

Task Management Portal

A Course Project Report

By

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Bonafide Certificate

Certified that Mini project report titled "Task Management Portal "is the bonafide work of Govind Kalawate(RA2111033010048),SaiKiran(RA2111033010047),PrathamHandique (RA2111033010029)who carried out the minor project under my supervision. Certified further, that to the best of my knowledge, the work reported herein does not form any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

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Index

S.No	Particulars	Page no
1	Introduction	1
1.a	Problem Statement	1
1.b	Domain Technology	2
2	Product Vision	4
3	Product Backlog	5
4	Architecture Document	9
5	Daily Estimate of Users	15
6	Capacity Planning	21
7	Functional Test Case	23
8	Defect Report	29
9	Daily Scrum	31
10	Implementation	33
11	Screenshots/Outputs	35
12	Conclusion	39
13	References	40

Introduction

Welcome to our Task Management Portal, your comprehensive solution for efficient project management. Our portal offers a range of essential documents and templates tailored to streamline your project lifecycle. The architecture document provides a detailed blueprint of system structure, while capacity planning ensures optimized resource allocation. Daily Scrum templates facilitate seamless team communication, while defect and estimation reports ensure quality and accurate project planning. With functional documentation, test case reports, product backlog, and vision, our portal equips you with the tools needed to drive success and innovation in your projects. Welcome to a new era of streamlined and effective task management.

Problem Statement

Inefficient task management practices within our organization hinder productivity, collaboration, and project success. Teams struggle with disparate tools, lack of centralized documentation, and inadequate communication channels, leading to missed deadlines, resource inefficiencies, and quality issues. Existing task management systems lack scalability, integration capabilities, and user-friendly interfaces, exacerbating the problem. There's a critical need for a comprehensive Task Management Portal that centralizes documentation, streamlines communication, facilitates efficient resource allocation, and provides robust project tracking functionalities. This portal must address the pain points of disparate tools, fragmented communication, and inadequate documentation to empower teams to collaborate effectively, meet deadlines, and deliver high-quality outcomes.

Domain Technology

Modern web development technologies have empowered developers to create dynamic, interactive, and engaging websites that cater to the evolving needs of users. By leveraging tools such as XAMPP, PHP, PHPMyAdmin, MySQL, HTML, CSS, and JavaScript, developers can build robust web applications that offer seamless navigation, intuitive user interfaces, and efficient data management.

Efficient Backend Development with XAMPP and PHP:

XAMPP provides a comprehensive solution for local web server development, facilitating seamless testing and deployment of PHP-based applications. PHP, a server-side scripting language, enables developers to build dynamic web pages, interact with databases, and handle form submissions efficiently. Combined with XAMPP, PHPMyAdmin, and MySQL, developers can create scalable and secure backend systems that manage data effectively and ensure optimal performance.

Responsive Frontend Design with HTML, CSS, and JavaScript:

HTML, CSS, and JavaScript form the foundation of frontend web development, allowing developers to create visually appealing and responsive user interfaces. HTML provides the structure and content of web pages, while CSS enhances their presentation and layout. JavaScript adds interactivity and dynamic functionality, enabling features such as form validation, animations, and client-side data manipulation. Together, these technologies empower developers to craft immersive and intuitive user experiences across various devices and screen sizes.

Database Integration and Management:

The integration of PHPMyAdmin and MySQL into web development workflows enables efficient database management and data-driven applications. Developers can design relational databases, create tables, and execute queries using PHPMyAdmin's user-friendly interface. MySQL, a powerful relational database management system, ensures data integrity, scalability, and security, facilitating seamless interaction between the frontend and backend components of web applications.

Optimized Performance and Security:

By adhering to best practices in web development, such as code optimization, caching mechanisms, and secure coding techniques, developers can enhance website performance and mitigate security risks. Implementing measures such as HTTPS encryption, input validation, and user authentication safeguards sensitive data and protects against common vulnerabilities, ensuring a safe and secure browsing experience for users.

Conclusion:

With the comprehensive toolkit of modern web development technologies at their disposal, developers can create dynamic, secure, and high-performance websites that meet the demands of today's digital landscape. By harnessing the power of XAMPP, PHP, PHPMyAdmin, MySQL, HTML, CSS, and JavaScript, developers can build innovative web applications that deliver seamless user experiences and drive business success. As web development continues to evolve, embracing these technologies and adopting best practices will be essential for staying ahead in the competitive online marketplace.

Product Vision

1. Audience:

Primary Audience: Lecturers and students seeking a streamlined platform for assignment submission and grading.

Secondary Audience: Project managers appointed by lecturers to oversee group projects.

2. Needs:

Primary Needs:

Efficient assignment submission and grading process for both individual and group projects.

Clear assignment tracking and deadline reminders for students.

Comprehensive progress monitoring and grading tools for lecturers.

Secondary Needs:

Integration with project management tools for enhanced collaboration on group projects. Customizable reporting features for lecturers to assess student performance.

3. Products:

Core Product:

A task management portal designed to facilitate assignment submission, grading, and progress tracking.

Additional Features:

Assignment categorization based on individual and group tasks.

Appointment of project managers to oversee group projects and facilitate communication. Customizable grading criteria and rubrics for fair assessment.

4. Values:

Core Values:

Efficiency: Streamlining the assignment management process for both lecturers and students.

Transparency: Providing clear visibility into assignment deadlines, progress, and grades.

Differentiators:

Collaboration: Facilitating effective communication and teamwork among students through appointed project managers.

Product Backlog: Task Management Portal

ID	Priority	As a	I want to	So that I can	Acceptance Criteria	Status	Functional Requirements	Non-Functional Requirements
1	Must	Project Manager	Create a team	Assign and divide sub-tasks among them	Must be assigned project manager by the lecturer. Should be logged in and registered at the portal.	In Progress	Assign work to team members and set deadlines. Have to receive task from lecturer.	Ensure team members are clear on their tasks and deadlines.
2	Must	Project Manager	Perform role management	For efficient completion of tasks	Should be logged in and registered at the portal. Have to be assigned project manager by the Lecturer.	Ready for Dev	Have to assign work to the members first and make sure they are making progress.	Ensure team members understand their roles and responsibilities.
3	Should	Project Manager	Send request to Lecturer	Get feedback on individual and group progress	Should be logged in and registered at the portal. Have to assign work to team members.	Backlog	Check the progress. Provide feedback on the team's performance.	Ensure effective communication between team and lecturer.
4	Must	Project Manager	See the progress in percentage	Urge my teammates to complete their assigned tasks	Have to assign work to team members and set deadlines.	Completed	Assign work to all team members. Monitor progress and provide support as needed.	Ensure timely completion of tasks.
5	Must	Project Manager	Set deadlines	Make sure everyone has completed work on time	Have to receive task from lecturer. Have to assign work to team mates.	Completed	Set clear deadlines for each task. Communicate deadlines to team members.	Ensure adherence to project timeline.
6	Must	Project Manager	Generate individual and group assessment	Make sure everyone has given their proper input	Assign work to all team members. Check the progress.	Completed	Ensure all team members contribute to assessments. Review and compile individual and group assessments.	Ensure fairness and accuracy in assessment process.

ID	Priority	As a	I want to	So that I can	Acceptance Criteria	Status	Functional Requirements	Non-Functional Requirements
7	Must	Project Manager	Only generate final report when the whole project is completed	Make sure that no sub-tasks are left before proper submission	Should be logged in and registered at the portal. Have to assign tasks to students. Have to make sure that the work is completed.	Completed	Review all completed tasks. Compile final report with input from all team members.	Ensure completeness and accuracy of final report.
8	Should	Student	Get email invitation	Register in the portal	-	Backlog	Receive email invitation. Register with valid information in the portal.	Ensure successful registration process.
9	Must	Student	View group profile	Know who my group mates and project manager are	Have to be registered in the portal	Completed	Access group profile. View details of group members and project manager.	Ensure visibility and transparency within the group.
10	Must	Student	View assigned tasks	Work on their completion	Should be logged in and registered at the portal	Completed	Access assigned tasks. Work on tasks according to instructions.	Ensure clear understanding of assigned tasks.
11	Must	Student	Edit tasks	Add or remove any additional information in the assignment.	Must have a task assigned to him. Must have done some work on it.	Completed	Access assigned task. Edit task details as needed.	Ensure flexibility and customization in task management.
12	Must	Student	Submit tasks	Get more tasks or finish my portion of the work.	Must have a task assigned to it. Should have completed the work.	Completed	Access assigned task. Submit completed task for review.	Ensure timely submission of tasks.
13	Must	Student	View progress	See how my members are working	Should be assigned a task by the project manager. Should be working on it. Should be a part of the team.	Completed	Access assigned task. View progress of individual and group tasks.	Ensure visibility and accountability in task progress.

