

Project Management System - Group 19

A web-based project management tool for small businesses that allows for task assignment, progress tracking, and team communication. This tool can help boost productivity and ease operation of small businesses. This tool helps to streamline project management, increase efficiency, and improve communication and collaboration among team members. By having all project-related information in one place, small business owners can make better decisions and stay on top of their projects.

Needs

- **Ease of Team Management & Task Assignment** : Teams can be managed much more effectively with project management features to assign tasks and review work.
- **Progress Tracking** : Real-time progress tracking of assigned tasks can improve workflow and help calculate time cost. This can improve time management and deadline estimation.
- **Fair Performance Tracking** : Individual performance tracking based on assigned tasks and system generated analytics can help create a transparent performance reporting process.
- **Better Collaboration & Easy Team Communication** : Teams can communicate efficiently and collaborate productively with easy team communication. Remote work becomes simpler and easier with coordination.
- **Continuous Budget Estimation & Analytics** : Task based budget estimation and visual analysis can optimize project costing.
- **Simplified Resource Allocation & Scheduling** : Shared resources can be allocated dynamically and clashes can be avoided.
- **Improved Decision Making** : Employee performance analysis, budget analysis and project tracking can help make accurate decisions for the benefit of the business.
- **Increased Productivity & Efficiency** : Proper delegation of tasks in accordance with analytical tools will improve efficiency and productivity of employees.

Features

- **Project Management :**
 - Administration will have the ability to create projects and assign managers/employees to it.
 - Project Managers will have the ability to create and manage tasks, including priority based task assignment, setting due dates, and tracking progress of the project.
 - Work review and approval, employee performance rating & team management feature for the project incharge.
- **Employee Performance Analytics :** Analytics based on the performance of an employee using work speed as well as quality of work.
- **Budget Analytics :** Graphically analyzed budget & costing reports for review and budget planning.
- **Real-time Chat :** An integrated chat application within the system for team communication and efficient collaboration.
- **Project File Sharing :** Project repository where all relevant documents and project data can be uploaded and shared with the team with proper access permissions.
- **Resource Booking & Allocation :** Dynamic resource booking system for employees which will be monitored by the resource manager.

