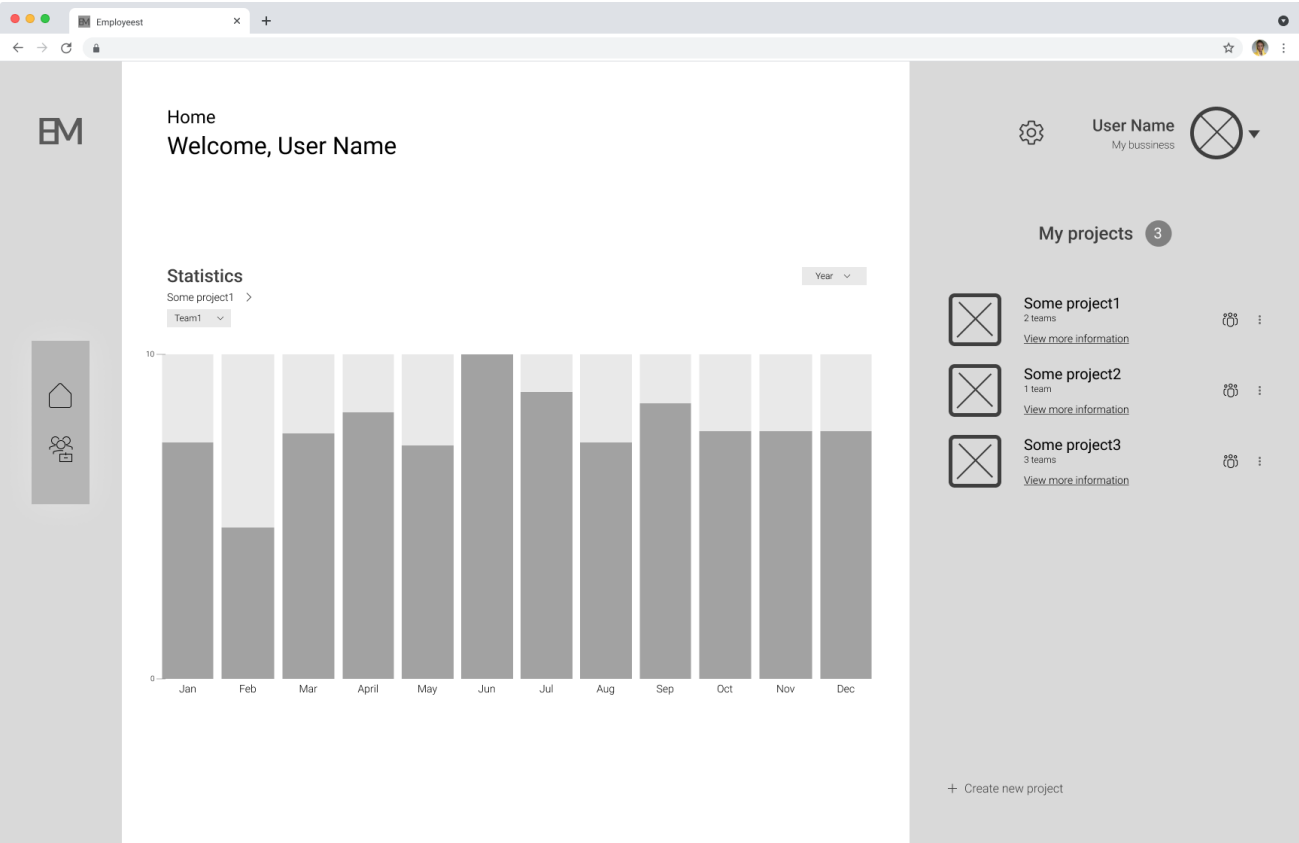
# Employee's dashboard



# Employee's team



# Owner's dashboard



# Owner's workers

EM

Employees 61

Add +

⚙️

User Name

My business

⌵

Employee	E-mail	Project	Team	Position	Salary	
<div>⊗</div> User Name	example@organisation.com	Some project1	Team1	Designer	1000 \$	:
<div>⊗</div> User Name	example@organisation.com	Some project1	Team1	Designer	1000 \$	:
<div>⊗</div> User Name	example@organisation.com	Some project1	Team1	Designer	1000 \$	:
<div>⊗</div> User Name	example@organisation.com	Some project1	Team1	Designer	1000 \$	:
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<div>⊗</div> User Name	example@organisation.com	Some project1	Team1	Designer	1000 \$	:
<div>⊗</div> User Name	example@organisation.com	Some project1	Team1	Designer	1000 \$	:
<div>⊗</div> User Name	example@organisation.com	Some project1	Team1	Designer	1000 \$	:

< 1 2 ... 5 >

## 4.2. Hardware Interfaces

Computer with Windows OS

## 4.3. Software Interfaces

Software used	Description
Operating system	Windows, it is used widely and is user-friendly
Framework	.NET Core
DB	PostgreSQL, it is used widely used, free and open-source

## 5. Nonfunctional Requirements

### 5.1. Performance requirements

This application is an employee management system

### 5.2. Security requirement

Private companies potentially can use this application to manage their stuff. This leads to the idea that the security factor is crucial because all employees' data should not be accessed by third parties. In addition, all company activity, achievements, and results should be kept private.

### 5.3. Software quality attributes

*Availability:* The employee management system should be available all the time. Otherwise, it can cause disorganization among teams and stop work for an indefinite period, which can lead companies to lose their reputation.

*Maintainability:* Business owners should maintain workers, their salaries, position, rights, and private information. However, no one could be able to access information on all employees' data.

*Usability:* The application should satisfy customers' needs to be competitive in the market.