ID	Priority	As a	I want to	So that I can	Acceptance Criteria	Status	Functional Requirements	Non-Functional Requirements
14	Must	Student	View feed-back	Know about the shortcomings in the part of the assignment I have done	Should have done some/ complete work on the assignment. Should be a part of the team. The lecturer must be invited by the project manager.	Completed	Access assigned task. View feedback provided by project manager or lecturer.	Ensure feedback loop for continuous improvement.
15	Must	Student	View grades	Know about the result of my hard work.	Must have completed my assignment. Must be part of the team	In-progress	Access assigned task. View grades provided by project manager or lecturer.	Ensure transparency and fairness in grading process.
16	Should	Lecturer	Send emails to students	Login and register in the application	Must be invited by the project manager. Should be logged in and registered at the portal.	Testing	Login to application. Send emails to students with relevant information.	Ensure effective communication with students.
17	Must	Lecturer	Assign a project manager	Assign the task to him to assign to his members	Should be logged in and registered at the portal. Send an email to the student.	Completed	Login to application. Assign project manager role to designated student.	Ensure clear delegation of responsibilities.
18	Must	Lecturer	Create tasks	Assign them to teams	Should be logged in and registered at the portal. Should have assigned project manager	Completed	Login to application. Create tasks and assign them to designated teams.	Ensure alignment of tasks with project objectives.
19	Must	Lecturer	View the progress of assignment	Keep in check how the students are doing	Should be logged in and registered at the portal. Must be invited by the project manager.	Completed	Login to application. View progress of individual and group tasks.	Ensure oversight and support for student progress.
20	Should	Lecturer	Give feed-back	Point out the mistakes and shortcomings of the assignment	Must be invited by the project manager	Completed	Login to application. Provide feedback on student assignments.	Ensure guidance and support for student improvement.

ID	Priority	As a	I want to	So that I can	Acceptance Criteria	Status	Functional Requirements	Non-Functional Requirements
21	Should	Lecturer	Receive invitation from project manager	Give feed-back to the assignments.	Should be logged in and registered at the portal.	Ready for dev	Login to application. Receive invitation from project manager and provide feedback on assignments.	Ensure effective collaboration with project manager.
22	Must	Lecturer	Grade assignments	Evaluate the students individually and within a group	Should be logged in and registered at the portal.	In-Progress	Login to application. Grade assignments based on predefined criteria.	Ensure fairness and accuracy in grading process.
23	Must	Lecturer	Add and remove students	Keep the discipline in check	Should be logged in and registered at the portal.	Completed	Login to application. Add or remove students from designated teams as needed.	Ensure compliance with project requirements and regulations.

Architecture Document : Task Management Portal

1. Application :

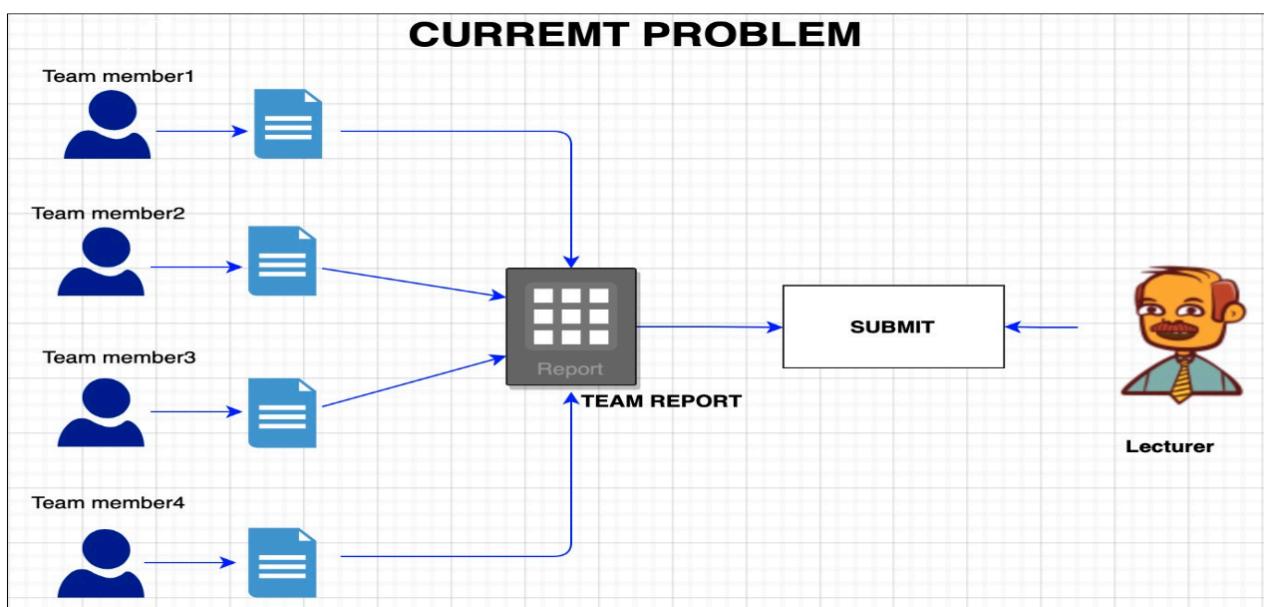
Application architecture: The Task Management Portal is designed using a microservices architecture, where the application is divided into smaller, independent services that communicate with each other through well-defined APIs. This architecture allows for greater flexibility, scalability, and maintainability of the application.

Microservices: Each functional component of the Task Management Portal, such as user management, task creation, assignment submission, and grading, is implemented as a separate microservice. This approach enables teams to develop, deploy, and scale each service independently, leading to faster development cycles and easier maintenance.

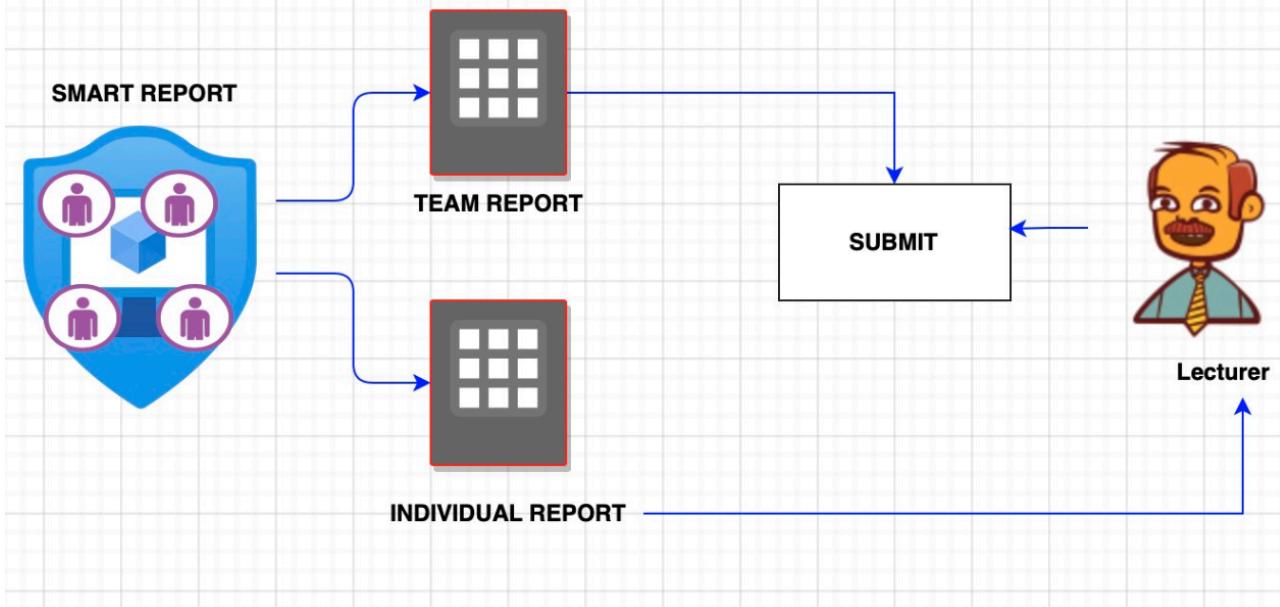
Event-Driven: The Task Management Portal utilizes an event-driven architecture to handle asynchronous communication and decouple components within the system. Events such as task creation, assignment submission, and grading trigger actions and updates across different microservices, allowing for seamless integration and responsiveness.

Serverless: Certain components of the Task Management Portal are built using serverless computing, where the infrastructure management is abstracted away, and developers focus on writing code that runs in response to events. Serverless functions handle tasks such as notification delivery, data processing, and background jobs, offering scalability and cost-efficiency without the need to manage servers.

