TASK TRACKER

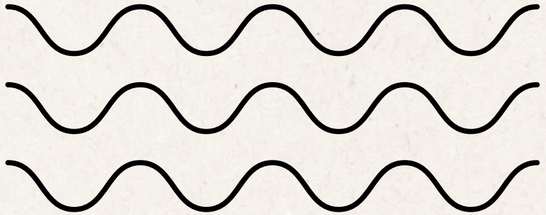
Open Source Practice Project

MEMBERS:

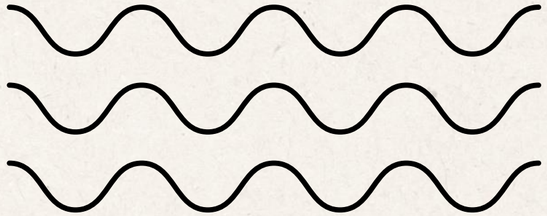
413854927 周瑋霖
412850173 梁浤祐
413854620 藍亞力
413854885 石黑翔平
412850215 薛竣珵

GITHUB:
github.com/itsYali/task-tracker

YOUTUBE:
https://youtu.be/vhsB4v5hpGQ



Designing the Web App



Introduction

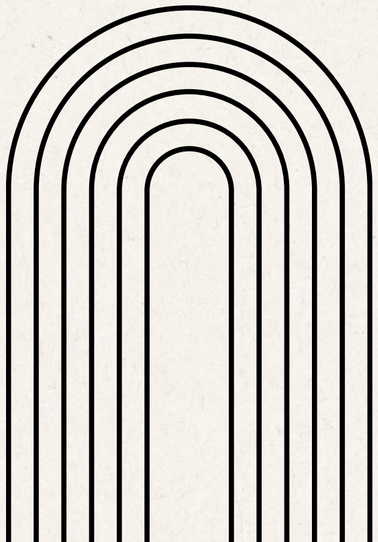
Task Tracker is a simple web-based application that helps users manage and track their tasks

Project Goals

Allow users to add tasks, set target dates, mark tasks as completed

Tasks can be filtered by status (complete, incomplete)

Implement a user registration and login system for managing personal list of tasks



Application Design

Follows a client-server model where most processing is handled on the server side

Architecture:

PHP for backend logic

MariaDB for data storage and management

CSS & JavaScript for frontend

Application Design

Follows a client-server model where most processing is handled on the server side

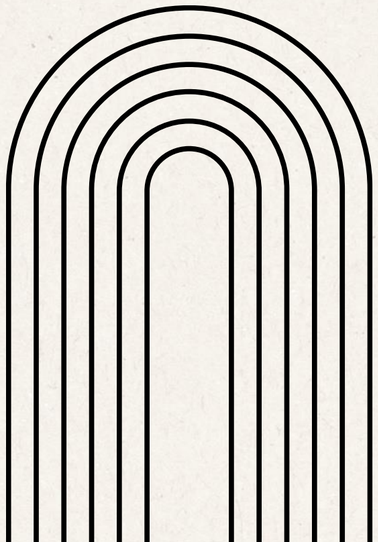
Main Modules:

User Authentication (registration, login)

Task Management (create, complete, filter tasks)

Personal Dashboard (shows user’s tasks and status)

Data Validation (ensures correct input)



Database Schema

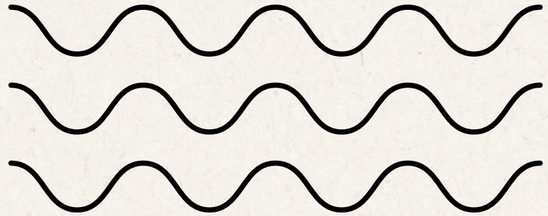
users: user_id, username, password_hash

tasks: task_id, user_id, task_name, target_date, is_completed, completed_date, created_at

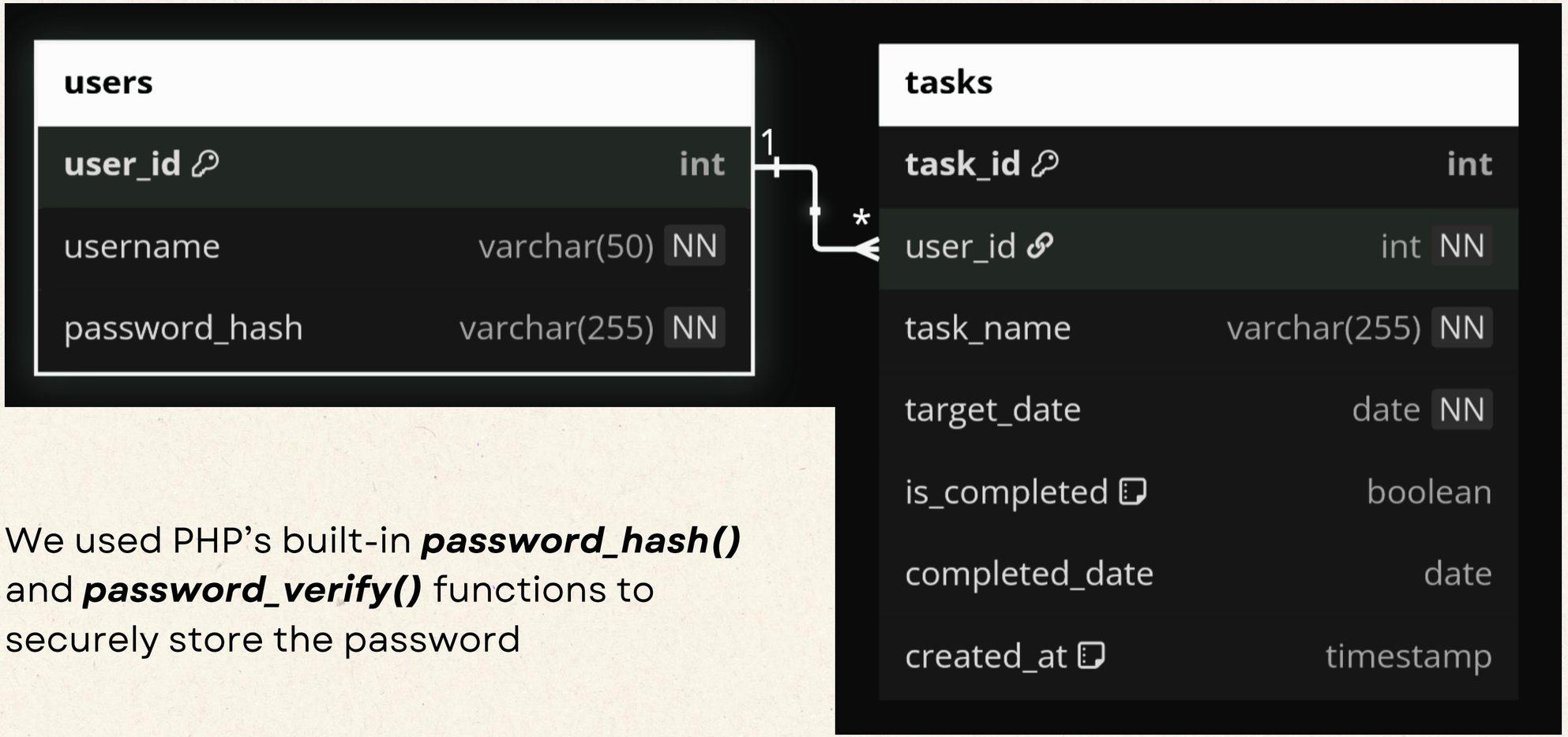
Relationship

Users have a **1 : Many** relationship with Tasks

Tasks have a **Many : 1** relationship with Users



Entity Relationship Diagram



We used PHP's built-in ***password_hash()*** and ***password_verify()*** functions to securely store the password

