

1. Title: TeamSync - Collaborative Project Management Tool

2. Project Statement:

Create a web app for teams to manage projects with tasks, deadlines, communication channels, and file sharing. Implement real-time updates and notification systems for efficient collaboration.

Outcomes:

1. **All users** can create a new project, specifying its name, description, and relevant details.
2. **All users** can add tasks to projects, including task descriptions, deadlines, and assignees.
3. **All users** can update tasks, such as changing descriptions, updating deadlines, and reassigning tasks.
4. **All users** can delete tasks from projects when they are no longer needed.
5. **All users** can view project details and task lists
6. **All users** can communicate within projects through built-in comment systems.
7. **All users** can share files within projects, ensuring all team members have access to necessary documents.
8. **Admins only** can manage user permissions and roles, ensuring that only authorised users can access and modify sensitive information.
9. **Admins only** can archive or delete projects to maintain organisation and relevance.
10. **All users** can view project progress and task completion statistics to monitor project status and team performance.

3. Modules to be implemented

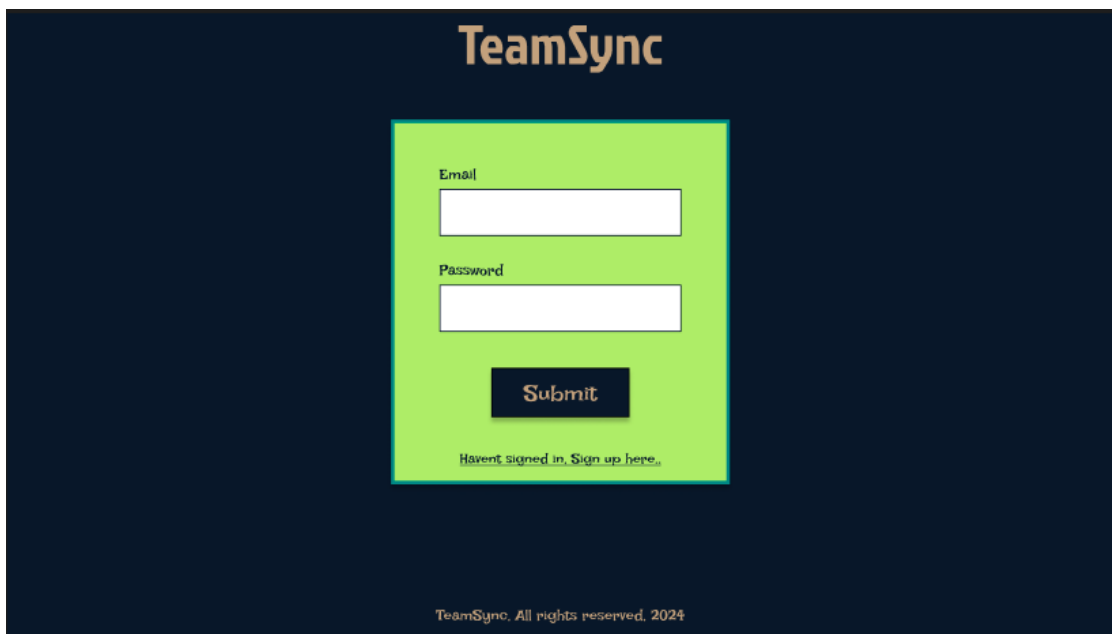
1. Module A: User Management
2. Module B: Project and Task Management
3. Module C: Communication and File Sharing
4. Module D: Reporting and Administration

4. Week-wise module implementation and high-level requirements with output screenshots

Milestone 1: Weeks 1-2

Modules A: User Management

- o Implement basic site structure with redirection to /home with dummy data.
- o Implement the static /about route.
- o Implement login and registration flow and all fail scenarios.
- o Allow role-based sign-in for Regular User and Admin, redirecting to role-specific dashboards.
- o Setup database and backend integration to support all functionalities.
- o Setup stubs for Project, Task, Communication, and File Management.
- o Ensure the application is functional with basic navigation.
- o Output screenshot:



TeamSync

To receive a reset link to your email, enter your email address here.

Your Email

Submit

[Want to try logging in, click here.](#)

TeamSync. All rights reserved. 2024

TeamSync

Please confirm your password to proceed with the password reset.

Password

Confirm Password

Reset

[Go back to Sign in.](#)

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TeamSync

Email

Password

Confirm Password

Register

[Already Registered? Sign in here](#)

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TeamSync

Welcome aboard!

Check your email at
xxxxx@yyy.zzz, follow the
link to complete your
registration!

