

# Final Product Report

## Team - SPM

### Product Description:

**Project Name:** Systematic Planner and Management

#### Problem Statement:

- Currently, there are few tools and services available for planning and management, but they are all designed to cater to the needs of enterprises only and are too complex for a general user.
- So there is a need for a system that is easy to use, accessible to everyone, and can perform a variety of tasks.
- There is a need for a centralized planner system that can easily be accessed and updated by the members.
- The tool should provide a way to ensure that everyone is on the same page and that tasks are not duplicated or overlooked.
- The tool should help individuals and teams prioritize tasks based on urgency and deadline, ensuring important tasks are completed well before time.
- This tool should also help with better collaboration and communication between the team members.

#### Project Idea:

Systematic planning and management tool helps individual users, teams, and enterprises plan, assign, track, and manage work, bringing teams together for everything from trip planning to ToDo lists to wedding planning and even software development.

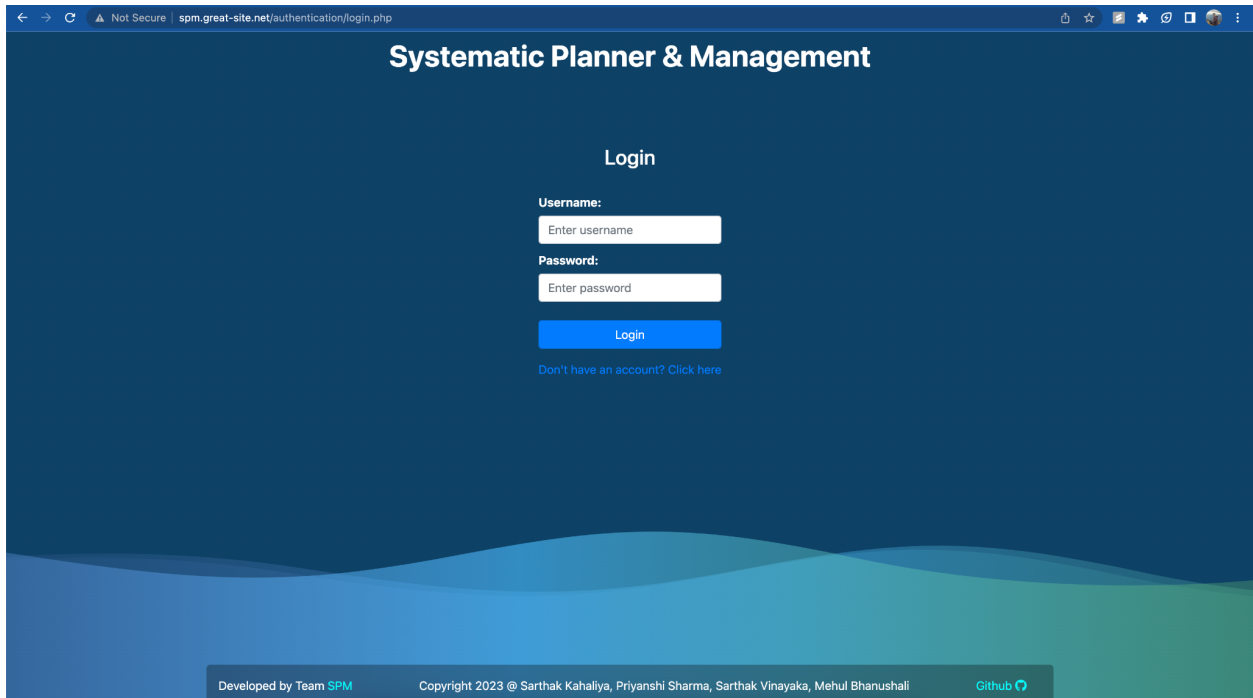
The system can be used by individuals or teams to manage their work and stay organized. The project would involve designing and developing a user-friendly interface that allows users to easily create and view tasks, assign them to team members, set deadlines, and track progress. Finally, the system would be built with security in mind and would provide users with the ability to control access to their tasks and projects.

#### Project Stakeholders and Business needs:

- General Public as an individual or group of individuals.
- Any Organisations for e.g. - restaurants, wedding planners, Enterprises, etc.
- The project manager or team leader.
- The IT department or the vendor that is responsible for maintaining and updating the system.

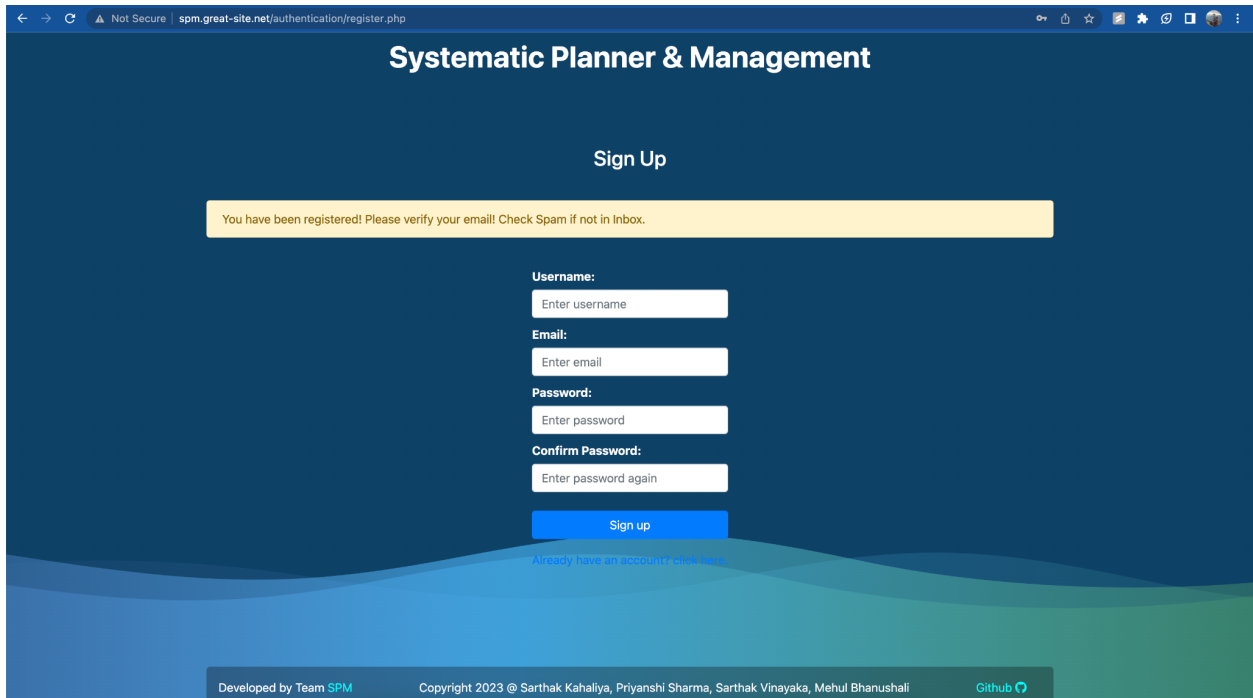
## Product Functionalities:

### Login:



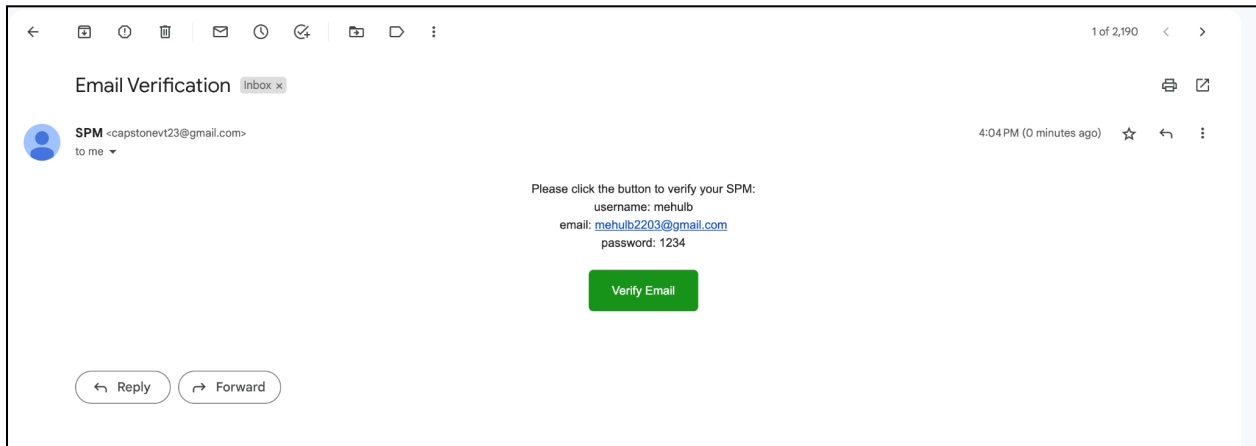
The screenshot shows a web browser window with the URL `spm.great-site.net/authentication/login.php`. The page title is "Systematic Planner & Management". The main heading is "Login". Below the heading, there are two input fields: "Username:" with the placeholder "Enter username" and "Password:" with the placeholder "Enter password". A blue "Login" button is positioned below the password field. A link "Don't have an account? Click here" is located below the button. At the bottom of the page, there is a footer with the text "Developed by Team SPM", "Copyright 2023 © Sarthak Kahaliya, Priyanshi Sharma, Sarthak Vinayaka, Mehul Bhanushali", and a "Github" link.

### Register:

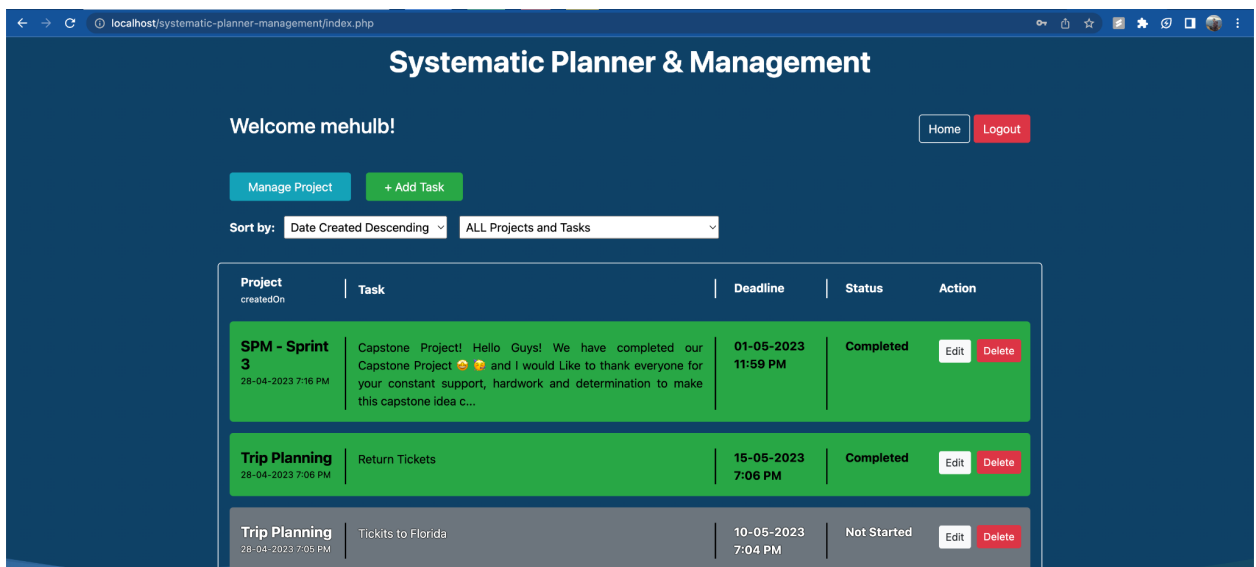


The screenshot shows a web browser window with the URL `spm.great-site.net/authentication/register.php`. The page title is "Systematic Planner & Management". The main heading is "Sign Up". A yellow notification box at the top contains the message: "You have been registered! Please verify your email! Check Spam if not in Inbox." Below the notification, there are four input fields: "Username:" with the placeholder "Enter username", "Email:" with the placeholder "Enter email", "Password:" with the placeholder "Enter password", and "Confirm Password:" with the placeholder "Enter password again". A blue "Sign up" button is positioned below the confirm password field. A link "Already have an account? Click here" is located below the button. At the bottom of the page, there is a footer with the text "Developed by Team SPM", "Copyright 2023 © Sarthak Kahaliya, Priyanshi Sharma, Sarthak Vinayaka, Mehul Bhanushali", and a "Github" link.