Data Validation

Client-side JavaScript

Ensures required fields are filled

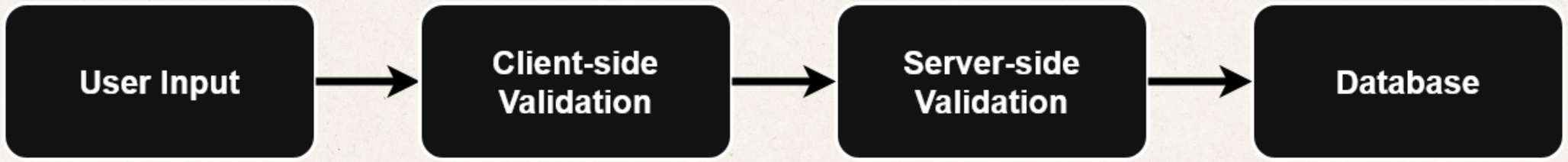
Checks password confirmation

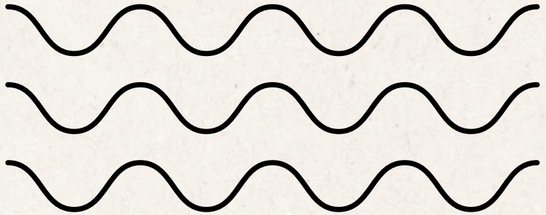
Enures date formats are valid

Server-side (PHP)