[Already signed up, Sign in here.](#)

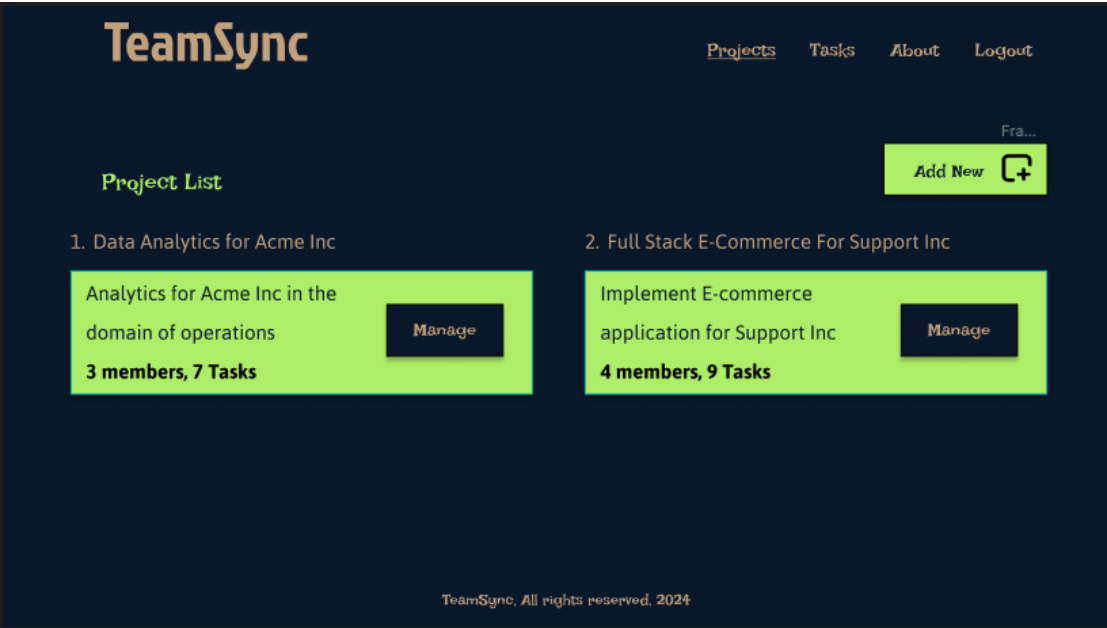
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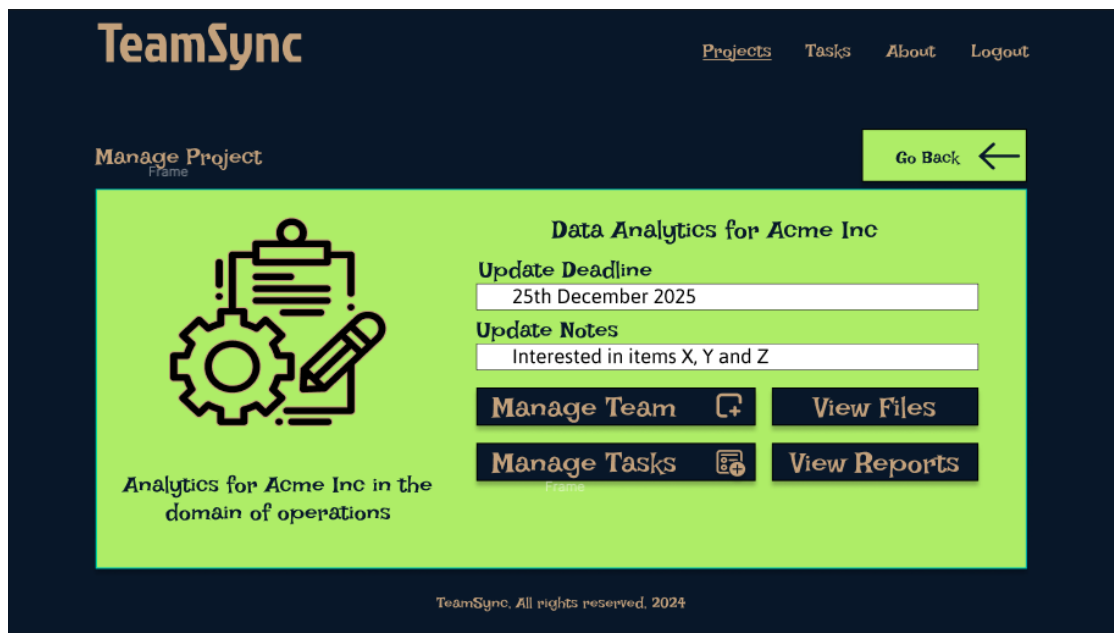