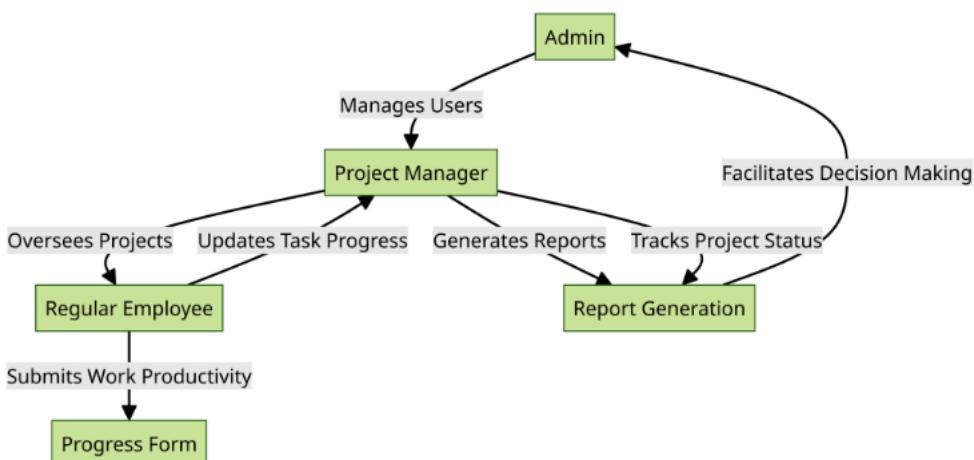
2. Database :



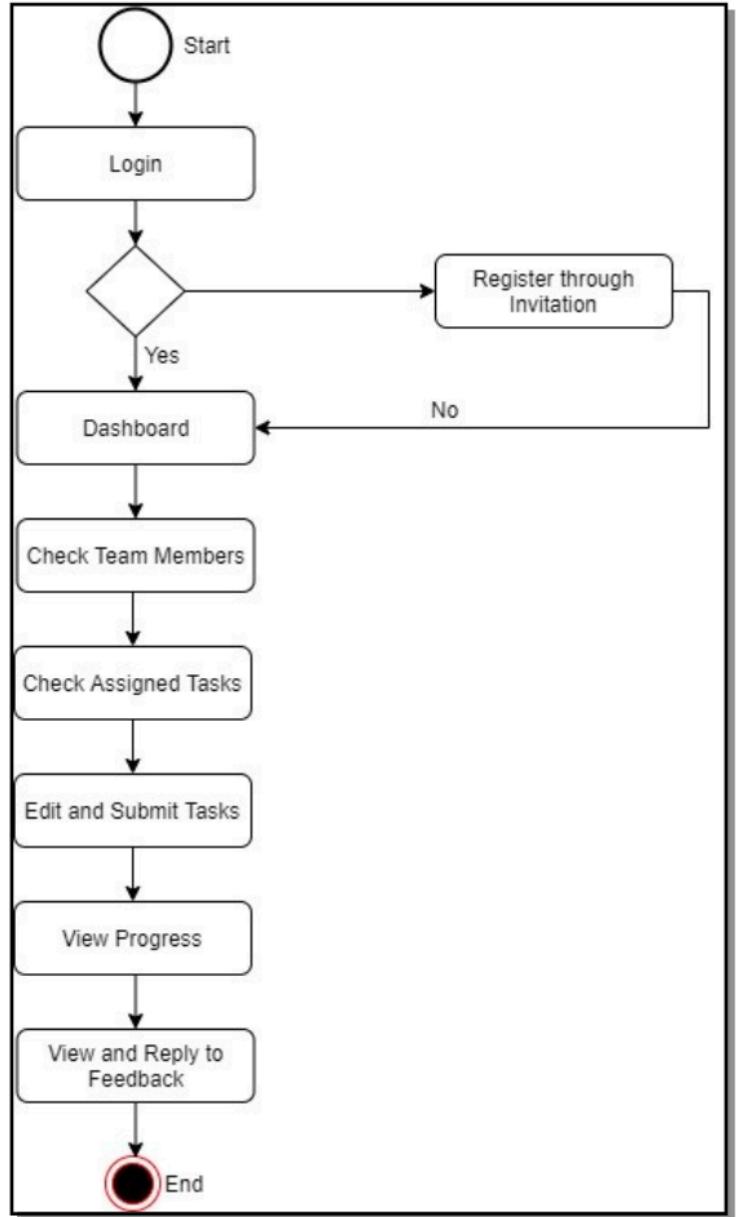
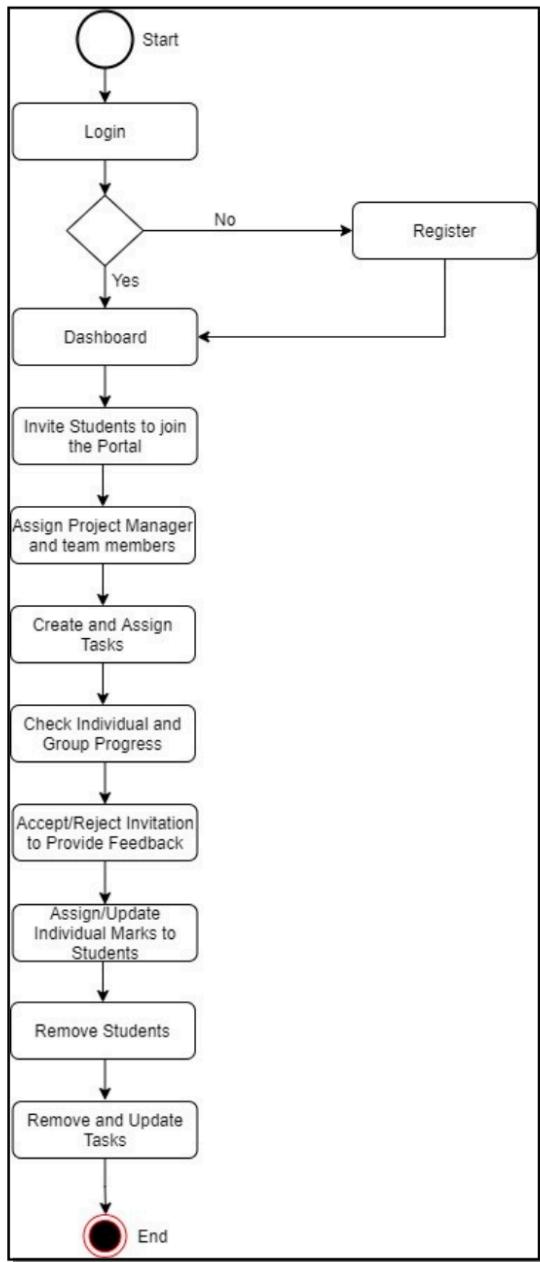
SOLUTION



- Admin (A):** The Admin holds overarching authority within the system. They manage user accounts, including creating and maintaining user profiles.
- Project Manager (B):** Project Managers oversee the execution of projects within the system. They create and manage projects, assign tasks to employees, and track project progress.
- Regular Employee (C):** Regular Employees are tasked with executing assigned project tasks. They update task progress and submit work productivity reports within the system.
- Progress Form (D):** This component facilitates Regular Employees' submission of task progress updates. It serves as a platform for employees to input their work accomplishments and track their contributions to ongoing projects.
- Report Generation (E):** Project Managers utilize this feature to generate reports based on project data. These reports offer insights into project performance, task completion rates, and other key metrics, aiding in informed decision-making and strategic planning.



Task Management System Flowchart



Entity Descriptions

1. User:

- Attributes:
 - **user_id**
: Unique identifier for each user.
 - **email**
: Email address of the user.
 - **password**
: Encrypted password for user authentication.
 - **role**
: Role of the user within the system (Admin, Project Manager, Regular Employee).

2. Project:

- Attributes:

- **project_id**
: Unique identifier for each project.
- **project_name**
: Name/title of the project.
- **description**
: Brief description outlining the project's objectives and scope.
- **start_date**
: Date when the project commenced.
- **end_date**
: Date when the project is expected to conclude.
- **status**
: Current status of the project (e.g., ongoing, completed, pending).
- **manager_id**
: User ID of the Project Manager overseeing the project.