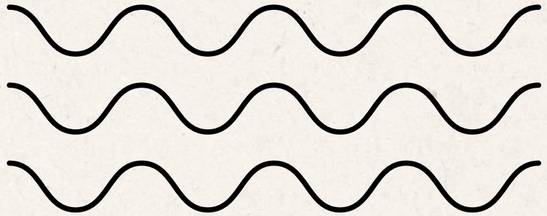
Validates all user input

Checks for duplicate usernames on registration

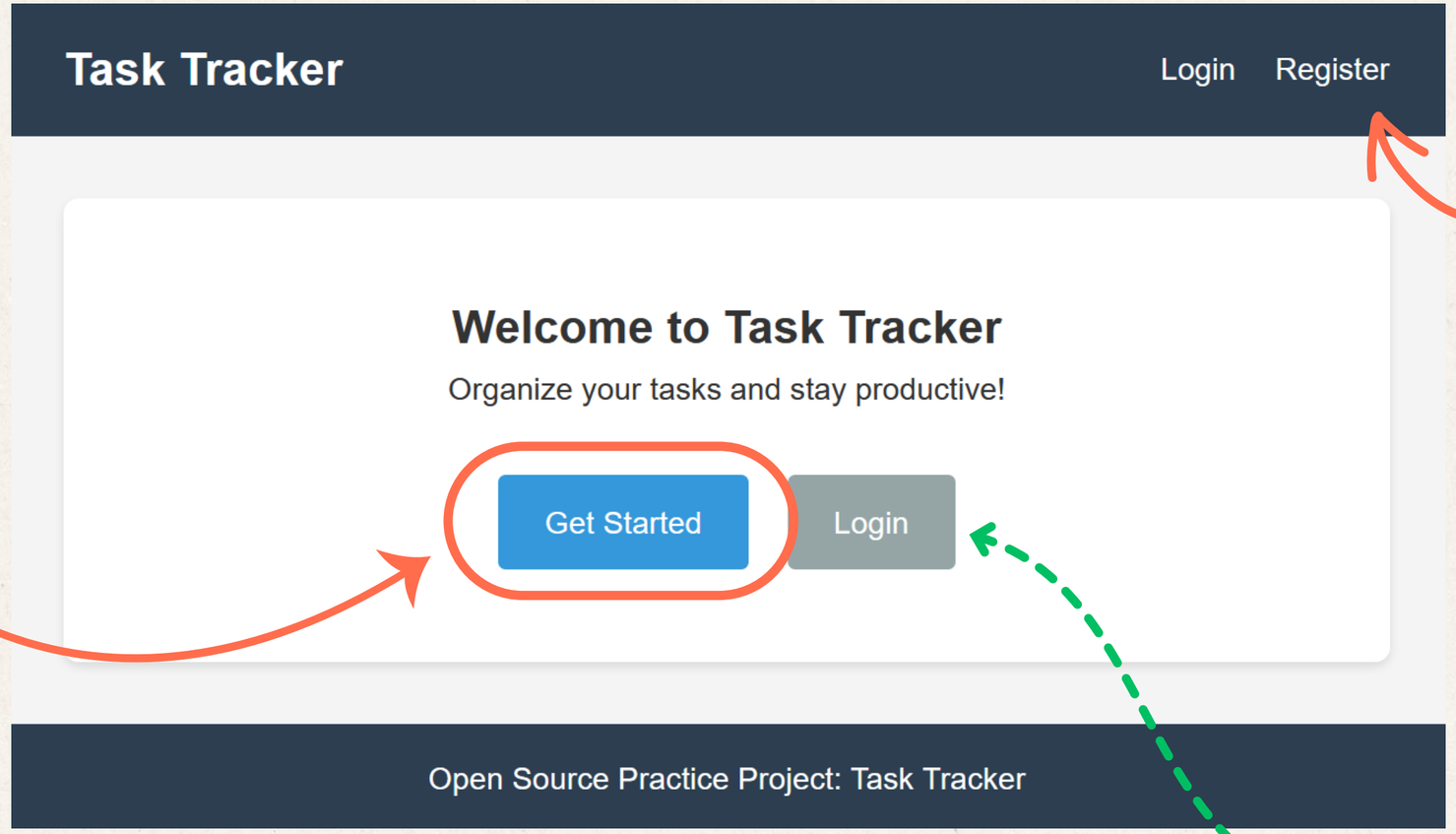




Using the Application



Homepage



Register a new account

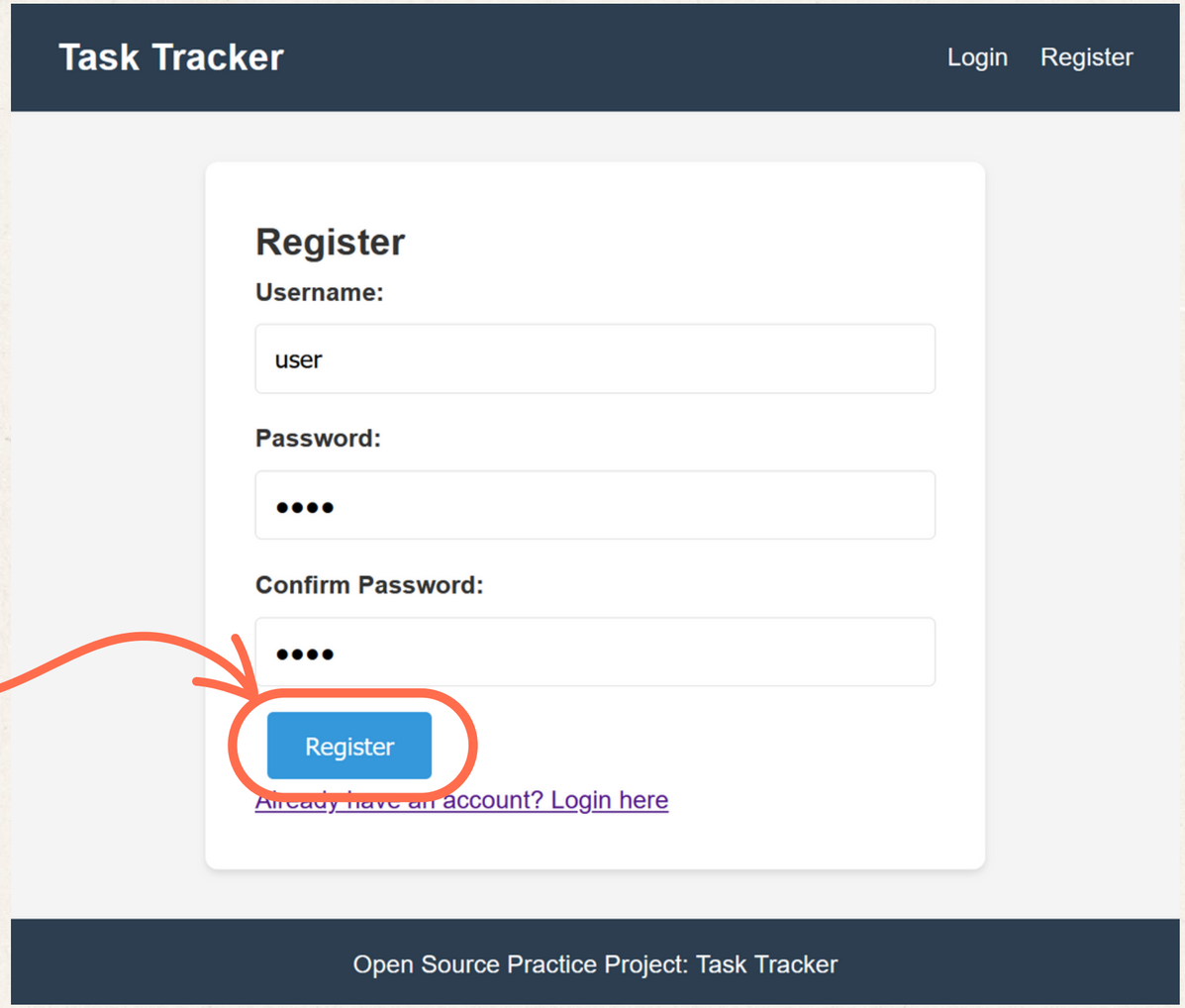
This link also takes you to the registration page