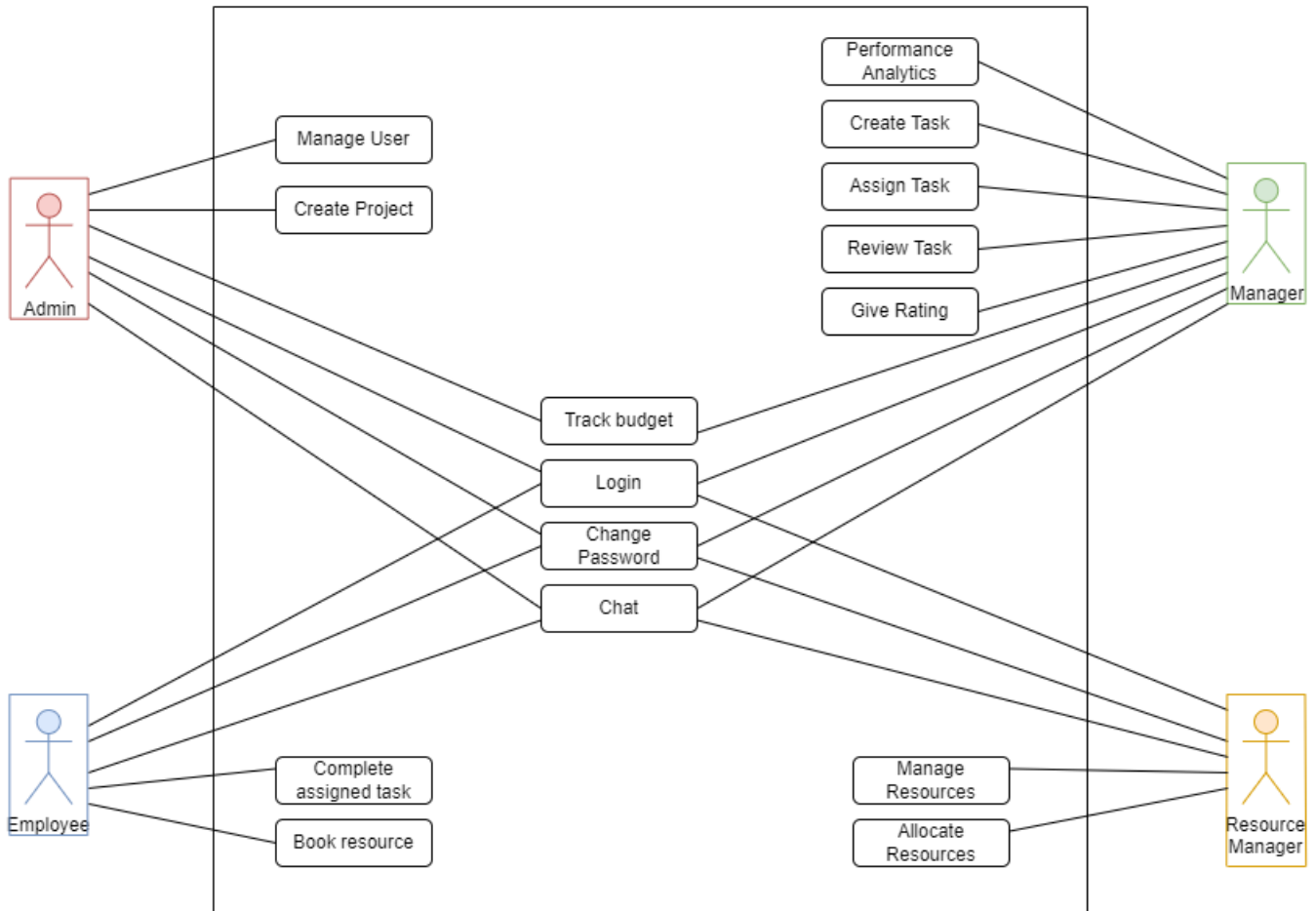
Functional Requirements

- Project management and task assignment tools
- Progress monitoring
- Performance tracking & analytics
- Team chat
- Resource list & management functionality
- Time monitoring
- File sharing
- Integration with other tools

Non-functional Requirements

- Intuitive UI/UX
- Scalability: The tool should be scalable to accommodate the needs of businesses.
- Security: To safeguard sensitive information and prevent unauthorized access, the tool should have strong security measures.
- Performance: The tool should respond quickly and handle concurrent requests.
- Reliability: The tool should be available and operational at all times, with minimal downtime.
- Compatibility: The utility should work with a variety of browsers and devices.
- Accessibility: People with impairments/disabilities should be able to use the tool.
- Localization: The tool should support multiple languages and geographies.
- Maintenance: To maintain smooth operation, the tool should be maintained timely with regular updates.
- Customization: The tool should be adaptable to the specific needs of individual enterprises

Use Case Diagram



Process Model

A web-based project management tool for small enterprises that enables task assignment, progress monitoring, and team communication is best suited to the **agile** software development process paradigm. The justification for this choice is as follows:

Flexibility: Agile allows for flexible and iterative development, which is crucial in a corporate context where requirements and priorities might change on a regular basis and are subject to rapid change.

Early Delivery: Agile makes it possible to deliver functioning software right immediately, which is useful for a project management tool because users can start using it right away and provide feedback to the development team to assist ensure the tool is functional and meets their expectations.

Prioritization: Agile enables prioritizing features and updates, which is essential for a project management tool when the significance of tasks and features is expected to change often.
Short feedback loops: Agile allows the development team to respond to customer feedback rapidly and make modifications and improvements.

In conclusion, the Agile software development process mode is the best suited for a web-based project management tool for small businesses that allows for task assignment, progress tracking, and team communication.