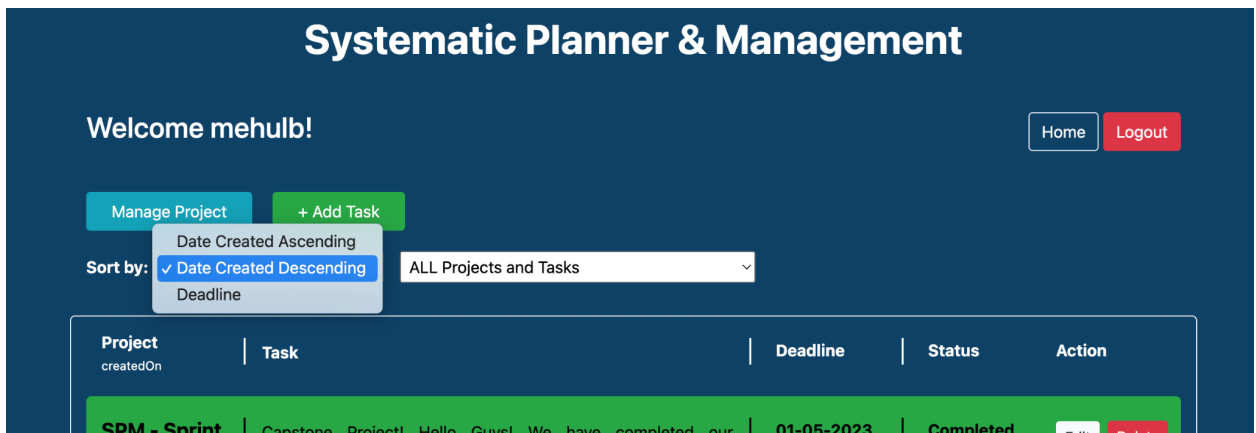
## Email Verification:



## Dashboard:



## Sorting Projects:



Filtering project:

The screenshot shows the 'Systematic Planner & Management' dashboard. At the top, it says 'Welcome mehub!' with 'Home' and 'Logout' buttons. Below are 'Manage Project' and '+ Add Task' buttons. A 'Sort by:' dropdown is set to 'Date Created Descending'. A dropdown menu is open, showing options: 'ALL Projects and Tasks', 'ID: 1 Project: SPM - Sprint 3', 'ID: 2 Project: Trip Planning' (highlighted), and 'ID: 5 Project: Collaborations'. Below the menu is a table with columns: Project (createdOn), Task, Deadline, Status, and Action. The first row shows 'SPM - Sprint 3' with a task description, a deadline of '01-05-2023 11:59 PM', and a status of 'Completed' with 'Edit' and 'Delete' buttons.

New project, edit project, delete project:

The screenshot shows the 'manageproject.php' form in the 'Systematic Planner & Management' application. It includes a 'Project Name' input field with an 'Add Project' button. Below is a 'Select Project:' dropdown menu with 'ID: 1 Project: SPM - Sprint 3' selected and a 'Delete Selected Project' button. The 'Project Owner:' field is set to 'mehub'. The 'Add User to Project:' section has an 'Enter name' input and an 'Add User' button. Under 'Assigned Users', there are buttons for 'sarthakv', 'sarthakk', 'priyanshi', and 'mehul'. The footer contains the text: 'Developed by Team SPM Copyright 2023 @ Sarthak Kahaliya, Priyanshi Sharma, Sarthak Vinayaka, Mehub Bhanushali Github'.

New task, deadline, and content section:

## Systematic Planner & Management

[Home](#) [Logout](#)

Create Task

Select Project: ID: 2 Project: Trip Planning

File Edit View Insert Format Table

new Task

May 2023

S	M	T	W	T	F	S	04	13	PM
30	1	2	3	4	5	6	05	14	AM
7	8	9	10	11	12	13	06	15	
14	15	16	17	18	19	20	07	16	
21	22	23	24	25	26	27	08	17	
28	29	30	31	1	2	3	09	18	
4	5	6	7	8	9	10	10	19	

Deadline:

2 WORDS POWERED BY TINY

[Add Task](#)

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Task view:

[Home](#) [Logout](#)

Created on 28-04-2023 7:16 PM

Project: SPM - Sprint 3

[Edit](#) [Delete](#)



## Capstone Project!

Hello Guys!

We have completed our Capstone Project 🥳 and I would like to thank everyone for your constant support, hardwork and determination to make this capstone idea come to reality.

Team: Sarthak Kahaliya, Sarthak Vinayaka, Priyanshi Sharma, Mehul Bhanushali

The Dream Team 🤖! Will miss you guys a lot after our Graduation 🥳

New update

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Add, delete comments, and assign a user:

Deadline: 01-05-2023 11:59 PM  
Created By  
mehub

Assigned Users  
sarthakv sarthakk priyanshi mehul

Comments:

sarthakk  
Hi this is great

mehub  
Hello everyone this is amazing

Delete Comment

File Edit View Insert Format Table  
Undo Bold Italic Underline Link Image Video Table List Bulleted List Numbered List Link Unlink

Add Comment

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This screenshot shows a task management interface. At the top, it displays the deadline as '01-05-2023 11:59 PM' and the creator as 'mehub'. Below this, the 'Assigned Users' section lists 'sarthakv', 'sarthakk', 'priyanshi', and 'mehul'. The 'Comments' section contains two entries: one from 'sarthakk' saying 'Hi this is great' and another from 'mehub' saying 'Hello everyone this is amazing'. A 'Delete Comment' button is visible below the second comment. A rich text editor with a toolbar (File, Edit, View, Insert, Format, Table) and a 'Add Comment' button are also present. The footer includes 'Developed by Team SPM', copyright information for 2023, and a GitHub link.

Edit task, change task status, deadline and remove users.

Created on 28-04-2023 7:16 PM

Project: SPM - Sprint 3

File Edit View Insert Format Table  
Undo Bold Italic Underline Link Image Video Table List Bulleted List Numbered List Link Unlink

VT VIRGINIA TECH.

Capstone Project!

