Dharish

Abstract

This document is created for Task Management System to list all the product features and functionalities to be available for the users

**Product requirement document**

Task Management System

**Project Title:** Task Management System

**1. Introduction**

The Task Management System (TMS) software solution focused at improving task organization, delegation, and tracking within teams or organizations. It provides a centralized platform for creating, assigning, prioritizing, and monitoring tasks, thereby enhancing productivity, collaboration, and transparency between the Project stakeholders

**2. Objectives**

* To streamline task management processes
* To improve team collaboration and communication
* To enhance task prioritization and allocation
* To Provide real-time task tracking and progress monitoring

**3. Features**

* **User Authentication and Authorization**: Secure login and role-based access control to ensure data confidentiality and integrity.
* **Components**: TMS should have components Projects and Tasks for users to perform below actions
  + **Project Creation :** Users can create new projects, duration and Company details
  + **Task Creation**: Users can create new tasks, Status and Assigned To individuals
  + **CRUD operations** for Projects and Tasks
  + **Task Assignment**: Assign tasks to individual team members or groups, with the ability to set deadlines and priorities.
  + **Task Prioritization**: Prioritize tasks based on urgency, importance, or other customizable criteria to ensure efficient resource allocation.
  + **Task Tracking**: Real-time tracking of task status, progress, and completion, allowing stakeholders to stay updated on project timelines.

**4. User Roles**

* **Admin**: Manages users, roles, and system settings. Has access to all features and functionalities.
* **Manager**: Creates, assigns, and monitors tasks within their team(s).
* **Team Member**: Receives assigned tasks, updates task status, and collaborates with team members.

**5. Technology Stack**

* **Frontend**: HTML, CSS, JavaScript (React.js)
* **Backend**: Node.js
* **Database**: SQL Server

**6. User Interface Design**

* Clean and intuitive user interface (UI) design with easy navigation and accessibility.
* Responsive design to ensure compatibility across various devices and screen sizes.

**7. User Story & User Journey**

**7.1 User Story: Task Master Creation**

**Title: As a user, I want to create tasks, manage their status, and assign them to individuals, so that I can efficiently track and manage my projects.**

**Description:**

Task Management System is a project management tool designed to help users organize and oversee their projects. Users need the ability to create tasks, update their status, and assign them to specific individuals to ensure clarity and accountability within their team.

**Acceptance Criteria:**

1. **Task Creation:**
   * Users can create new tasks with the following details:
     + Task Title (required)
     + Task Description (optional)
     + Due Date (optional)
   * Tasks should be saved and displayed in a task list.
2. **Task Status Management:**
   * Each task should have a status that can be updated. Possible statuses include:
     + Not Started
     + In Progress
     + Done
   * Users should be able to change the status of a task at any time.
3. **Assigned to Individuals Creation:**
   * Users can create Team members for Tasks from a list of team members.
4. **Task List Display:**
   * The task list should display all tasks with the following information:
     + Task Title
     + Assigned To
     + Status
     + Due Date (if provided)
   * Tasks should be filterable by status and assignee.
   * Tasks should be sortable by due date and creation date.
5. **Notifications:**
   * Users should receive notifications for the following events:
     + When a task is assigned to them.
     + When the status of a task they are assigned to changes.

**7.1.1 User Journey:**

1. **Creating a Task:**
   * The user navigates to the Task Masters page.
   * The user selects Tasks menu from Project component
   * The user fills the Task name ,description and due date
   * The user clicks on the "Create Task" button.
2. **Creating Status:**
   * The user navigates to the Task Masters page.
   * The user selects Status menu from Project component
   * The user fills the Task status
   * The user clicks on the "Create" button.
3. **Creating Assigned To Individuals:**
   * The user navigates to the Task Masters page.
   * The user selects Tasks menu from Project component
   * The user fills the Assigned To individual members
   * The user clicks on the "Create" button
4. **Updating Tasks :**
   * The user views the task name, status and Assigned To.
   * The task status is updated, and a notification is sent to the assigned individual.
5. **View Task:**
   * The user selects view task from the Task grid and view the Task details
6. **Delete Tasks**
   * The user selects the Tasks and click on delete to delete the Task from

**Technical Considerations:**

* Ensure that the system supports real-time updates to task status and assignments.
* Implement user authentication to ensure tasks and assignments are secure.
* Design the user interface to be intuitive and easy to navigate.

**Non-Functional Requirements:**

* The system should handle a large number of tasks efficiently.
* Notifications should be timely and reliable.
* The interface should be responsive and accessible on different devices.

**7.2 User Story: Project Master Creation**

**Title: As a user, I want to create projects with specific details, so that I can organize and track the progress of various company initiatives.**

**Description:**

Project Masters used to help users organize and manage their company's projects. Users need the ability to create new projects, specifying essential details such as the project name, duration, and associated company. This feature will ensure clear identification and tracking of multiple projects within the organization.

**Acceptance Criteria:**

1. **Project Creation:**
   * Users can create Projects with the following details:
     + Project Name (required)
     + Project Description (optional)
   * Projects should be saved and displayed in a project list.
2. **Project Duration:**
   * Users can create Project duration with the following details:
     + Duration (required)
   * Projects duration should be saved
3. **Company Creation**
   * Users can create Company with the following details:
     + Company Name (required)
     + Contact (optional)
     + Address(required)
   * Projects should be saved and displayed in a project list.
4. **Project Details Management:**
   * Users can view and edit project details at any time.
   * Any changes to project details should be saved and reflected in the project list.
5. **Project List Display:**
   * The project list should display all projects with the following information:
     + Project Name
     + Associated Company
     + Duration
6. **Notifications:**
   * Users should receive notifications for the following events:
     + When a new project is created.
     + When a project's details are updated.

**7.2.1 User Journey:**

1. **Creating a Project:**
   * The user navigates to the Project Masters application.
   * The user clicks on the "Create Project" button.
   * The user fills in the project details, including the project name, duration, and associated company.
   * The user clicks "Create Project," and the project is added to the project list.
2. **Editing Project Details:**
   * The user views the project list and selects a project.
   * The user clicks on the "Edit" button.
   * The user updates the project details and saves the changes.
   * The updated project details are reflected in the project list, and a notification is sent.
3. **View Project Details**
   * The user selects the project to view list and selects a project.
   * The user can view the project details selected
4. **Delete Projects**
   * The user selects the project to be selected from the Project Grid
   * The user can delete the project details

**Technical Considerations:**

* Ensure the system supports real-time updates to project details.
* Implement user authentication to secure project information.
* Design the user interface to be intuitive and easy to navigate.
* Calculate the project duration automatically based on the start and end dates.

**Non-Functional Requirements:**

* The system should handle a large number of projects efficiently.
* Notifications should be timely and reliable.
* The interface should be responsive and accessible on different devices.

**8. Security Considerations**

* Data encryption in transit and at rest to protect sensitive information.
* Regular security audits and updates to mitigate potential vulnerabilities.

**9. Deployment**

* Cloud deployment (e.g., AWS, Azure) for scalability, reliability, and accessibility.
* Continuous integration and deployment (CI/CD) pipeline for automated testing and deployment.

**10. Conclusion**

The Task Management System aims to revolutionize task management by providing a comprehensive solution for teams to efficiently create, assign, track, and analyze tasks. By enhancing collaboration, productivity, and transparency, TMS empowers organizations to achieve their goals effectively and adapt to dynamic business environments.