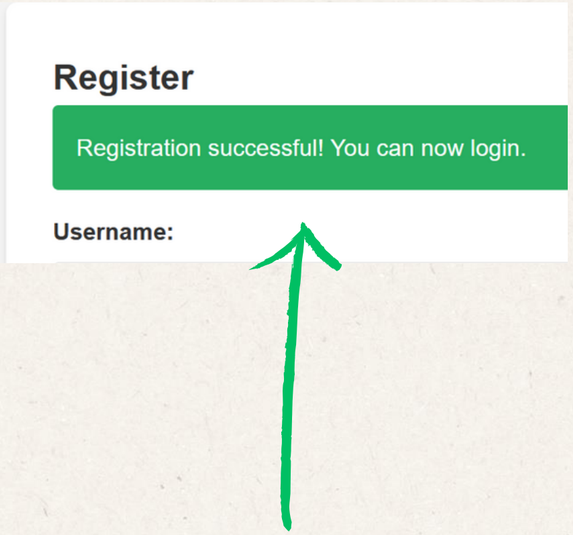
Or you can login if you already have an account

User Registration

After filling out the registration form

Click Register

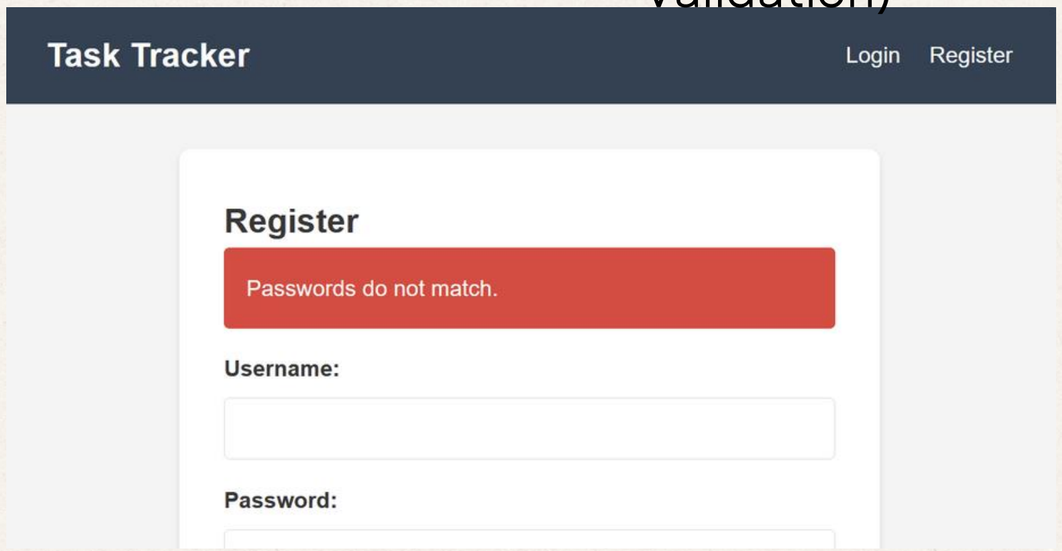




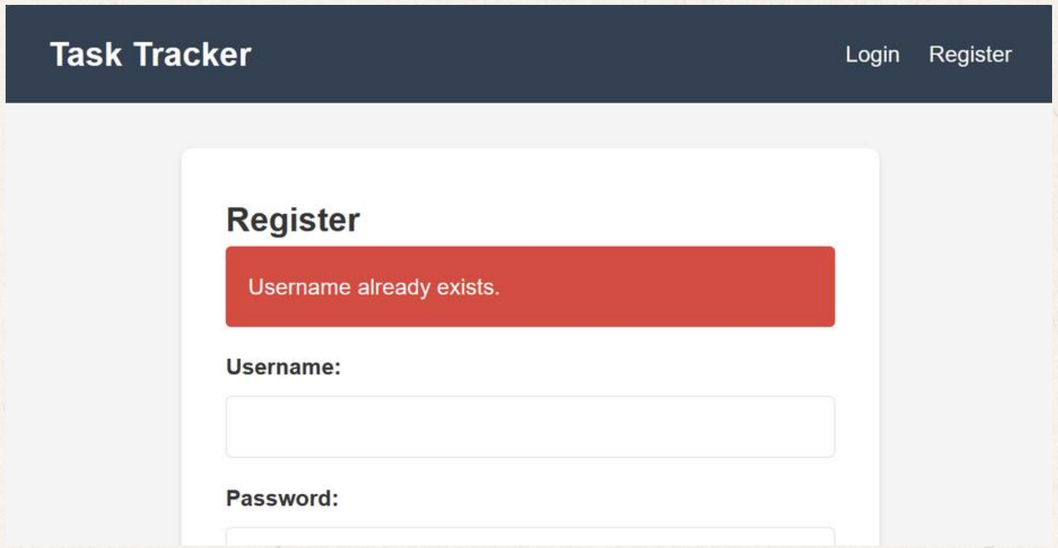
Message on successful account creation

User Registration

Error Messages (Data Validation)