Status: Not Started In Progress **Completed**

Deadline: 05/01/2023, 11:59 PM Save

Enter name Add User

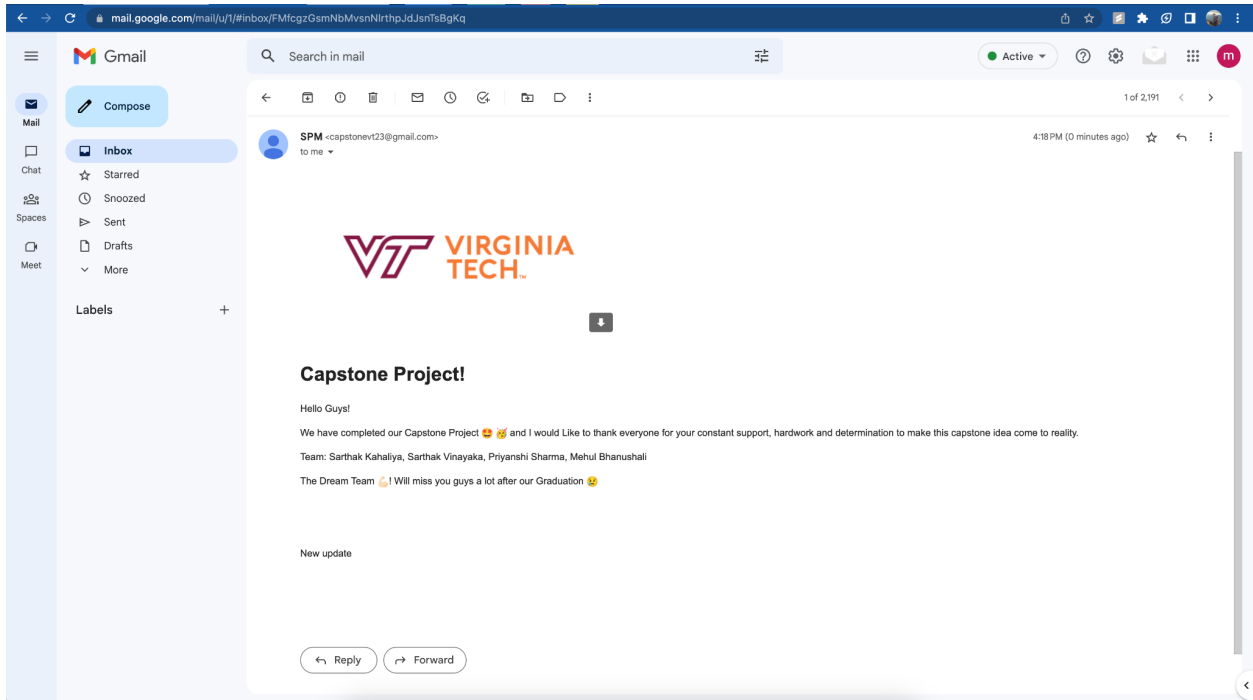
Created by mehul

Assigned Users sarthakv sarthakk priyanshi mehul

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This screenshot shows a task management interface for editing a task. The task is titled 'Capstone Project!' and is part of 'Project: SPM - Sprint 3'. The status is currently 'Completed', with options for 'Not Started', 'In Progress', and 'Completed'. The deadline is set to '05/01/2023, 11:59 PM'. The task was created on '28-04-2023 7:16 PM' by 'mehul'. The 'Assigned Users' section lists 'sarthakv', 'sarthakk', 'priyanshi', and 'mehul'. A rich text editor with a toolbar (File, Edit, View, Insert, Format, Table) is visible, containing the Virginia Tech logo and the text 'Capstone Project!'. There is an 'Add User' button and a 'Save' button. The footer includes 'Developed by Team SPM', copyright information for 2023, and a GitHub link.

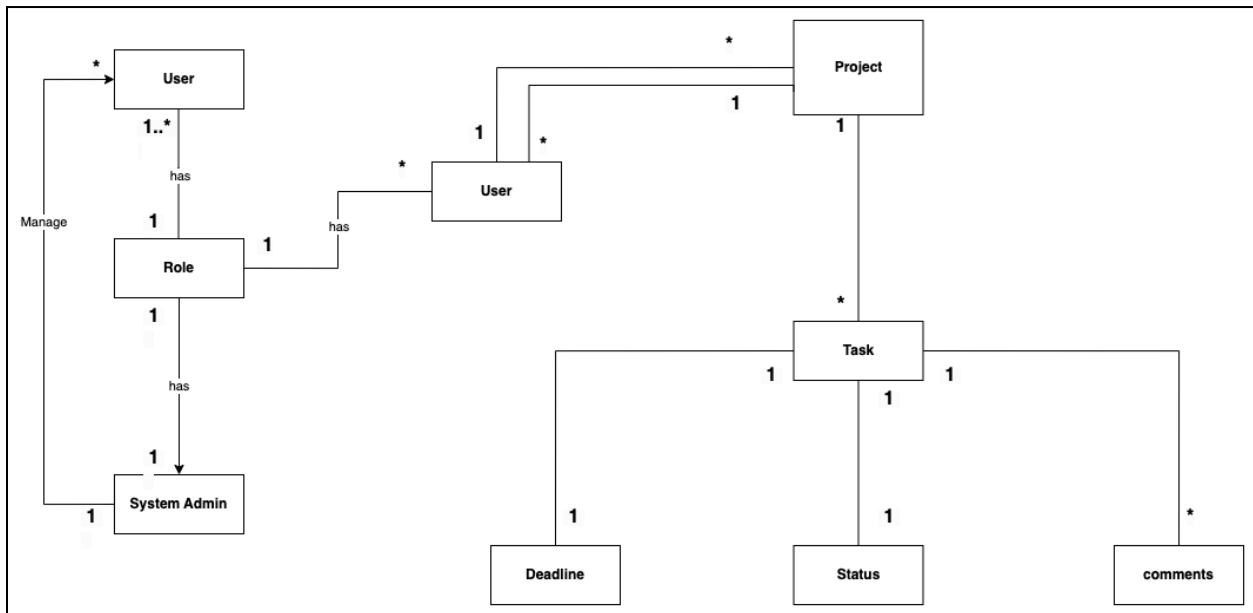
## Task assignment email:



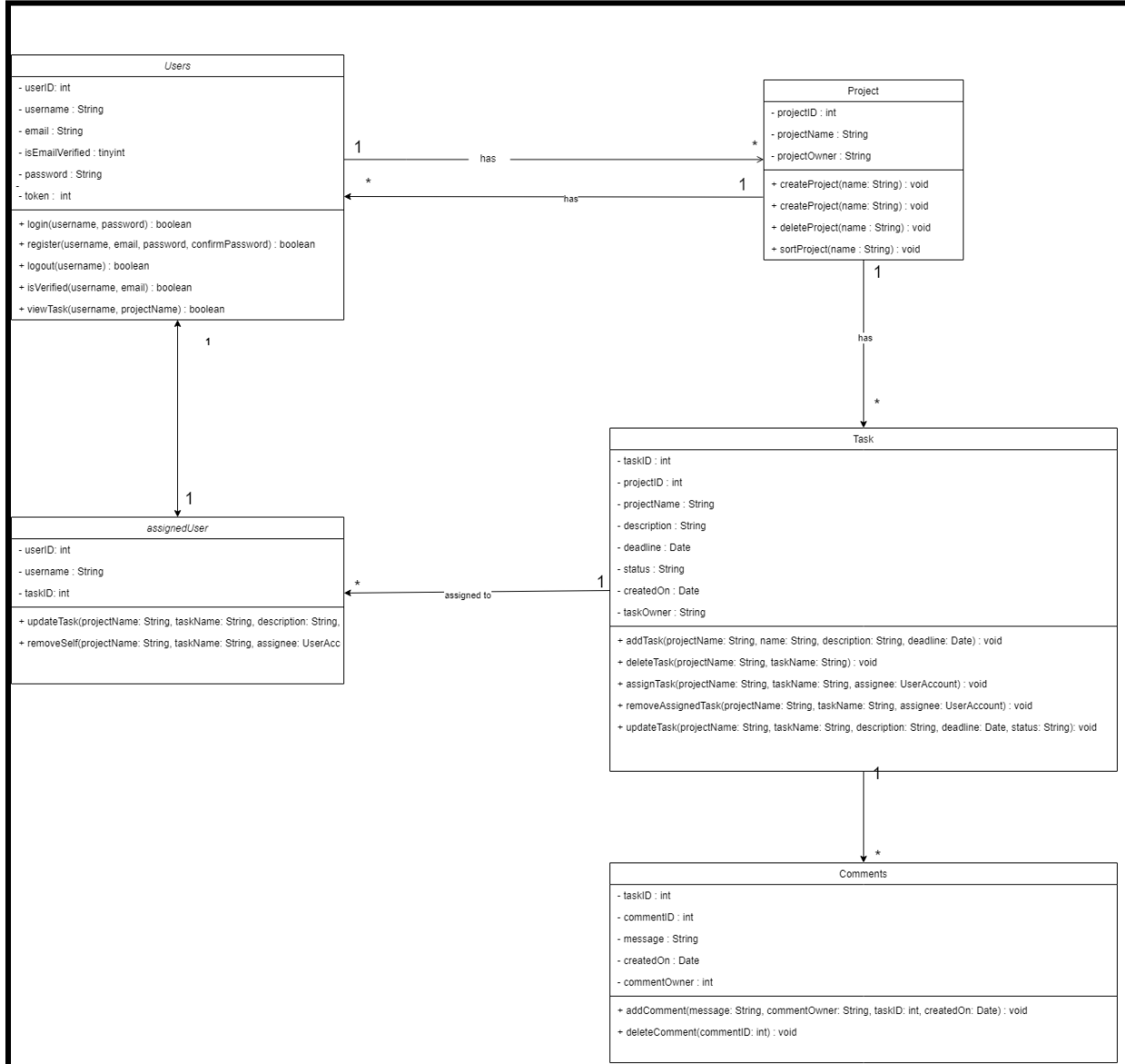
## Design:

### Domain Model

Here is the final domain model with all the entities.



## Design Class Diagram



## Sequence Diagram

The GRASP pattern is applied as below:

### 1. Information Expert:

- **Auth.php** is responsible for checking the authentication of the user.
- **Login.php** is responsible for logging in the user.
- **Logout.php** is responsible for logging out the user.
- **Register.php** is responsible for registering a new user.



- **views** is responsible for displaying all the necessary information regarding projects, tasks and user.
- **index.php** is responsible for the index page of the web application.

## 2. Creator

- **Auth.php** is responsible for authenticating the users so that they can access other pages such as index.php, create.php,edit.php.
- **Logic.php** contains functionality that is responsible to access all other pages.
- **methods.php** is responsible for all the sorting, filtering and the basic functionality of the web application.

## 3. High Cohesion:

Each class in our design should have a single purpose; this is essential for high coherence and will also help us achieve low-level coupling.

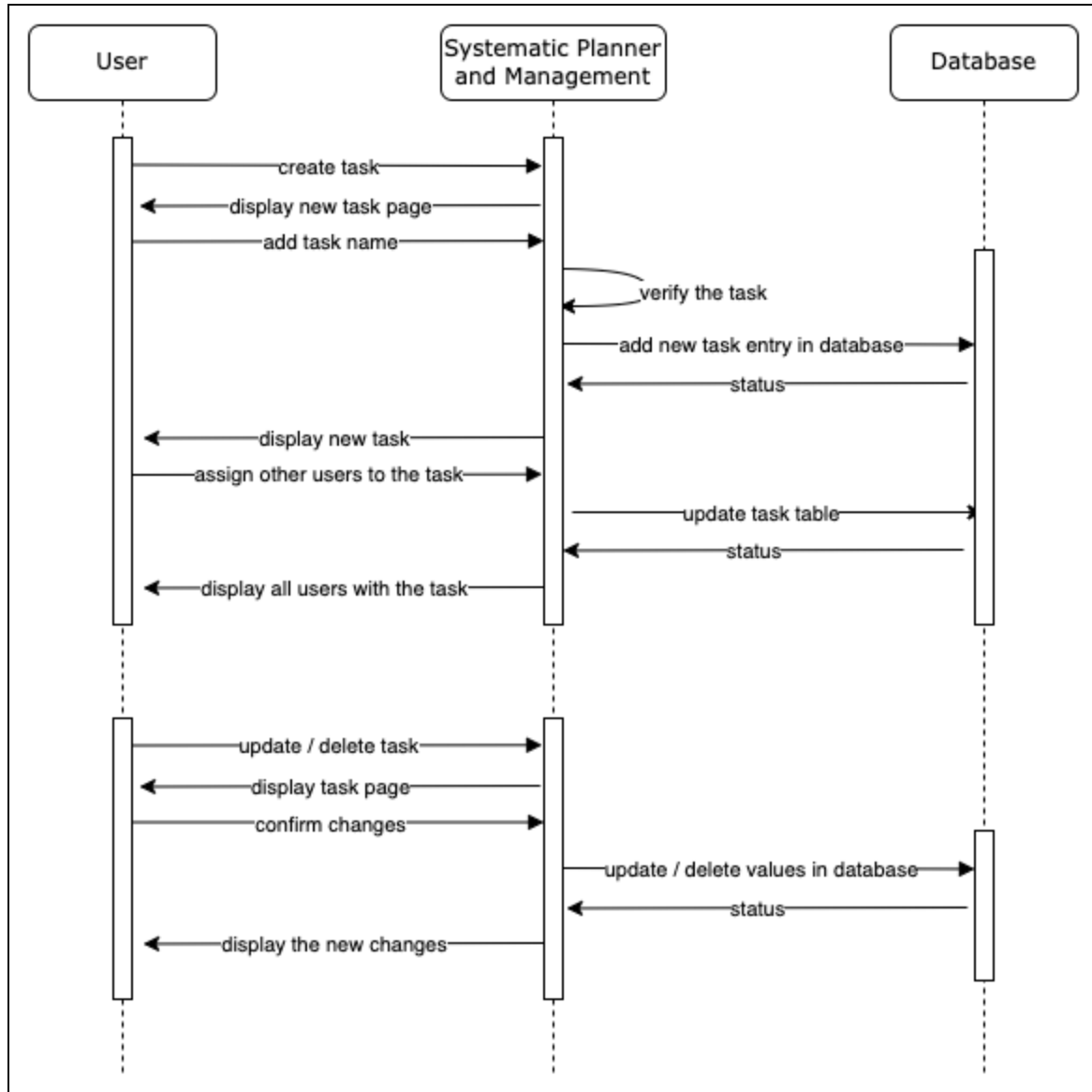
4. **Low Coupling:** Each function is independent of each other for example if you modify the create task functionality it will not change edit task or create project functionality. So if all the functions are independent we can say that it is following low coupling.