3. Task:

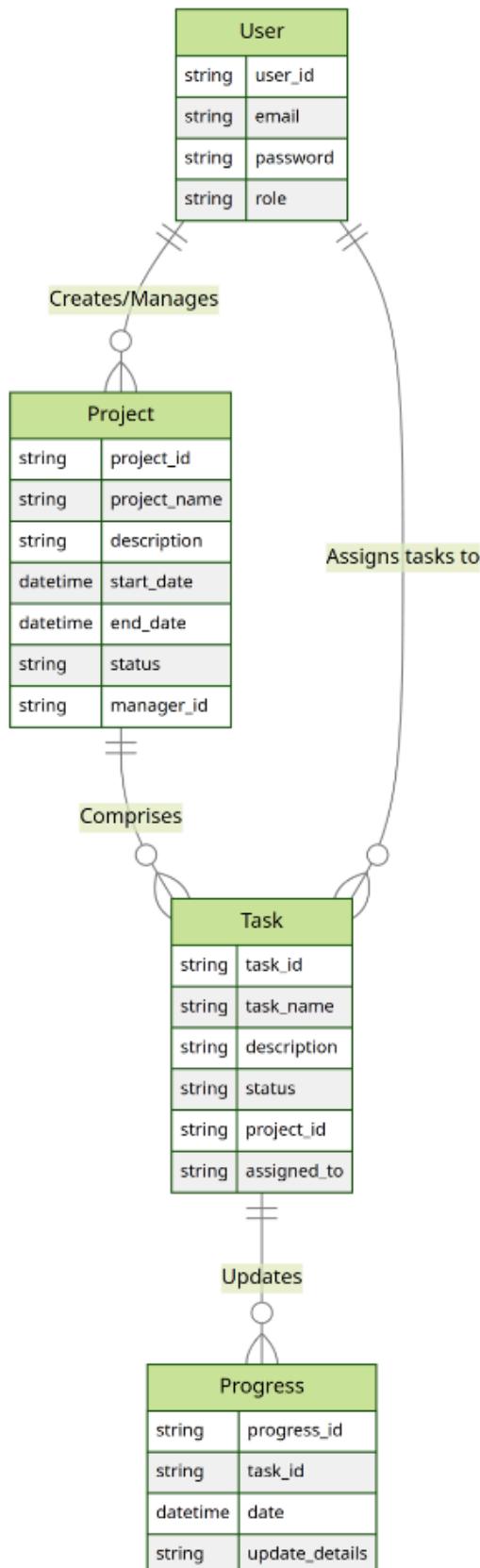
- Attributes:
 - **task_id**
: Unique identifier for each task.
 - **task_name**
: Name/title of the task.
 - **description**
: Description providing additional context or details about the task.
 - **status**
: Current status of the task (e.g., in progress, completed, pending).
 - **project_id**
: ID of the project to which the task belongs.
 - **assigned_to**
: User ID of the employee to whom the task is assigned.

4. Progress:

- Attributes:
 - **progress_id**
: Unique identifier for each progress update.
 - **task_id**
: ID of the task being updated.
 - **date**
: Date and time when the progress update was made.
 - **update_details**
: Details of the progress/update submitted by the employee.

Relationships

- **User-Project:** One user can create/manage multiple projects. A project is associated with one user (creator/manager).
- **Project-Task:** One project can comprise multiple tasks. Each task belongs to one project.
- **User-Task:** Users (Project Managers) assign tasks to employees. Each task is assigned to one user (Regular Employee).
- **Task-Progress:** Each task can have multiple progress updates. Progress updates are linked to one task.



Task Management System ER Diagram

3. Data Exchange Contract

- **Language:** PHP
- **Databases used:** MySQL
- **Design used:** HTML JavaScript, Ajax, JQuery, Bootstrap
- **Browser used:** IE8, Google Chrome, Opera Mozilla
- **Software used:** WAMP/ XAMPP/ LAMP/MAMP

Frequency of Data Exchanges:

- Data exchanges occur in real-time as users interact with the application.
- Batch data exchanges may occur periodically for scheduled tasks or updates.

Data Sets:

- User information: Name, email, password hash, profile details.
- Assignment details: Title, description, deadline, attachments.
- Submission details: Assignment ID, student ID, submission date, file uploads.
- Grading information: Assignment ID, student ID, grades, feedback.

Mode of Exchanges:

- API: RESTful API endpoints for data retrieval and manipulation.
- File: File uploads and downloads for large data sets or attachments.
- Queue: Message queues for asynchronous processing and task management.

Language:

- PHP for server-side scripting and business logic.

Databases Used:

- MySQL for storing structured data.

Design Used:

- HTML for markup.
- JavaScript for client-side interactivity.
- Ajax for asynchronous data exchange.
- jQuery for DOM manipulation and event handling.
- Bootstrap for responsive and mobile-friendly design.

Browsers Used:

- Supported browsers include IE8, Google Chrome, Opera, and Mozilla Firefox.

Software Used:

- WAMP, XAMPP, LAMP, or MAMP for local development and testing

Daily Estimates of Users

ID	Prior - ity	As a	I want to	So thatI can	Accep tance Criteria	Status	Functional Requirements	Non-Func tional Re quirements	Origi - nal Esti mate
1	Must	Proje ct Man - ager	Create a team	Assign and divide sub-tasks among them	Must be assigned project manager by the lecturer. Should be logged in and registered at the portal.	In Progre ss	Assign work to team mem bers and set deadlines. Have to receive task from lectur er.	Ensure team members are clear on their tasks and deadlines.	5 days
2	Must	Proje ct Man - ager	Perform role man agement	For effi cient comple tion of tasks	Should be logged in and registered at the portal. Have to be as signed project manager by the Lecturer.	Ready for Dev	Have to assign work to the members first and make sure they are making progress.	Ensure team members understand their roles and responsi bilities.	5 days
3	Shou ld	Proje ct Man - ager	Send re quest to Lecturer	Get feed back on individual and group progress	Should be logged in and registered at the portal. Have to assign work to team members.	Not Com plete d	Check the progress. Provide feedback on the team's perfor mance.	Ensure effec tive commu nication be tween team and lecturer.	7 days
4	Must	Proje ct Man - ager	See the progress in per centage	Urge my teammates to com plete their assigned tasks	Have to assign work to team members and set dead lines.	Com plete d	Assign work to all team mem bers. Moni tor progress and provide support as needed.	Ensure timely completion of tasks.	7 days

5	Must	Project Manager	Set deadlines	Make sure everyone has completed work on time	Have to receive task from lecturer. Have to assign work to team mates.	Completed	Set clear deadlines for each task. Communicate deadlines to team members.	Ensure adherence to project time line.	5 days
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ID	Priority	As a	I want to	So that I can	Acceptance Criteria	Status	Functional Requirements	Non-Functional Requirements	Original Estimate
6	Must	Project Manager	Generate individual and group assessment	Make sure everyone has given their proper input	Assign work to all team members. Check the progress.	Completed	Ensure all team members contribute to assessments. Review and compile individual and group assessments.	Ensure fairness and accuracy in assessment process.	6 days
7	Must	Project Manager	Only generate final report when the whole project is completed	Make sure that no sub-tasks are left before proper submission	Should be logged in and registered at the portal. Have to assign tasks to students. Have to make sure that the work is completed.	Completed	Review all completed tasks. Compile final report with input from all team members.	Ensure completeness and accuracy of final report.	8 days
8	Should	Student	Get email invitation	Register in the portal	-	Not Completed	Receive email invitation. Register with valid information in the portal.	Ensure successful registration process.	4 days

9	Must	Student	View group profile	Know who my group mates and project manager are	Have to be registered in the portal	Completed	Access group profile. View details of group members and project manager.	Ensure visibility and transparency within the group.	3 days
10	Must	Student	View assigned tasks	Work on their completion	Should be logged in and registered at the portal	Completed	Access as signed tasks. Work on tasks according to instructions.	Ensure clear understanding of as signed tasks.	5 days

ID	Prior - ity	As a	I want to	So thatI can	Accep tance Criteria	Status	Functional Requirements	Non-Func tional Re quirements	Origi - nal Esti mate
11	Must	Student	Edit tasks	Add or remove any additional information in the assignment.	Must have a task as signed to him. Must have done some work on it.	Completed	Access as signed task. Edit task details as needed.	Ensure flexibility and customization in task management.	6 days
12	Must	Student	Submit tasks	Get more tasks or finish my portion of the work.	Must have a task as signed to it. Should have completed the work.	Completed	Access as signed task. Submit completed task for review.	Ensure timely submission of tasks.	7 days

1 3	Must	Stu dent	View progress	See how my mem bers are working	Should be as signed a task by the project manager. Should be work ing on it. Should be a part of the team.	Com plete d	Access as signed task. View progress of individual and group tasks.	Ensure visi bility and accountabi lity in task progress.	2 days
1 4	Must	Stu dent	View feedback	Know about the shortcom ingsin the part of the assign ment I have done	Should have done some/ complete work on the as signment. Should be a part of the team. The lec turer must be invited by the project manager.	Com plete d	Access as signed task. View feed back pro vided by project manager or lecturer.	Ensure feed back loop for continuous improvement.	3 days

I D	Prior - ity	As a	I want to	So thatI can	Accep tance Criteria	Status	Functional Require ments	Non-Func tional Re quirements	Origi - nal Esti mate
1 5	Must	Stu dent	View grades	Know about the result of my hard work.	Must have complet - ed my assign ment. Must be part of the team	In progres s	Access as signed task. View grades pro vided by project manager or lecturer.	Ensure trans parency and fairness in grading process.	10 days