- Passwords must match



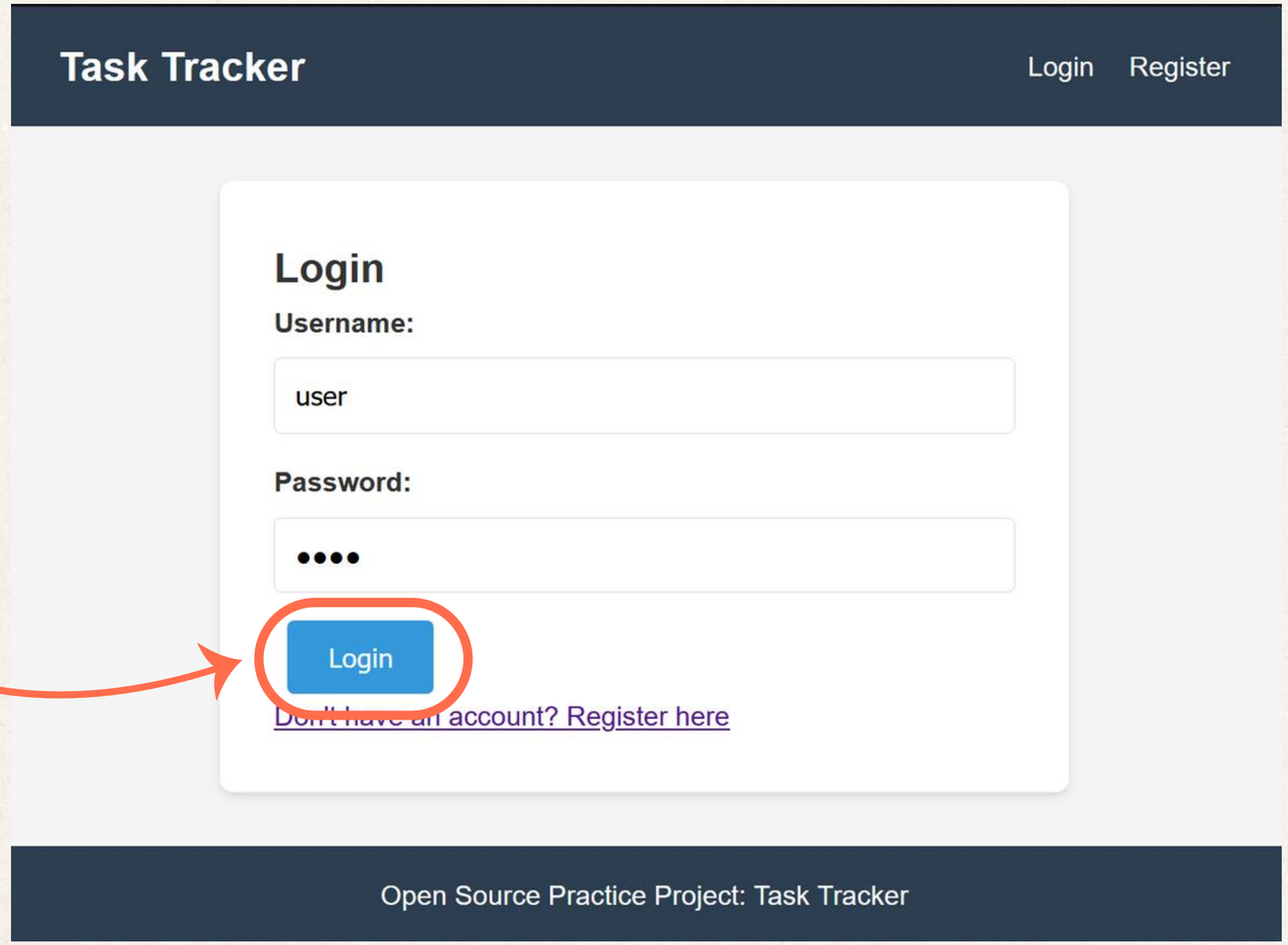
- Username cannot be the same as another user

Login Page

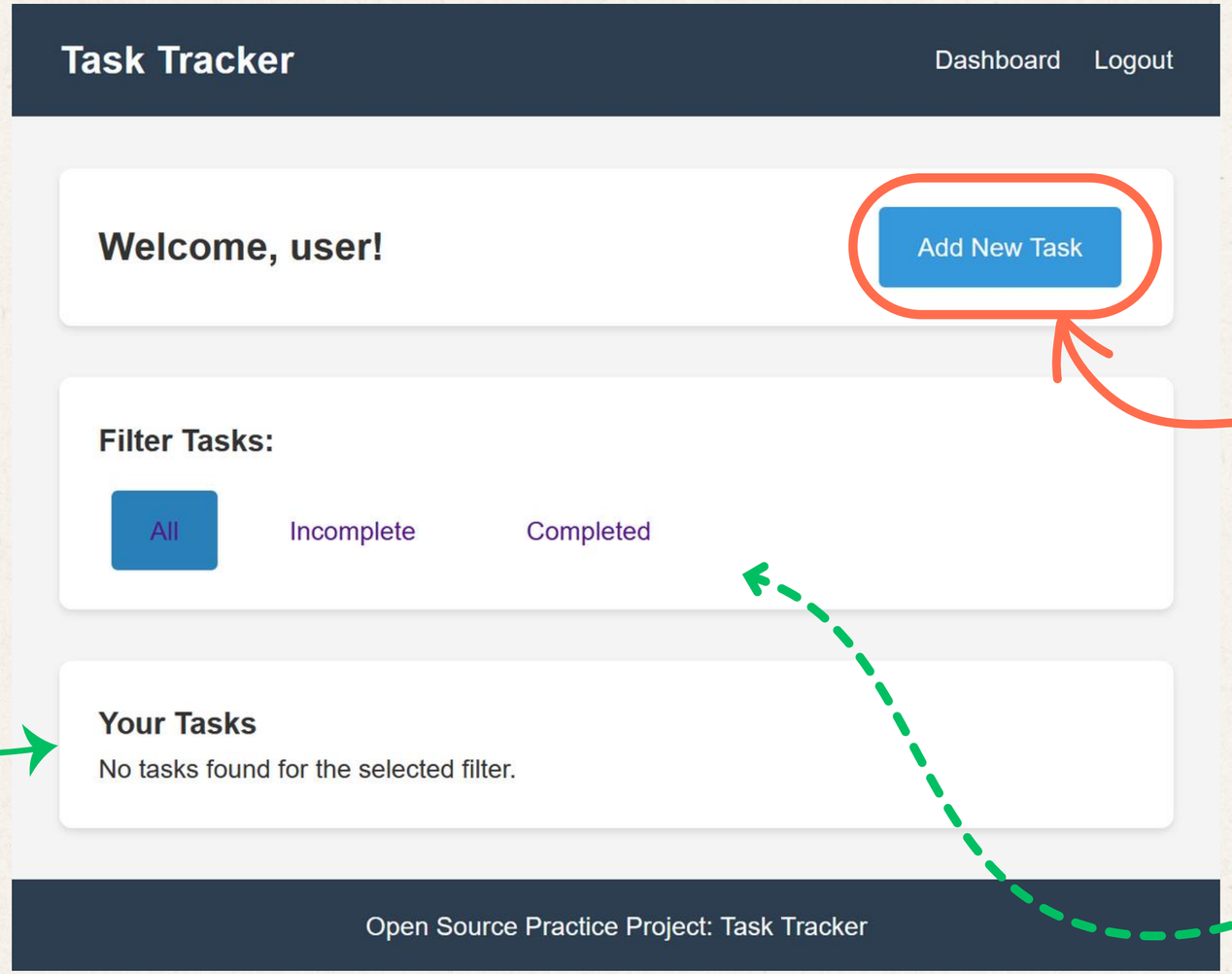
After registration is complete, the user can now login