Milestone 2: Weeks 3-4

Module B: Project and Task Management

- o Implement project creation and management functionality.
- o Allow users to add tasks to projects, including descriptions, deadlines, and assignees.
- o Implement CRUD operations for tasks within projects.
- o Setup database schema for projects and tasks.
- o Integrate frontend with backend to support project and task management functionalities.
- o Tagging Code in Version Control
- o Output Screenshots:

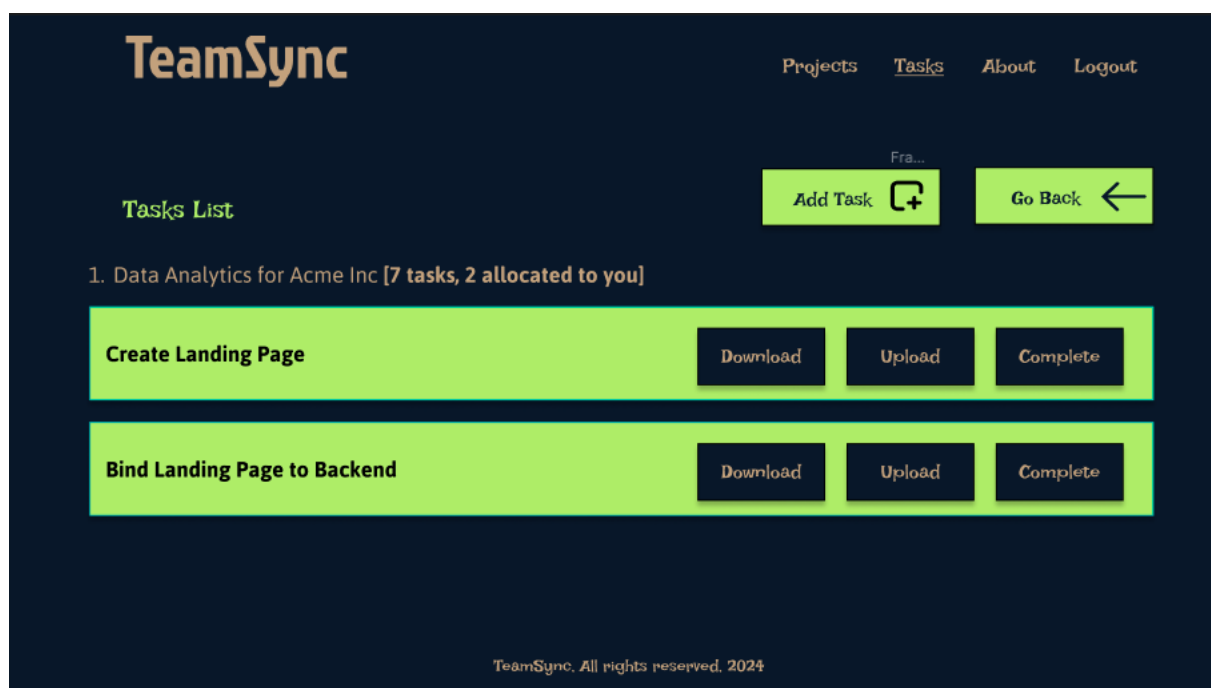
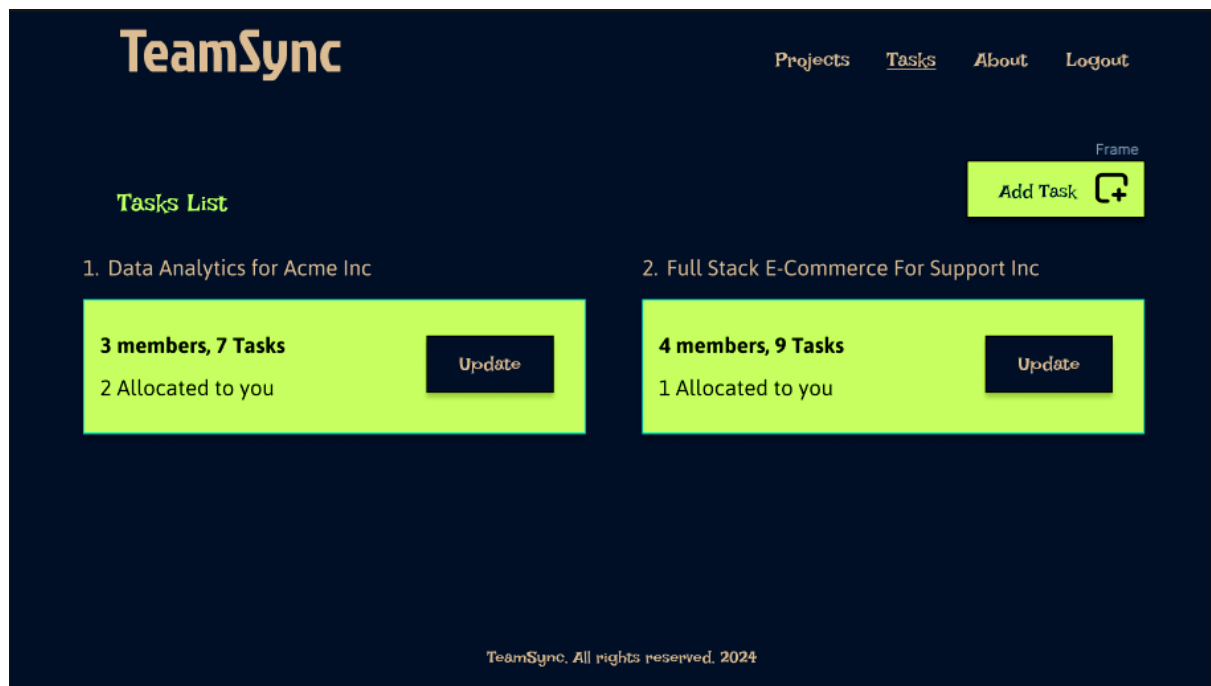