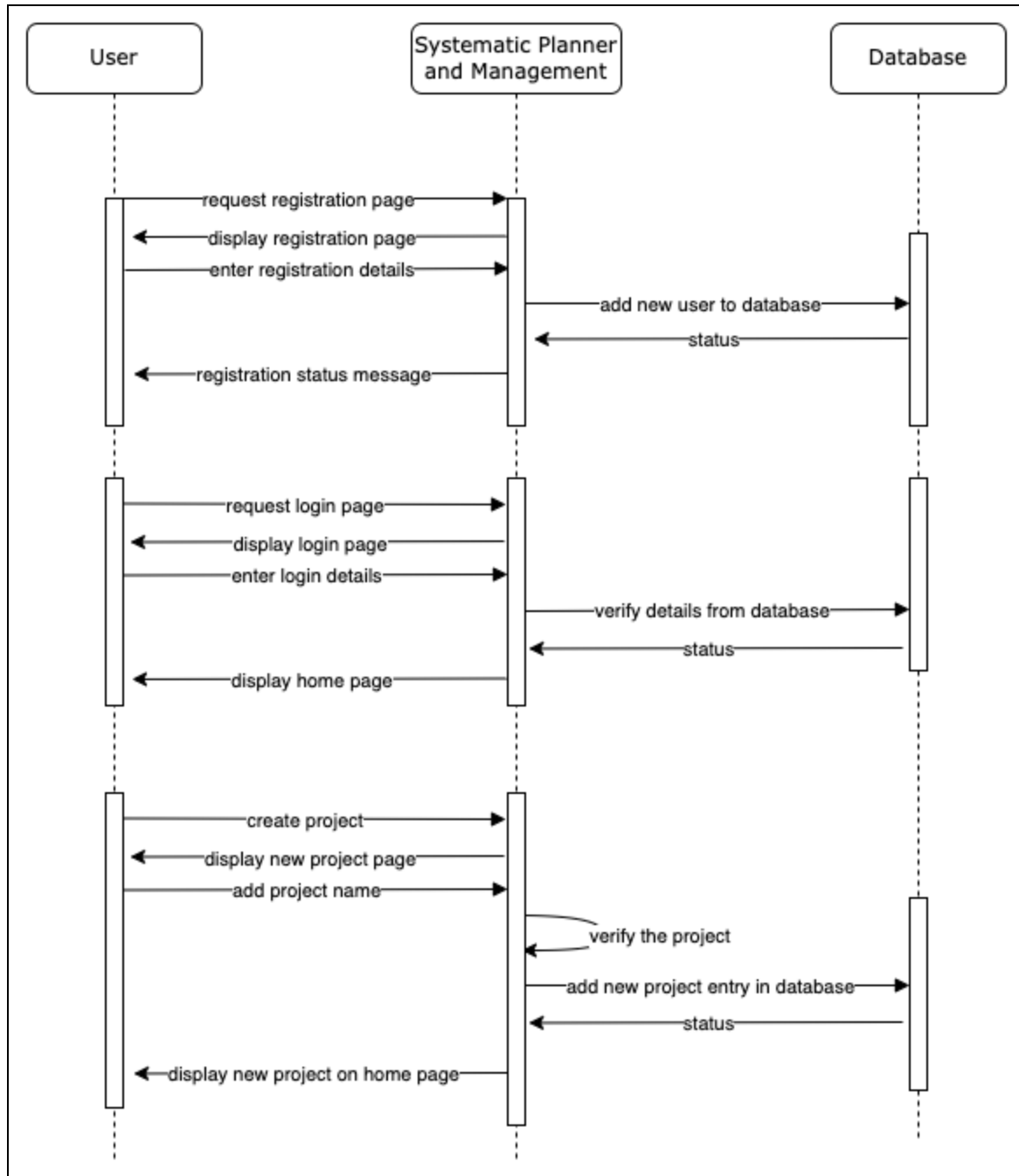
5. **Controller:** Our main use cases, which entail creating a user, a project, and an application, may each be assigned use case-based handlers in the controller scenario. This will enable us to manage the order of events in accordance with our own use cases.