Enter user and password

Click Login



Dashboard



Tasks list

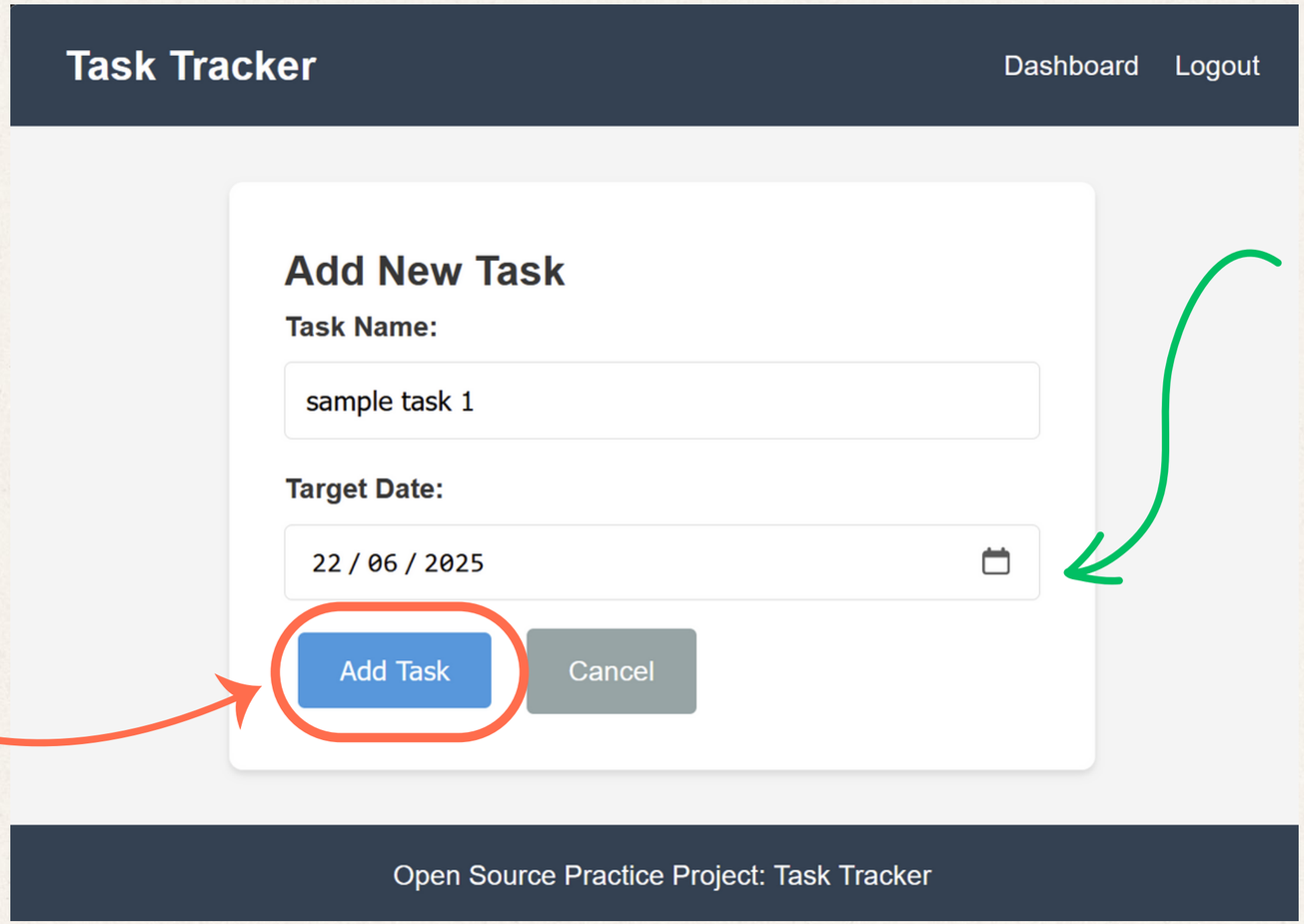
Click here to add a new task

Filter options

Adding a Task

After entering the task name and setting a target date

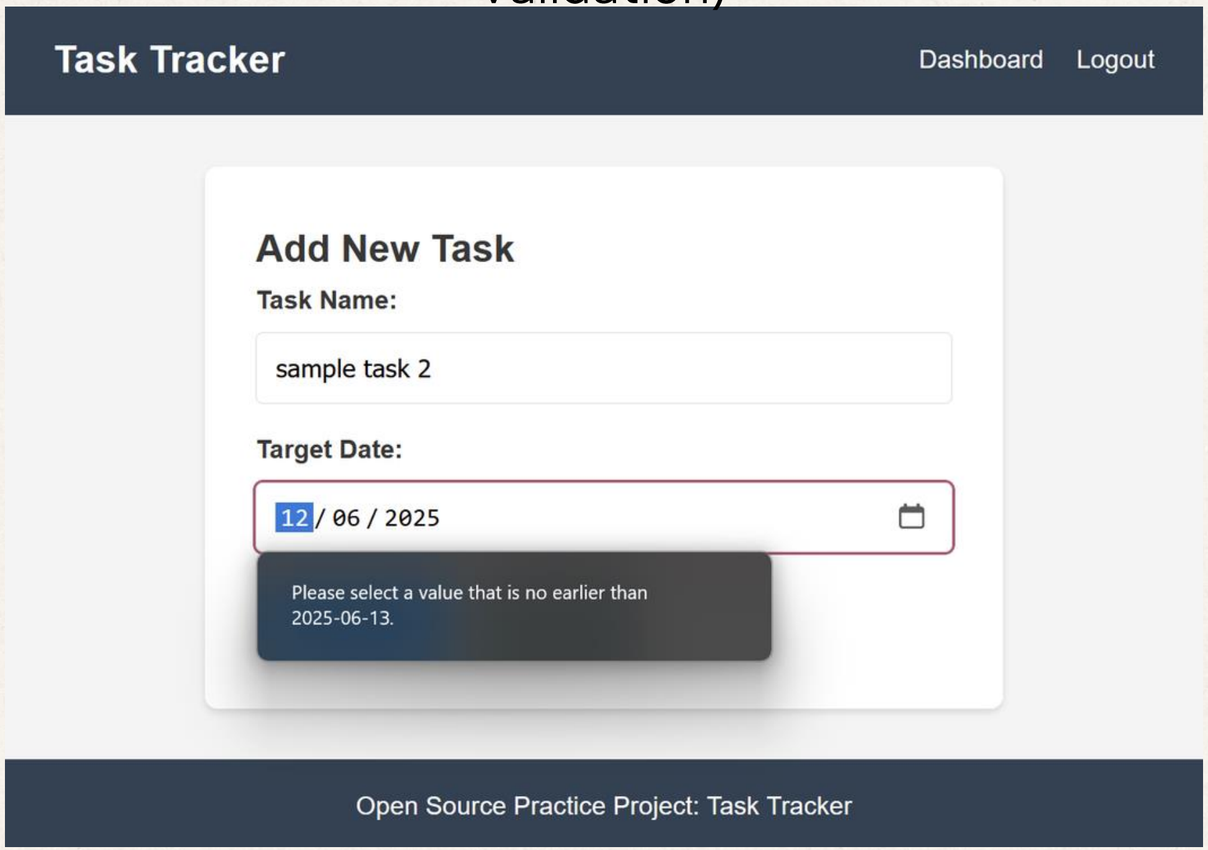
Click here to add the task



Uses Date type for proper date handling

Adding a Task

Error Messages (Data Validation)