Milestone 3: Weeks 5-6

Module C: Data Operations and Reporting

- o Implement built-in comment system for project communication.
- o Allow users to share files within projects.
- o Implement file upload and download functionalities.
- o Ensure file sharing is secure and accessible to authorised users only.
- o Setup basic notification system (need not be real-time) for project updates and comments.
- o Integrate communication and file sharing features with existing project and task management functionalities.
- o Tagging code in Version Control.
- o Output Screenshot:



Milestone 4: Weeks 7-8

Module D: Performance Optimisation and Administration

- o Implement project progress and task completion reporting
- o Develop interfaces for generating and viewing reports.

- o Implement user and role management functionalities for admins.
- o Allow admins to archive or delete projects.
- o Integrate reporting and administrative features with the overall application.
- o Tagging code in version control.
- o Output Screenshot:

The screenshot displays the TeamSync web application interface. At the top, the 'TeamSync' logo is on the left, and navigation links for 'Projects', 'Tasks', 'About', and 'Logout' are on the right. Below the navigation bar, a report title 'Report: Data Analytics for Acme Inc' is shown on the left, and a 'Go Back' button with a left arrow is on the right. The main content area features a table with five columns: 'Task Name', 'Creation Date', 'Uploads', 'Assigned To', and 'Finish Date'. Each column header has a sort icon. The table contains four rows of task data. At the bottom of the page, a footer reads 'TeamSync. All rights reserved. 2024'.

Task Name	Creation Date	Uploads	Assigned To	Finish Date
Create Landing Page	23 July 2024	4	John Doe	In Progress
Bind Landing Page to Backend	13 Sept 2024	6	Amar	In Progress
Create Project Stub	31st Dec 2023	1	Akbar	21st Jan 2024
Implement API Login	20 July 2023	2	Anthony	14 Sep 2023

Evaluation Criteria:

Milestone 1 Evaluation (Week 2):

- o Completion of user authentication and registration.
- o Completion of login after authorisation.
- o Implementation of the static /about route.
- o Code checked into version control.

Milestone 2 Evaluation (Week 4):

- o Completion of project creation and management.
- o CRUD operations for tasks within projects.
- o Integration of frontend with backend for project and task management.
- o Code checked into version control.

Milestone 3 Evaluation (Week 6):