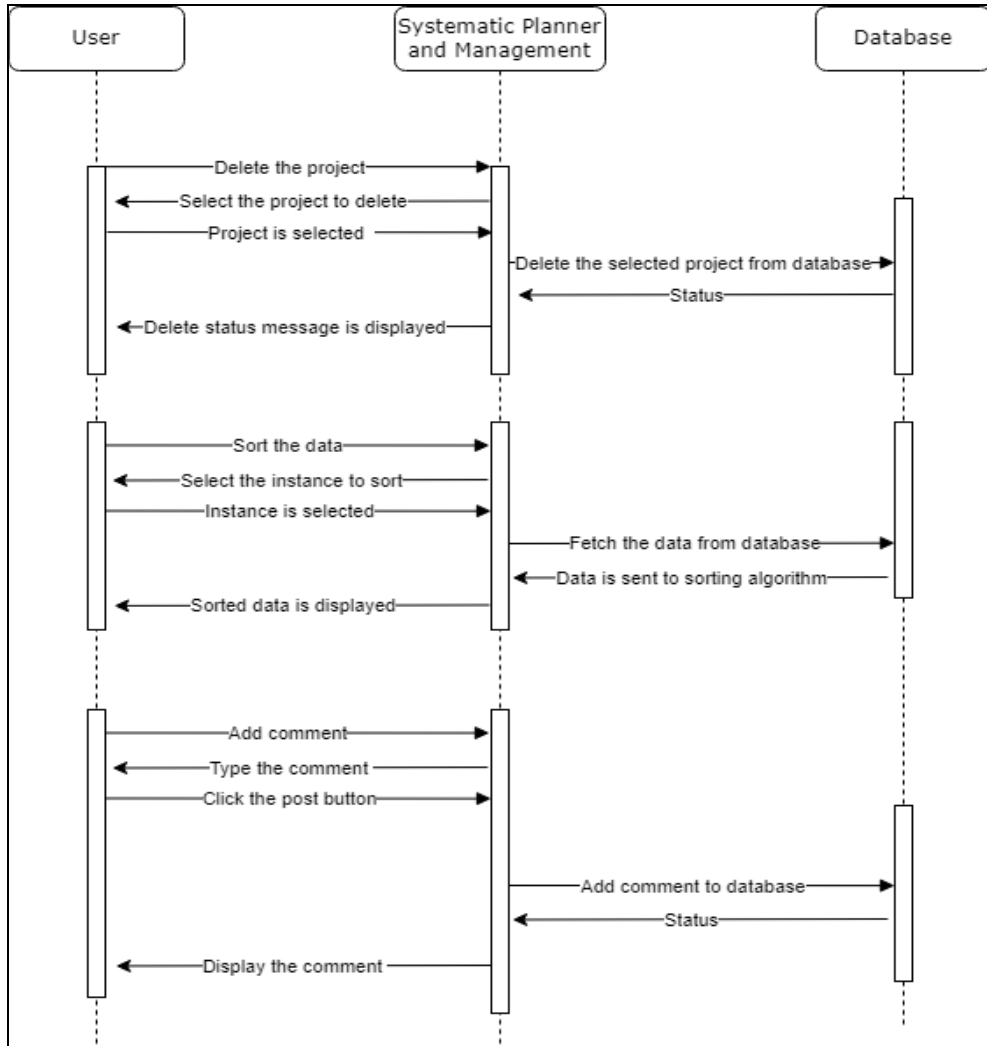
Example:

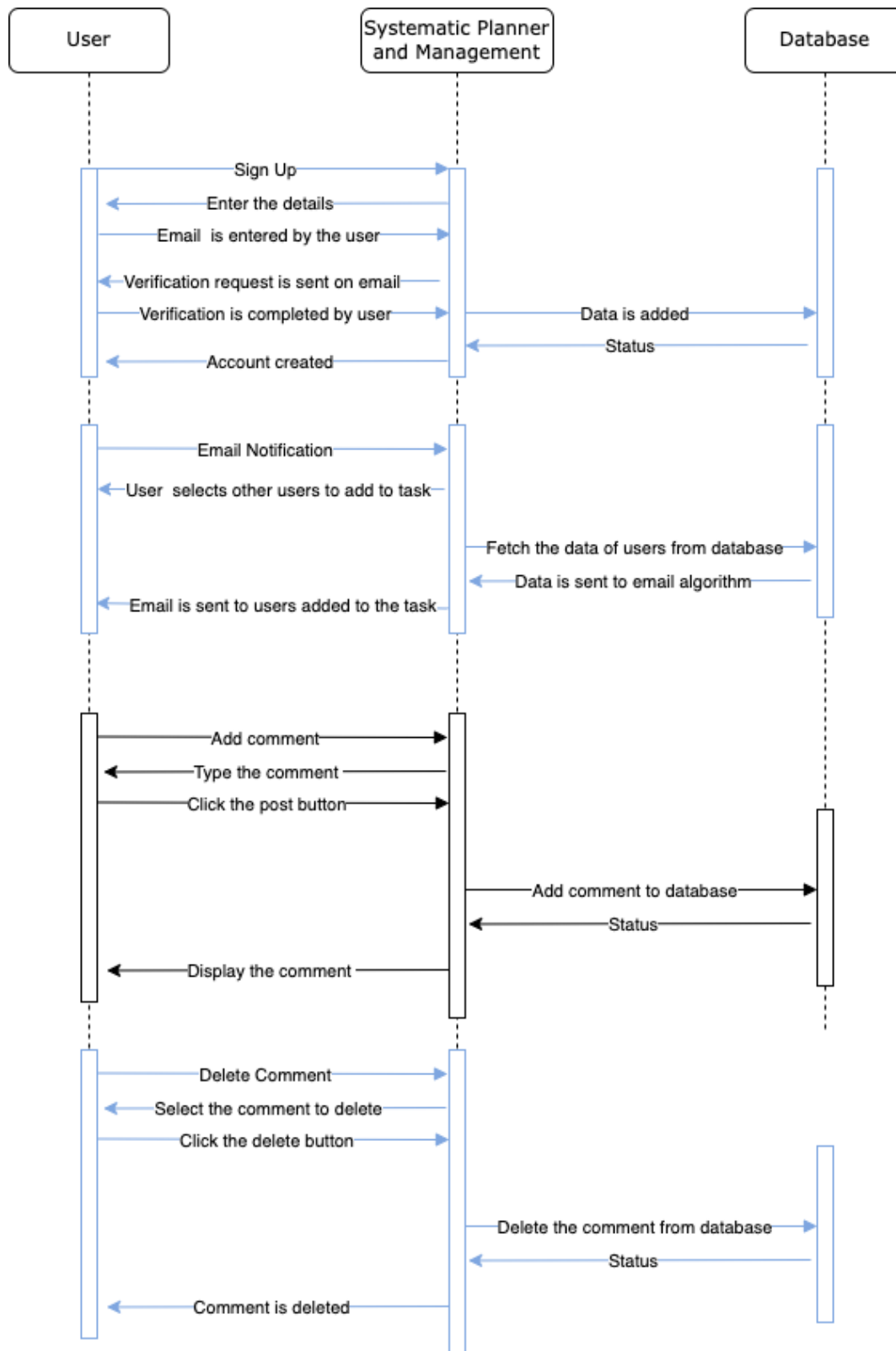
To authenticate the user and determine their access role in our scenario, the controller queries server-side REST APIs with a POST Method called login\_btn().

Below is the sequence diagram and it shows the timeline of events for all the user stories we have implemented throughout the project.