1 6	Should	Lecturer	Send emails to students	Login and register in the application	Must be invited by the project manager. Should be logged in and registered at the portal.	In Progress	Login to application. Send emails to students with relevant information.	Ensure effective communication with students.	4 days
1 7	Must	Lecturer	Assign a project manager	Assign the task to him to assign to his members	Should be logged in and registered at the portal. Send an email to the student.	Completed	Login to application. Assign project manager role to designated student.	Ensure clear delegation of responsibilities.	4 days
1 8	Must	Lecturer	Create tasks	Assign them to teams	Should be logged in and registered at the portal. Should have assigned project manager	Completed	Login to application. Create tasks and assign them to designated teams.	Ensure alignment of tasks with project objectives.	5 days
1 9	Must	Lecturer	View the progress of assignment	Keep in check how the students are doing	Should be logged in and registered at the portal. Must be invited by the project manager.	Completed	Login to application. View progress of individual and group tasks.	Ensure oversight and support for student progress.	7 days

ID	Priority	As a	I want to	So that I can	Acceptance Criteria	Status	Functional Requirements	Non-Functional Requirements	Original Estimate

2 0	Shou l d	Lec ture r	Give feedback	Point out the mis takes and shortcom ings of the assign ment	Must be invited by the project manager	Com plete d	Login to application. Provide feedback on student assign ments.	Ensure guid ance and support for student im provement.	5 days
2 1	Shou l d	Lec ture r	Receive invitation from project manager	Give feedback to the assign ments.	Should be logged in and registered at the portal.	N o t - com plete d	Login to application. Receive invitation from project manager and provide feedback on assign ments.	Ensure effec tive collabo ration with project man ager.	6 days
2 2	Must	Lec ture r	Grade assign ments	Evaluate the stu dents in dividually and within a group	Should be logged in and registered at the portal.	In Progre ss	Login to application. Grade as signments based on predefined criteria.	Ensure fair ness and ac curacy in grading process.	10 days
2 3	Must	Lec ture r	Add and remove students	Keep the discipline in check	Should be logged in and registered at the portal.	Com plete d	Login to application. Add or re move stu dents from designated teams as needed.	Ensure com pliance with project re quirements and regula tions.	10 days

Capacity Planning for Current Split: Task Management Protocol

Stakeholder	Role	Organization	Expectation	Influence	Interest
Govind	Front End Dev	Application	Users can navigate through their dashboard	High	High
Pratham	Back end	Application	Users can store their data seamlessly in the database	High	High
Sai Kiran	Tester and designer	Application	Navigate through the website	High	High

Name	Role	Working Days	Planned Leaves	Other Coursework Activities	Upskilling (in Days)	Design, Development, Testing, Documentation (in Days)	Estimated Hours
Govind	Lead & Developer	22	0	0	2	20	120
Pratham	Developer	22	0	3	2	15	90
Sai Kiran	Developer	22	0	3	2	15	90

- Working Days: Number of days available for work during the sprint.
- Planned Leaves: Number of planned leaves during the sprint.
- Other Coursework Activities: Other academic activities that may require time during the sprint. Upskilling: Days allocated for upskilling or learning new skills during the sprint.
- Design, Development, Testing, Documentation: Number of days allocated for project-related tasks.
- Estimated Hours: Estimated total hours available for project work during the sprint. Is capacity planning necessary for all? Yes, capacity planning is necessary for all team members. They have to mention their available hours for the current sprint.

Functional Test Case : Task Management Portal

<p>Test case: US01</p> <p>User story: US01</p>			
Pre-conditions			
As a lecturer, I want to log in my dashboard.			
Test Steps	Expected Result	Actual Result	Status (Pass/Fail)
Lecturer can log in the dashboard	The website	Lecturer can log in	Pass
with his credentials.	allows the Lecturer to log in.	and check his dashboard.	

<p>Test case: US02</p> <p>User story: US0</p>			
Pre-conditions			
As a lecturer, I want to create projects for the students.			
Test Steps	Expected Result	Actual Result	Status (Pass/Fail)
Lecturer can navigate the menu bar and create a new project and set deadlines for the students.	A new project is created and the deadline is set.	Lecturer has created the project and set the deadline.	Pass

<p>Test case: US03</p> <p>User story: US03</p>			
Pre-conditions			
As a lecturer, I want to select student and assign a project manager in each team.			
Test Steps	Expected Result	Actual Result	Status (Pass/Fail)
The lecturer selects the names of students he wants to be in a team and assigns one of them the task of being a project manager.	A team is created and the project manager is assigned.	The team along with the project manager was finalized.	Pass

<p>Test case: US04</p> <p>User story: US04</p>			
Pre-conditions			
As a lecturer, I want to send invitation link to the students.			
Test Steps	Expected Result	Actual Result	Status (Pass/Fail)
After setting the team members, the lecturer clicks on the button to send the invitation link.	The invitation link is sent through email.	The email invitation was sent successfully.	Pass

<p>Test case: US05</p> <p>User story: US05</p>			
Pre-conditions			
As a student, I want to receive the email invitation from the lecturer.			
Test Steps	Expected Result	Actual Result	Status (Pass/Fail)
Students can view the inbox of their email accounts for the invitation.	An email invitation is received to the students.	Students received the email invitation on their accounts.	Pass

<p>Test case: US06</p> <p>User story: US06</p>			
Pre-conditions			
As a student, I want to sign up and log in the portal using the email invitation.			
Test Steps	Expected Result	Actual Result	Status (Pass/Fail)
Click on the email invitation link sent by the lecturer and direct to the portal. From there sign up and then log in.	Students log in and sign up in the portal.	Students were able to sign up and log in the portal using the invitation.	Pass

<p>Test case: US07</p> <p>User story: US07</p>			
Pre-conditions			
As a project manager, I want to create assignment from the project received by the manager.			
Test Steps	Expected Result	Actual Result	Status (Pass/Fail)
Project manager will create a new assignment and set the deadline for the other members.	The assignment is uploaded on the portal and all the members can see it.	The assignment, along with the deadline was set and the members could view it.	Pass

<p>Test case: US08</p> <p>User story: US08</p>			
Pre-conditions			
As a project manager, I want to create tasks and distribute them among the team members.			
Test Steps	Expected Result	Actual Result	Status (Pass/Fail)
Create the tasks and assign them to the members.	All the members should receive the tasks that they have to do.	the project manager created the tasks successfully and the members received it.	Pass

<p>Test case: US09</p> <p>User story: US09</p>			
Pre-conditions			
As a student, I want to receive tasks from the project manager.			
Test Steps	Expected Result	Actual Result	Status (Pass/Fail)
Student will view his dashboard for the task notification sent by the project manager.	Students should receive the created tasks.	Students got the notification for their assigned tasks.	Pass

<p>Test case: US10</p> <p>User story: US10</p>			
Pre-conditions			
As a student, I want to delete or edit my tasks and then submit them after completion.			
Test Steps	Expected Result	Actual Result	Status (Pass/Fail)
Students can work on their tasks and save them whenever they want. After completing the tasks, they can submit it.	Students should work on their tasks and then submit them.	Students could edit, update and delete their tasks and after completing them, could submit.	Pass

<p>Test case: US011</p> <p>User story: US011</p>			
Pre-conditions			
As a project manager, I want to check the work progress and download individual report.			
Test Steps	Expected Result	Actual Result	Status (Pass/Fail)
After all the members have completed their work, the project manager can download the individual report.	Project manager can view the individual progress and after completion can download the report.	The project manager viewed his members' progress and when they were done, downloaded the final report.	Pass

<p>Test case: US12</p> <p>User story: US12</p>			
Pre-conditions			
As a student, I want to request the lecturer for feedback.			
Test Steps	Expected Result	Actual Result	Status (Pass/Fail)
Students can send the feedback request to the lecturer after completing their tasks.	Students should be able to send feedback request to the lecturer.	Students were able to successfully send the request for feedback to the lecturer.	Pass

<p>Test case: US13</p> <p>User story: US13</p>			
Pre-conditions			
As a lecturer, I want to receive feedback requests and give feedback.			
Test Steps	Expected Result	Actual Result	Status (Pass/Fail)
Lecturer will receive feedback requests and will know through notifications. After clicking on it,	Lecturer can receive feedback requests and	Lecturer received the feedback request notification and from	Pass

he will be redirected to give the feedback to the specific student.	given feedback to the students.	there, he was able to give feedback.	
---	---------------------------------	--------------------------------------	--

<p>Test case: US14</p> <p>User story: US14</p>			
Pre-conditions			
As a student, I want to view feedback from the lecturer.			
Test Steps	Expected Result	Actual Result	Status (Pass/Fail)
Student will receive feedback from the lecturer which he can view under the specific task.	Students should be able to view the feedback.	Student received feedback from lecturer and was able to view it.	Pass