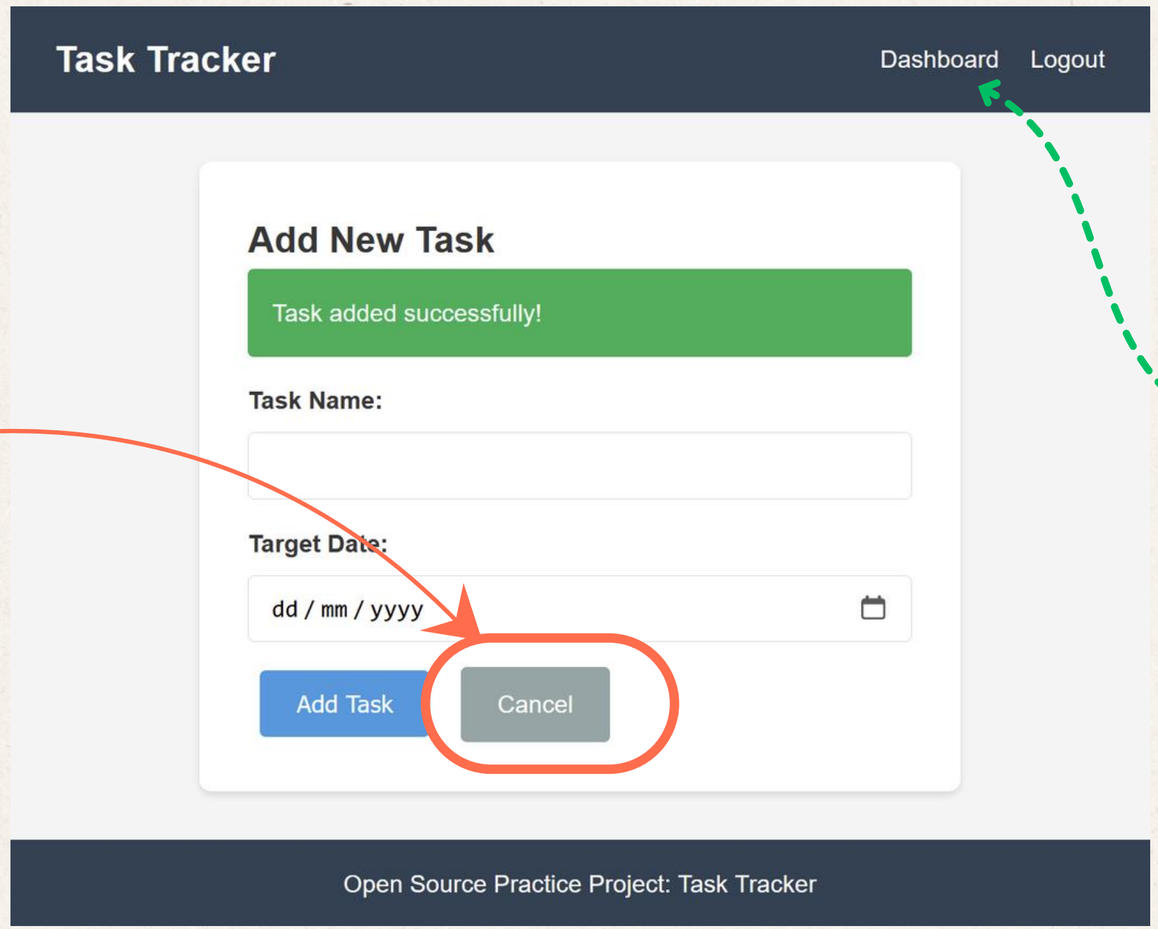


- **Target date cannot be set in the past**

Adding a Task

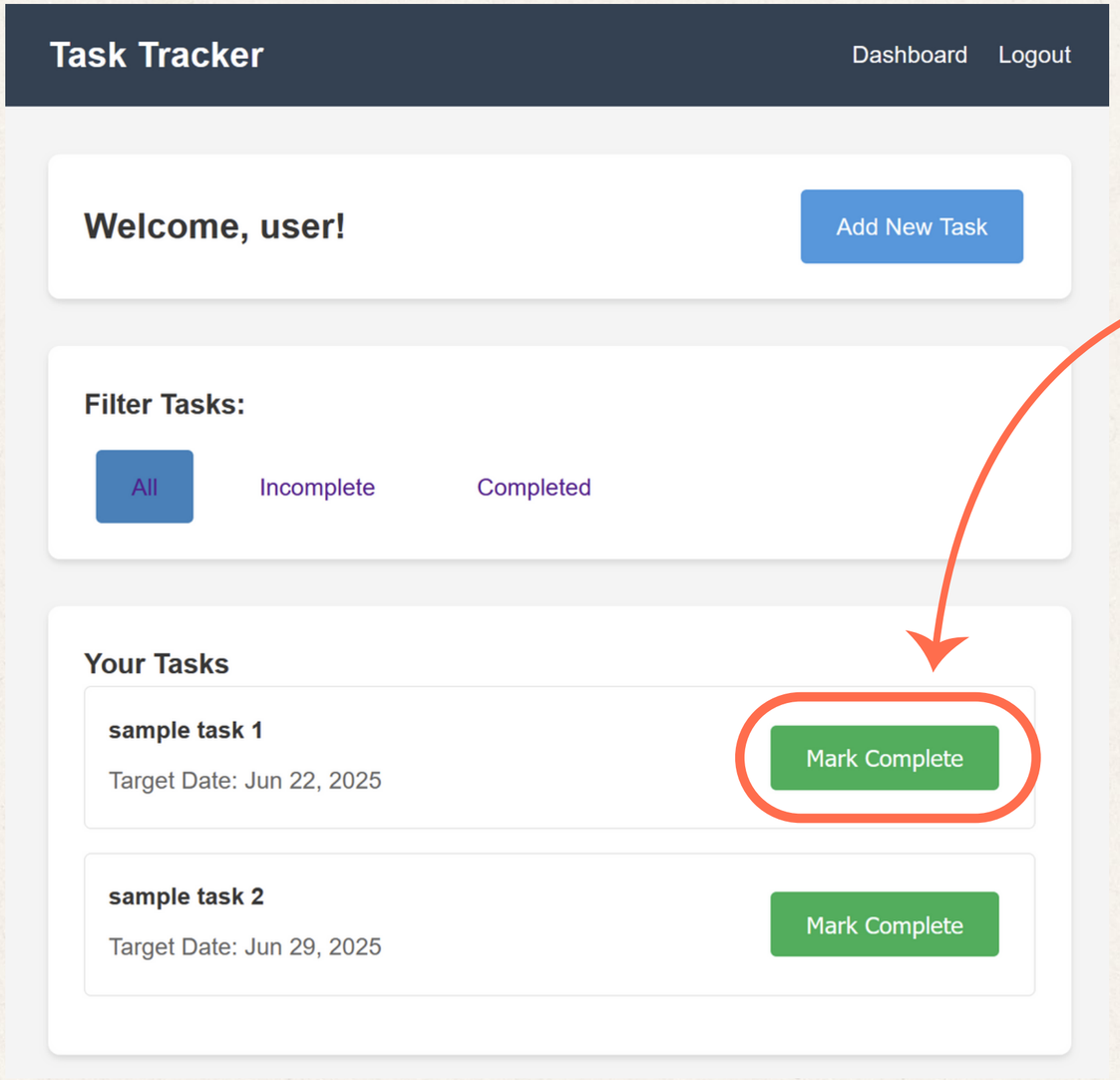
After successfully adding a task

Click cancel to return to the dashboard



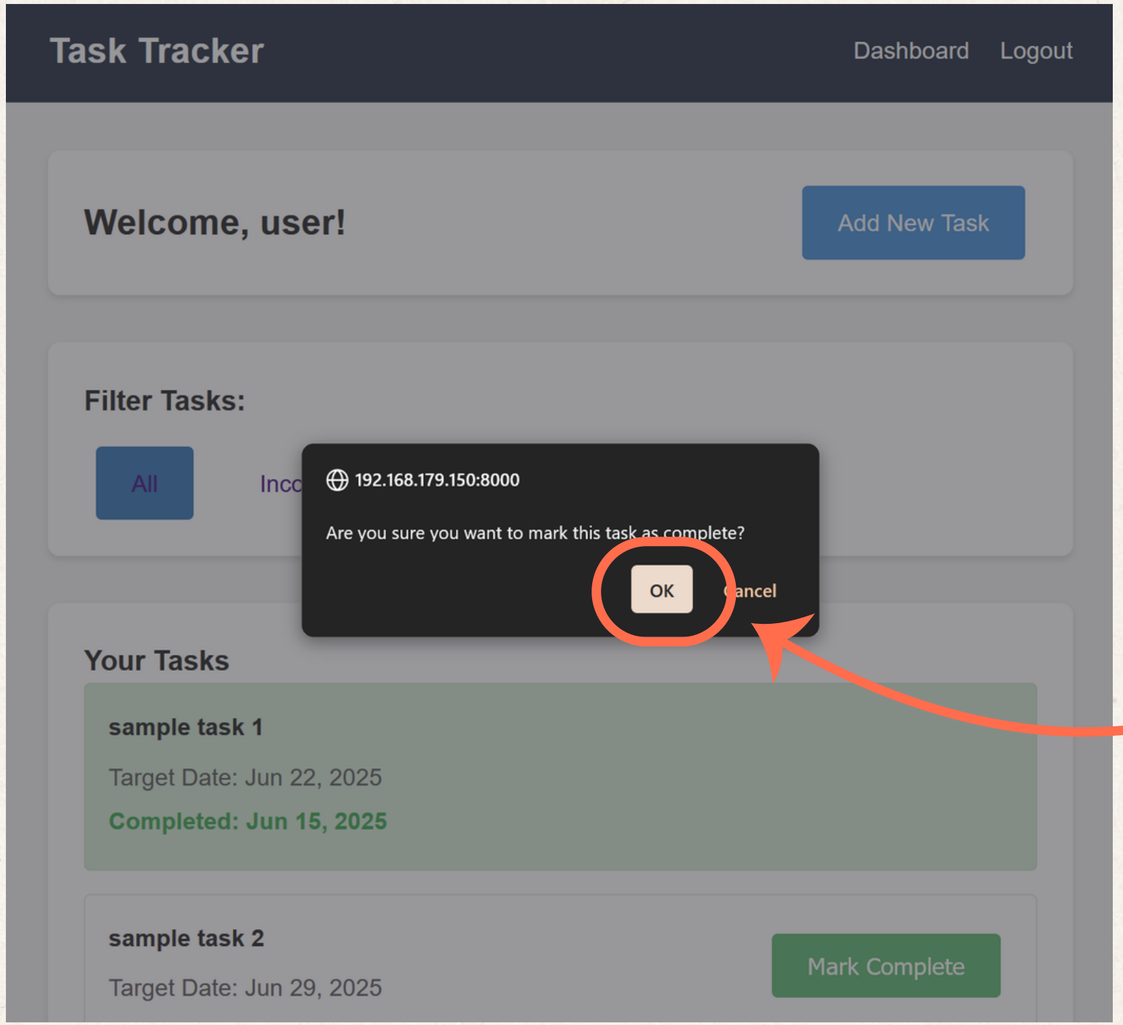
This link also takes user to the dashboard