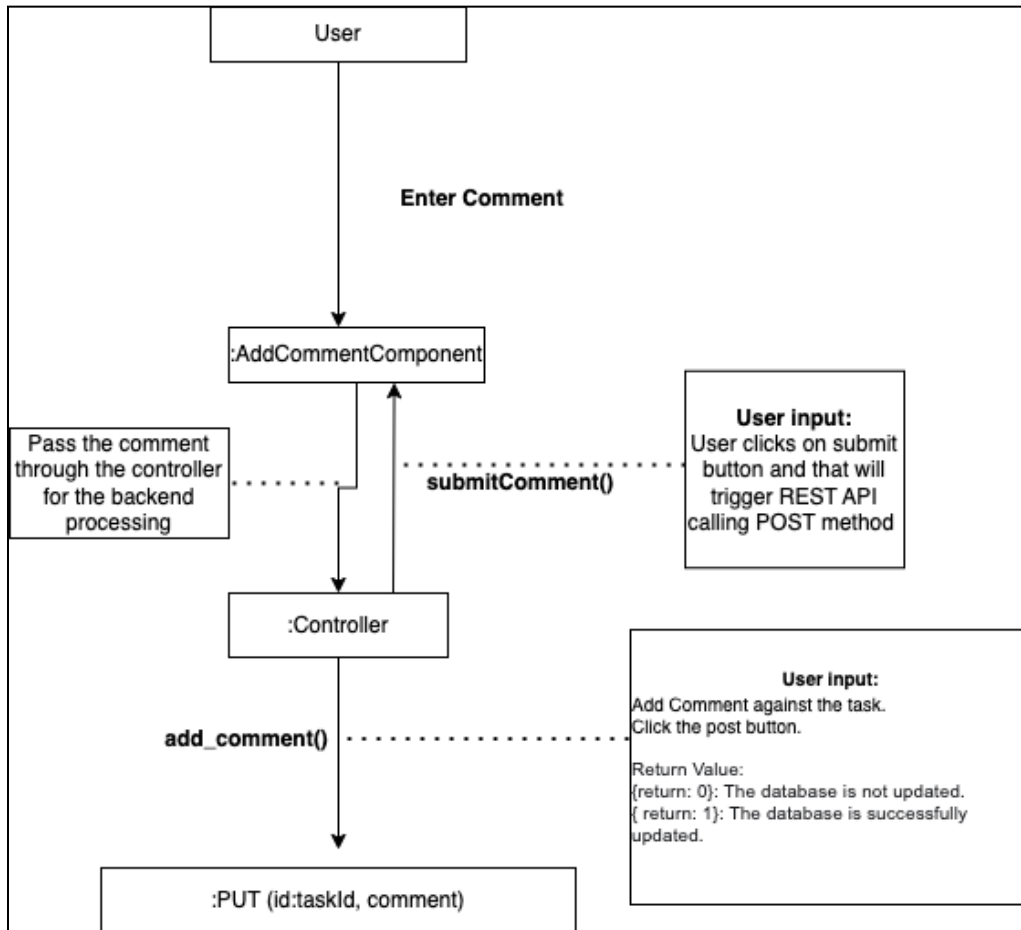








## Collaboration Diagram



For building this project we have used php for this project because of various reasons such as ease of learning, and readability and offers easibility. Since it is a Procedural programming language it is faster and more efficient than object-oriented programming, especially for smaller projects, and offers greater reusability as procedures can be used in different parts of the program without object dependencies.

Other tools that are being used were -

**IDE** - Visual studio code

**Tool** - PhpMyAdmin, Xampp, GitLab, infinityfree for hosting the website

For one functionalities we did use one of the sorting algorithm to sort the data of database,

## **What is Unique about our project?**

Other systems or tools that have functionality similar to our project are Jira, Asana, and Kanban boards. All of these applications have the functionality of managing different projects within a team and are mostly used by software developers.

Only businesses and enterprises can use these applications because they are too complicated for regular users. Experts in fields as different as software engineering, IT, marketing, and finance use these applications for project management. Yet the broader public might not be familiar with it. They are designed for groups and teams rather than individuals, and they may not be widely known or used outside of the business world. But our application can be used by a person having zero to no technical knowledge. And it is being made for the general public for managing the small small tasks with ease and in an interactive manner.

## **Retrospection:**

### **What went well and what went wrong?**

- We were able to implement all the user stories that we planned and also added a few extra during the last sprint like email verification.
- We were able to target all the user personas that were decided during the phase 2.
- We were able to address all the feedbacks given to us by our classmates and the professor and worked on solving them.
- Successfully hosted our website!
- The team encountered various difficulties such as over-commitment during sprint 1 as we thought we could complete more user stories during this time.
- Technical issues with PHP, such as relative paths and compatibility issues with newer versions of packages, required the team to rework some code.
- Time management was difficult due to varying schedules, making scheduling meetings a challenge.

### **Discuss what you have learned and how working on this product added to your skills?**

The team learned important lessons from the difficulties encountered during the project.

- They emphasized the importance of having a realistic plan, anticipating technical issues, breaking down large tasks into smaller ones, and managing time efficiently.
- To work on time management the team implemented various solutions to improve their workflow, such as creating a shared calendar, being more proactive in scheduling meetings, using Notion to track progress, and regularly reviewing the backlog to prioritize tasks effectively.
- We have a couple folks that are solely focused on backend development, one person who handles frontend development, and one person who can handle fullstack. Everyone on the team has worked with databases in a variety of capacities in the past for various projects. So, there was a lot of things we learned as a team.

**Describe actions that should have been taken to avoid the problems encountered while working on the project?**

- To make sure we do not over commit ourself after phase 2, we systematically divided our user stories for the last 2 sprints. We thoroughly evaluated the project requirements and estimated the time required to complete each task. We should have done this since the beginning of the project but we learn as we go.
- For all the technical issue we faced, we were able to dive deep into the problem as work on the bug as we go and were able to solve most of the problems although it did take us quite a lot of time. We realize now that using php was not a great idea since there were lot of packages and it created a lot of compatibility issues for us.
- We created a shared calendar that includes all meetings and deadlines to help manage time more efficiently. We also used Notion to keep track of how our project is going and to check the backlog regularly to make sure that tasks are ranked correctly and that we are working on the most important ones.

**Describe how could your product get better?**

- To make our product better, making our web app more dynamic so that it works well on mobile phones would be our next step.
- And we can also work on a mobile application for it for convenience.
- Our comment section does not have an edit button, so adding that would make it better.

**Link to our Gitlab repository:**

<https://code.vt.edu/spm/systematic-planner-management>

**Demo video link:**

<https://drive.google.com/drive/folders/1Tw7d1GXEsKI929jd91VAtgBXvn9M0mzG?usp=sharing>