<p>Test case: US15</p> <p>User story: US15</p>			
Pre-conditions			
As a project manager, I want to submit the completed project and report to the lecturer.			
Test Steps	Expected Result	Actual Result	Status (Pass/Fail)
After completion, the project manager sent the project and individual report to the lecturer.	Project manager should submit project and report.	Project manager was able to send the completed project and individual report to the lecturer.	Pass

<p>Test case: US16</p> <p>User story: US16</p>			
Pre-conditions			
As a lecturer, I want to receive the report and project and assign grades.			
Test Steps	Expected Result	Actual Result	Status (Pass/Fail)
The lecturer will receive the project and the report and after evaluating it, he will give grades.	The lecturer should be able to receive project and assign grades,	The lecturer received the project and report from the project manager and awarded them individual grades.	Pass

<p>Test case: US17</p> <p>User story: US17</p>			
Pre-conditions			
As a student, I want to view the grades that have been given to me by the lecturer.			
Test Steps	Expected Result	Actual Result	Status (Pass/Fail)
Students can go to the dashboard and view their grades given by the lecturer.	Student should be able to view completed project and assigned grades.	Student could see his grades from the dashboard.	Pass

Defect : Task Management Portal

Reported Environment	Feature	Defect ID	Defect Description	Severity (Low/Medium/High)	Screenshot	Status	Remarks	FIELD9	FIELD10
UAT (User Acceptance Testing)	Registration Email	DEF-001	When attempting to send registration emails to students and product managers, the system does not deliver the emails successfully. Instead, the emails remain undelivered, preventing students and product managers from receiving registration invitations.	High	N/A	Open	<p>Reproduction Steps:</p> <ol style="list-style-type: none"> 1. Log in to the application as an admin or lecturer. 2. Navigate to the "Registration" or "Invite Users" section. 3. Enter the email addresses of the students and product managers. 4. Click on the "Send Invitation" or "Register" button. 5. Observe that the system does not send the registration emails. 6. Check the email server logs or records to confirm that the emails were not delivered. <p>Expected Behavior:</p> <ul style="list-style-type: none"> - Users should be able to send registration emails to students and product managers. - The system should successfully deliver the registration invitations to the specified email addresses. - Upon receiving the registration emails, students and product managers should be able to register and access the application. <p>Workaround:</p> <ul style="list-style-type: none"> - Currently, there is no workaround. Users are unable to send registration emails, affecting the onboarding process for students and product managers. <p>System Environment:</p> <ul style="list-style-type: none"> - Browser: Safari Version 99.0.1234.5678 - Operating System: MACOS 	Low Budget Issue	The application faces budget constraints, limiting the allocation of resources and funds for development and implementation tasks. This affects various aspects of the project, including feature development, infrastructure improvements, and tool acquisition.

Reported Environment	Feature	Defect ID	Defect Description	Severity (Low/Medium/High)	Screenshot	Status	Remarks	FIELD9	FIELD10
UAT (User Acceptance Testing)	Grade Assignment Functionality	DEF-002	The functionality for grading assignments is not functioning correctly, preventing lecturers from evaluating students' submissions and providing feedback. Lecturers are unable to assign grades or review student performance effectively.	High	N/A	Open	<p>Reproduction Steps:</p> <ol style="list-style-type: none"> 1. Log in to the application as a lecturer or instructor. 2. Navigate to the "Grade Assignments" or "Assessment" section. 3. Select the assignment or task to be graded. 4. Attempt to assign grades or provide feedback on student submissions. 5. Observe that the grading functionality is either incomplete, unavailable, or produces errors. 6. Verify that grades and feedback are not recorded or saved successfully. <p>Expected Behavior:</p> <ul style="list-style-type: none"> - Lecturers should be able to grade assignments and provide feedback on student submissions. - The grading functionality should be intuitive, reliable, and easy to use. - Grades and feedback provided by lecturers should be recorded accurately and accessible to students. <p>Workaround:</p> <ul style="list-style-type: none"> - Currently, there is no workaround. Lecturers are unable to grade assignments or provide feedback through the application. <p>System Environment:</p> <ul style="list-style-type: none"> - Browser: Safari Version 99.0.1234.5678 - Operating System: MACOS 	Feedback Functionality	The feedback submission feature is not functioning correctly, preventing students from providing feedback on assignments, course materials, or overall learning experiences. Students are unable to communicate their opinions or suggestions effectively through the application.

Daily Scrum Template : Task Management Portal

Team member	Question	Monday	Tuesday	Wednesday	Thursday	Friday
Govind	What did you do yesterday?	Reviewed project plan	Conducted team meeting	Addressed technical issues	Met with stakeholders	Presented progress report
	What are you doing	Updating task assignments	Resolving resource con-	Testing new features	Collaborating with team	Analyzing project metrics
	Is there anything blocking you?	None	None	Gmail Authentication	Gmail Authentication & Grade	Gmail Authentication & Grade
Pratham	What did you do yes-	Implemented login module	Designed user interface	Integrated backend API	Fixed login bugs	Reviewed code changes
	What are you doing	Testing login functionality	Adding registration feature	Conducting user testing	Refactoring codebase	Preparing for sprint demo
	Is there anything blocking you?	None	Gmail Authentication	Gmail Authentication	Gmail Authentication	Gmail Authentication
Sai Ki-ran	What did you do yes-terday?	Developed database schema	Implemented data models	Debugged database queries	Conducted performance tests	Documented database changes
	What are you doing today?	Optimizing database queries	Analyzing database performance	Updating database de-sign	Conducting code review	Preparing database back-ups
	Is there anything block-ing you?	None	Grade	Grade	Grade	Grade

ID	Sprint	Priority	As a	I want to	So that I can	Acceptance Criteria	Status	Functional Requirements	Non-Functional Requirements	Original Estimate	Actual Effort (in days)
20	3	Should	Lecturer	Give feedback	Point out the mistakes and shortcomings of the assignment	Must be invited by the project manager	Completed	Login to application. Provide feedback on student assignments.	Ensure guidance and support for student improvement.	5 days	5 days
21	3	Should	Lecturer	Receive invitation from project manager	Give feedback to the assignments.	Should be logged in and registered at the portal.	Not-completed	Login to application. Receive invitation from project manager and provide feedback on assignments.	Ensure effective collaboration with project manager.	6 days	
22	3	Must	Lecturer	Grade assignments	Evaluate the students individually and within a group	Should be logged in and registered at the portal.	In-Progres	Login to application. Grade assignments based on predefined criteria.	Ensure fairness and accuracy in grading process.	10 days	-
23	3	Must	Lecturer	Add and remove students	Keep the discipline in check	Should be logged in and registered at the portal.	Completed	Login to application. Add or remove students from designated teams as needed.	Ensure compliance with project requirements and regulations.	10 days	9 days
				Assignee: Govind Kalawate							Due Date: 16/04/2024

Implementation Details

1. Software and Platforms Used:

- Programming Language: PHP
- Database Management System: MySQL
- Web Technologies: HTML, JavaScript, Ajax, jQuery, Bootstrap
- Web Server: Apache (supported by WAMP, XAMPP, LAMP, MAMP)
- Operating Systems: Windows, Linux, macOS
- Development Environment: *WAMP (Windows), XAMPP (Cross-platform), LAMP (Linux), MAMP (macOS)
- Browsers Supported: Internet Explorer 8 (and above), Google Chrome, Mozilla Firefox, Opera
- Version Control: Git

2. Framework and Libraries:

- Frontend Framework: Bootstrap for responsive and mobile-friendly design
- JavaScript Library: jQuery for DOM manipulation and event handling
- Server-side Framework: Custom PHP framework (if applicable)
- Data Exchange: RESTful API endpoints for communication
- Security: PHP Security Best Practices, SSL/TLS for secure communication

3. Development Process:

- Agile Methodology: Iterative development approach with regular sprints and feedback cycles
 - Version Control: Git for managing source code and collaborative development
 - Code Reviews: Regular peer reviews to ensure code quality and adherence to coding standards
 - Testing: Unit testing, integration testing, and user acceptance testing (UAT) to ensure functionality and stability
 - Deployment: Continuous integration/continuous deployment (CI/CD) pipelines for automated testing and deployment
 - Documentation: Comprehensive documentation for codebase, APIs, and user guides

4. Scalability and Performance:

- Horizontal Scaling: Load balancing and clustering for distributing traffic across multiple servers
- Caching: Implementation of caching mechanisms (e.g., Memcached, Redis) for improved performance

- Database Optimization: Indexing, query optimization, and database sharding for efficient data retrieval
- Monitoring: Logging and monitoring tools (e.g., ELK stack, Prometheus, Grafana) for real-time performance monitoring and troubleshooting

5. Security Measures:

- Authentication: Secure user authentication using hashed passwords and salted hashes
- Authorization: Role-based access control (RBAC) to restrict access based on user roles
- Data Encryption: SSL/TLS encryption for secure data transmission over the network
- Input Validation: Sanitization and validation of user inputs to prevent SQL injection, XSS, and other vulnerabilities
- Session Management: Secure session handling to prevent session hijacking and fixation attacks
- Security Headers: Implementation of security headers (e.g., Content Security Policy, HTTP Strict Transport Security) to mitigate common web security risks

6. Compliance and Regulations:

- GDPR Compliance: Implementation of measures to ensure compliance with GDPR regulations regarding data privacy and protection
- Accessibility Standards: Adherence to WCAG (Web Content Accessibility Guidelines) for ensuring accessibility to users with disabilities
- Data Backup and Recovery: Regular backups and disaster recovery plans to mitigate data loss and ensure business continuity

7. Support and Maintenance:

- User Support: Helpdesk or ticketing system for handling user queries and issues
- Maintenance Schedule: Regular maintenance and updates to address security vulnerabilities and performance optimizations
- Documentation Updates: Regular updates to documentation to reflect changes and improvements in the system

By adhering to these implementation details, the Task Management Portal ensures robustness, scalability, security, and compliance with industry standards and best practices.