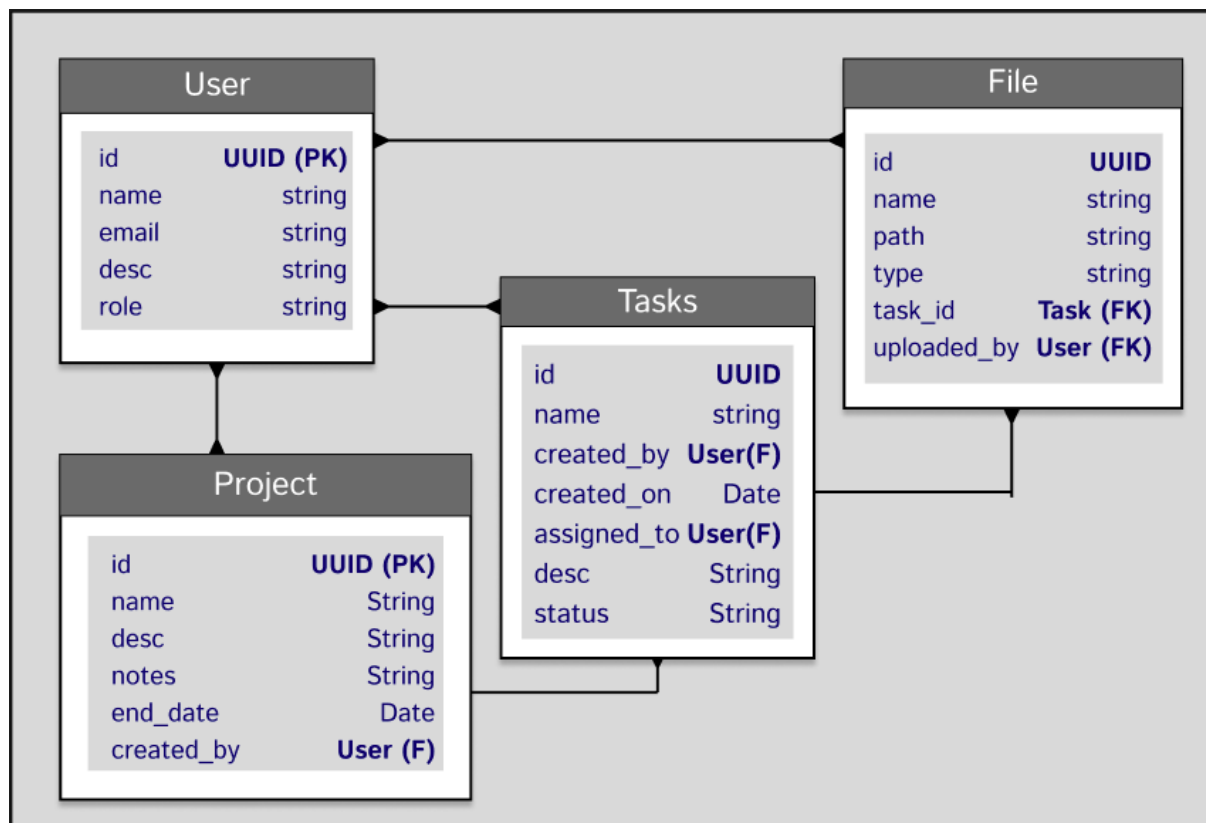
- o Implementation of comment system for project communication.
- o Completion of file sharing functionality within projects.
- o Integration of communication and file sharing features with project management.
- o Code checked into version control.

Milestone 4 Evaluation (Week 8):

- o Implementation of project progress and task completion reporting.
- o Completion of user and role management functionalities.
- o Admin capabilities to archive or delete projects.
- o Integration of reporting and administrative features.
- o Tagging code in version control.

5. Design Diagrams

Class Diagram: Entity classes



Class Diagram: Service Interface

auth/ Authentication Service				
/login	POST	{ email: "abc@def.ghi", password: "\$3cre+P@s\$" }	200, 400, 401	
/forgot	POST	{ email: "abc@def.ghi" }	200, 400, 404	
/reset/<token>	GET	{ newpassword: "n3wPa5\$w@rd" }, Query param: Token	200, 400, 401	
/register	POST	{ email: "abc@def.ghi", password: "\$3cre+P@s\$" ... }	201, 400, 409	
/confirm/<token>	GET	Query param: Token	200, 400, 401	
Project/ Project Service (protected)				
/<.id>	GET	Query Param: project ID	200, 404	
/manage/<.id>	PUT	{ updates or user data }	204, 401, 404	
/	POST	{ name: "ABC", notes: "xxx", description: "xxx" ..}	201, 400	
/	PUT	{ name: "ABC", notes: "xxx", description: "xxx" ..}	200, 400, 404	
/<.id>	DELETE	Query Param: project ID	200, 404	
Tasks/ Tasks Service (protected)				
/<.id>	GET	Query Param: Task ID	200, 404	
/manage/<.id>	PUT	Query Param: Task ID	204, 401, 404	
/	POST	{ name: "xxx", deadline: "24/072024", status: "xxx" }	201, 400	
/	PUT	{ name: "xxx", deadline: "24/072024", status: "xxx" }	200, 400, 404	
/<.id>	DELETE	Query Param: Task ID	200, 404	
/<.id>/document	PUT	Image Data as a param	200, 400, 404	
admin/ Admin Service (protected)				
/users	POST		200, 404	
/users/<.id>	GET	Query Param: User ID	200, 400, 404	
/users/<.id>	DELETE	Query Param: User ID	204, 404, 400	