System Screenshot : Task Managenet Portal

Product Manager :

The screenshot shows the 'Project List' page of the Task Management System. The left sidebar has 'Projects' selected. The main area displays a table with two entries:

#	Project	Date Started	Due Date	Status	Action
1	Sample Project Lorem ipsum dolor sit amet, consectetur adipiscing elit. In elementum, metus vitae malesuada mollis, urna nisl luctus ligula, vitae nibh porttitor massa eros eu ligula. Nunc, dui metus, leculli id...	Apr 16, 2024	Jul 04, 2024	On-Progress	Action
2	Sample Project 102 Simple Only	Apr 03, 2024	Nov 09, 2024	Started	Action

Showing 1 to 2 of 2 entries.

The screenshot shows the 'New Project' page. The left sidebar has 'Add New' selected under 'Projects'. The main area contains form fields:

Name	Status
<input type="text"/>	Pending
Start Date	End Date
<input type="text"/> 17/04/2024	<input type="text"/> 17/04/2024
Project Team Members	
<input type="text"/> Please select here	
Description	
<div style="border: 1px solid #ccc; padding: 5px;"><p><i>B</i> <i>I</i> <i>U</i> <i>S</i> <i>X</i> <i>X</i> <i>Source Sans Pro</i> <i>16</i> <i>A</i> <i>Text</i> <i>Table</i> <i>Image</i></p><p><i>Text</i> <i>Image</i> <i>Link</i> <i>Code</i> <i>Help</i></p></div>	

The screenshot shows the 'Home' page. The left sidebar has 'Dashboard' selected. The main area includes a welcome message and two cards:

Welcome Govind Kalawate(RA2111033010048)!

Project Progress

#	Project	Progress	Status	Action
1	Sample Project Due: 2024-07-04	50.00% Complete	On-Progress	View
2	Sample Project 102 Due: 2024-11-09	0% Complete	Started	View

2 Total Projects

4 Total Tasks

Safari File Edit View History Bookmarks Window Help

localhost Wed 11

Project Manager

- Dashboard
- Projects
- Task
- Report**

Task Management System

Reports

Project Progress

#	Project	Task	Completed Task	Work Duration	Progress	Status
1	Sample Project Due: 2024-07-04	2	1	6 Hr/s.	50.00% Complete	On-Progress
2	Sample Project 102 Due: 2024-11-09	2	0	0 Hr/s.	0% Complete	Started

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Safari File Edit View History Bookmarks Window Help

localhost Wed 17 Apr 7:19 AM

Project Manager

- Dashboard
- Projects
- Task**
- Report

Task Management System

Task List

+ Add New project

#	Project	Task	Project Started	Project Due Date	Project Status	Task Status	Action
1	Sample Project	Sample Task 1 Fusce ullamcorper mattis semper. Null vel risus ipsum. Sed maximus dapibus nisl non loo... Sample	Apr 16, 2024	Jul 04, 2024	On-Progress	Done	Action ▾
2	Sample Project	Sample Task 2 Sample Task 2	Apr 16, 2024	Jul 04, 2024	On-Progress	Pending	Action ▾
3	Sample Project 102	Task Test Sample	Apr 03, 2024	Nov 09, 2024	Started	Pending	Action ▾
4	Sample Project 102	Test 23 Sample test 23	Apr 03, 2024	Nov 09, 2024	Started	Pending	Action ▾

Show 10 entries Search: Previous 1 Next

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Safari File Edit View History Bookmarks Window Help

localhost Wed 17 Apr 7:26 AM

Lecturer

- Dashboard
- Projects
- Task
- Report
- Users

 - + Add New
 - > List

Task Management System

User List

+ Add New User

#	Name	Email	Role	Action
1	Govind Kalawate(RA2111033010048)	ga3211@srmist.edu.in	Project Manager	Action ▾
2	Pratham Handique	pa2289@srmist.edu.in	Employee	Action ▾
3	Sai Kiran	sm7402@srmist.edu.in	Employee	Action ▾
4	Shaik Rasheeda Begum (103332)	admin@admin.com	Admin	Action ▾

Show 10 entries Search: Previous 1 Next

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Lecturer :

The screenshot shows the 'Home' page of the Task Management System. The left sidebar is titled 'Lecturer' and includes 'Dashboard', 'Projects', 'Task', 'Report', and 'Users'. The main content area has a header 'Task Management System' and a sub-header 'Home'. It displays a welcome message 'Welcome Shaik Rasheeda Begum (103332)!'. Below this is a 'Project Progress' section with two projects listed:

#	Project	Progress	Status
1	Sample Project	50.00% Complete	On-Progress
2	Sample Project 102	0% Complete	Started

On the right, there are two summary boxes: 'Total Projects' (2) and 'Total Tasks' (4). The bottom of the page includes a copyright notice 'Copyright © 2024 SRMIST. All rights reserved.' and a footer bar with various icons.

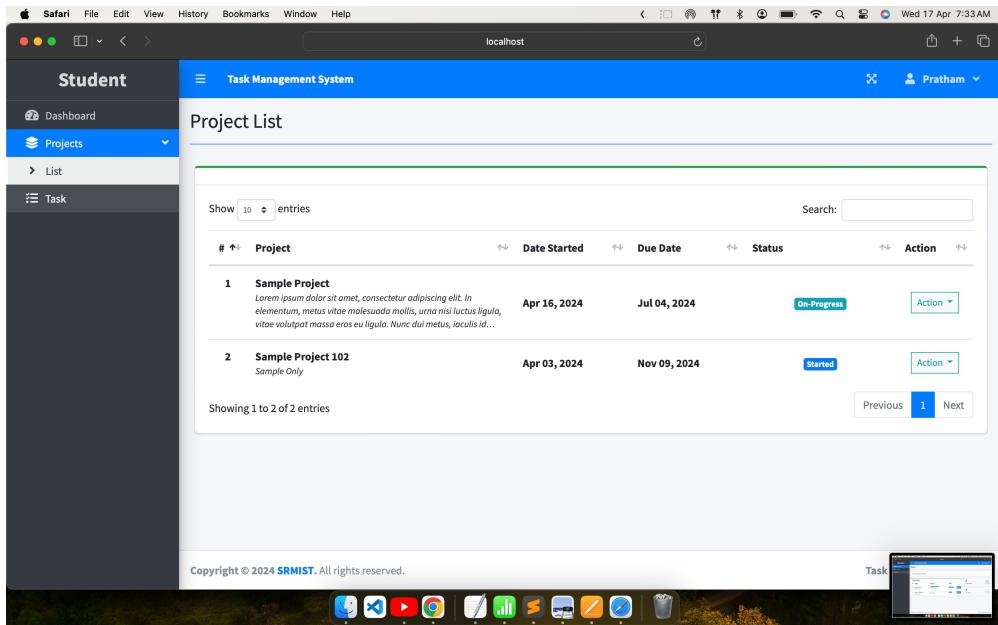
The screenshot shows the 'New Project' page. The left sidebar is titled 'Lecturer' and includes 'Dashboard', 'Projects' (with 'Add New' and 'List' options), 'Task', 'Report', and 'Users'. The main content area has a header 'Task Management System' and a sub-header 'New Project'. It contains fields for 'Name' (with status 'Pending'), 'Start Date' (17/04/2024), 'End Date' (17/04/2024), 'Project Manager' (dropdown placeholder 'Please select here'), 'Project Team Members' (dropdown placeholder 'Please select here'), and a 'Description' rich text editor. The bottom of the page includes a copyright notice and a footer bar with various icons.

The screenshot shows the 'Reports' page. The left sidebar is titled 'Lecturer' and includes 'Dashboard', 'Projects', 'Task', 'Report' (selected), and 'Users'. The main content area has a header 'Task Management System' and a sub-header 'Reports'. It displays a 'Project Progress' table:

#	Project	Task	Completed Task	Work Duration	Progress	Status
1	Sample Project Due: 2024-07-04	2	1	6 Hr/s.	50.00% Complete	On-Progress
2	Sample Project 102 Due: 2024-11-09	2	0	0 Hr/s.	0% Complete	Started

The bottom of the page includes a copyright notice and a footer bar with various icons.

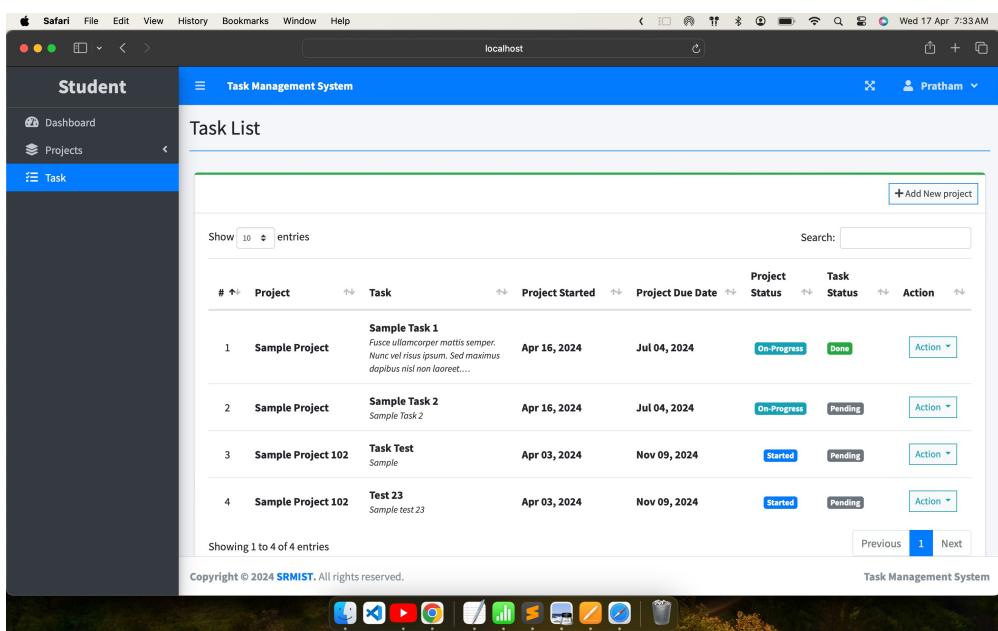
Student :



Screenshot of the Student Project List page in a web browser. The page title is "Task Management System". The left sidebar shows "Student" with "Dashboard", "Projects", and "Task" selected. The main content area is titled "Project List" and displays a table of projects. The table has columns: #, Project, Date Started, Due Date, Status, and Action. There are two entries:

#	Project	Date Started	Due Date	Status	Action
1	Sample Project	Apr 16, 2024	Jul 04, 2024	On-Progress	Action
2	Sample Project 102	Apr 03, 2024	Nov 09, 2024	Started	Action

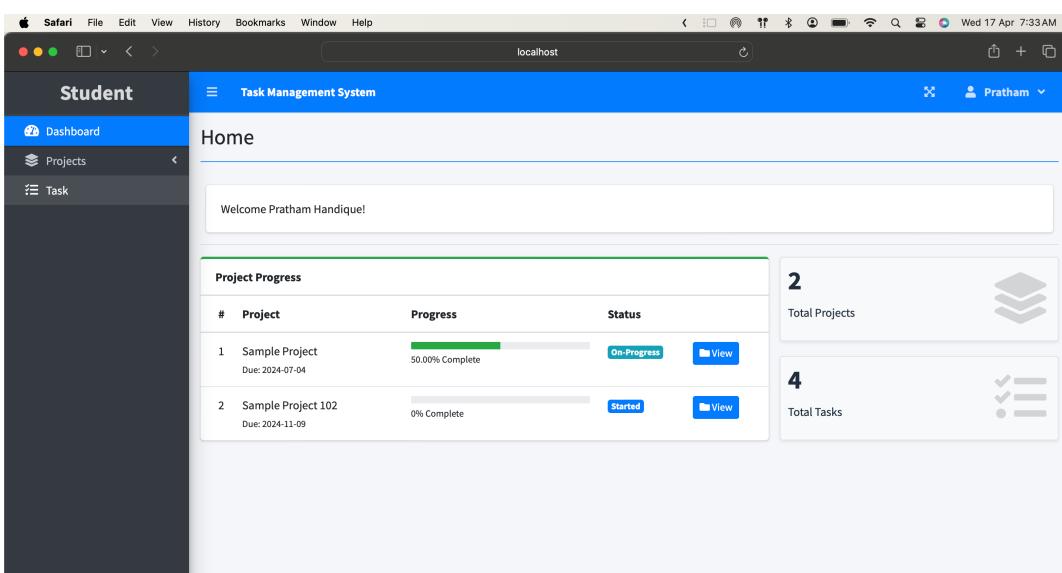
At the bottom, it says "Showing 1 to 2 of 2 entries". The status bar at the bottom right shows "Task Management System".



Screenshot of the Student Task List page in a web browser. The page title is "Task Management System". The left sidebar shows "Student" with "Dashboard", "Projects", and "Task" selected. The main content area is titled "Task List" and displays a table of tasks. The table has columns: #, Project, Task, Project Started, Project Due Date, Project Status, Task Status, and Action. There are four entries:

#	Project	Task	Project Started	Project Due Date	Project Status	Task Status	Action
1	Sample Project	Sample Task 1	Apr 16, 2024	Jul 04, 2024	On-Progress	Done	Action
2	Sample Project	Sample Task 2	Apr 16, 2024	Jul 04, 2024	On-Progress	Pending	Action
3	Sample Project 102	Task Test	Apr 03, 2024	Nov 09, 2024	Started	Pending	Action
4	Sample Project 102	Test 23	Apr 03, 2024	Nov 09, 2024	Started	Pending	Action

At the bottom, it says "Showing 1 to 4 of 4 entries". The status bar at the bottom right shows "Task Management System".



Screenshot of the Student Home page in a web browser. The page title is "Task Management System". The left sidebar shows "Student" with "Dashboard", "Projects", and "Task" selected. The main content area is titled "Home" and displays a welcome message "Welcome Pratham Handique!" and a "Project Progress" section.

The "Project Progress" section shows two projects:

#	Project	Progress	Status
1	Sample Project Due: 2024-07-04	50.00% Complete	On-Progress
2	Sample Project 102 Due: 2024-11-09	0% Complete	Started

To the right, there are two summary boxes:

- 2 Total Projects** (represented by a stack icon)
- 4 Total Tasks** (represented by a checklist icon)

Conclusion

The completion of the Task Management Portal project marks a significant milestone in the journey towards modernizing project management within our organization. Through meticulous planning, diligent development, and careful implementation, the Task Management Portal has emerged as a powerful tool that streamlines project workflows, enhances collaboration, and promotes productivity.

From the outset, the project was driven by a clear vision to leverage cutting-edge technologies and best practices to address the challenges inherent in traditional project management approaches. The adoption of a microservices architecture, event-driven communication, and serverless computing reflects our commitment to agility, scalability, and responsiveness in meeting the evolving needs of project management.

The Task Management Portal's user-friendly interface, coupled with its robust functionality, empowers users across all levels of the organization to manage projects efficiently and effectively. Whether it's creating and assigning tasks, tracking progress, generating reports, or managing user accounts, the portal provides intuitive features that simplify complex tasks and foster collaboration.

Furthermore, the implementation details underscore our dedication to security, compliance, scalability, and performance. By adhering to industry best practices, including secure authentication, authorization, data encryption, and continuous monitoring, we ensure the confidentiality, integrity, and availability of our data while maintaining compliance with regulatory standards.

As we move forward, the Task Management Portal will continue to evolve, driven by feedback from users, advancements in technology, and changes in organizational requirements. Through ongoing support and maintenance, coupled with regular updates and enhancements, we will ensure that the portal remains a valuable asset that enables our organization to achieve its goals efficiently and effectively.

In conclusion, the Task Management Portal represents not only a technological achievement but also a catalyst for transformation within our organization. By embracing innovation and embracing change, we have laid the foundation for a more collaborative, agile, and successful future.

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These references provide insights into various aspects of the technologies, methodologies, and best practices utilized in the development of the Task Management Portal. They serve as valuable resources for understanding concepts, addressing challenges, and optimizing the portal's functionality and performance.