Dashboard



Click this button to mark a task as completed

Dashboard



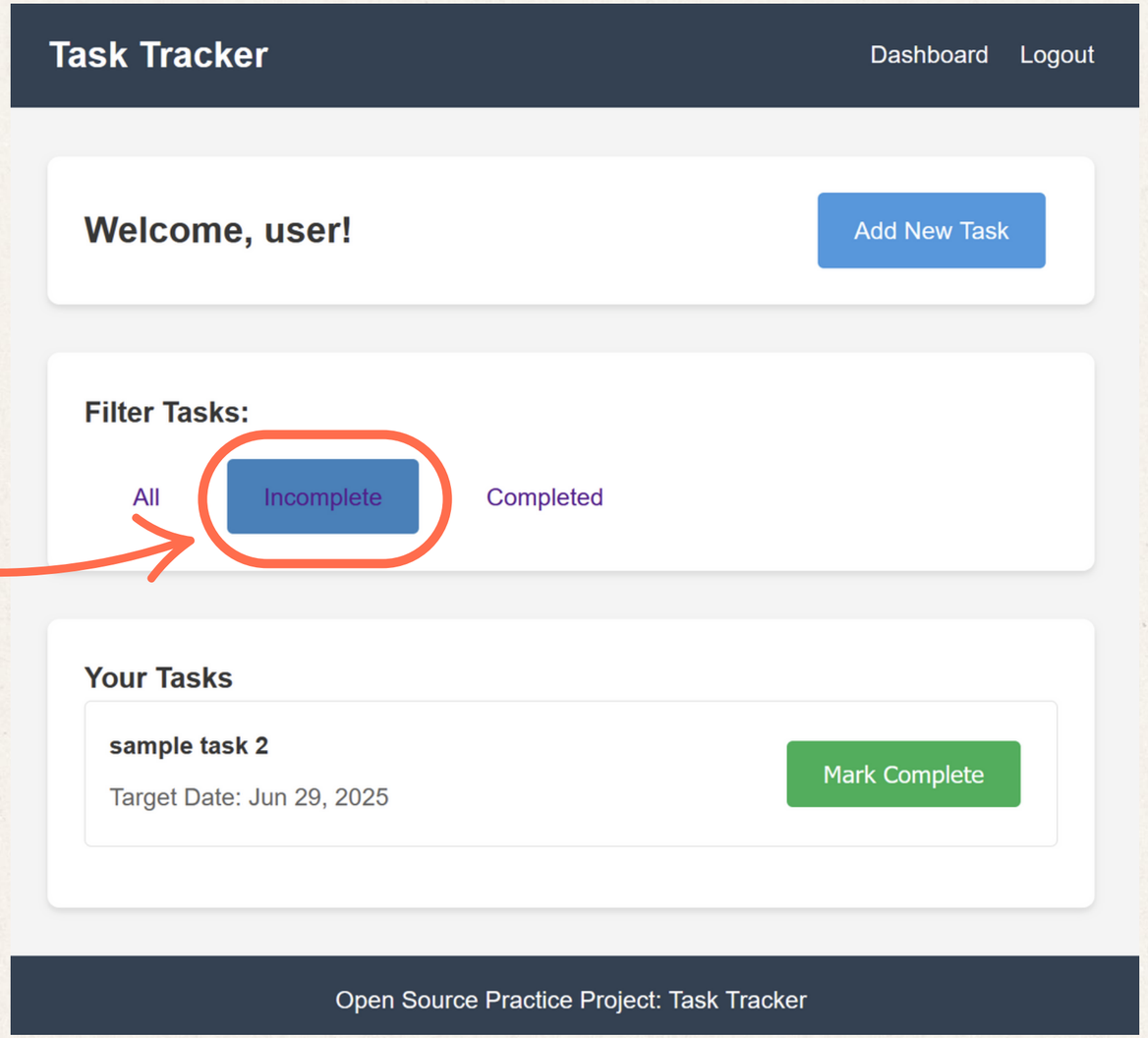
After clicking Mark Complete, it will ask the user for confirmation

Click OK to confirm

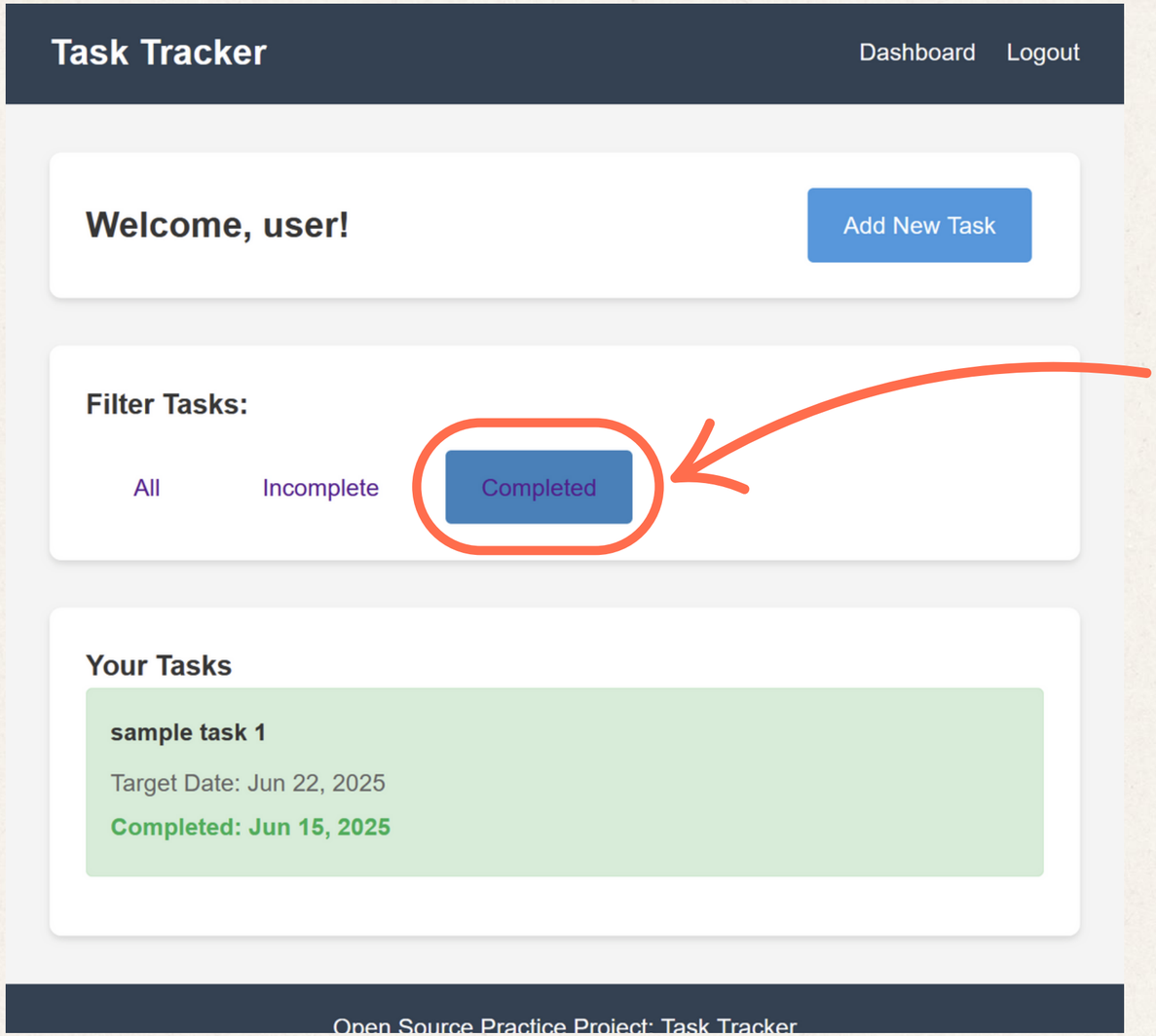
Dashboard Filter Options

There are filtering options to allow the user to focus on specific tasks

Shows only incomplete tasks

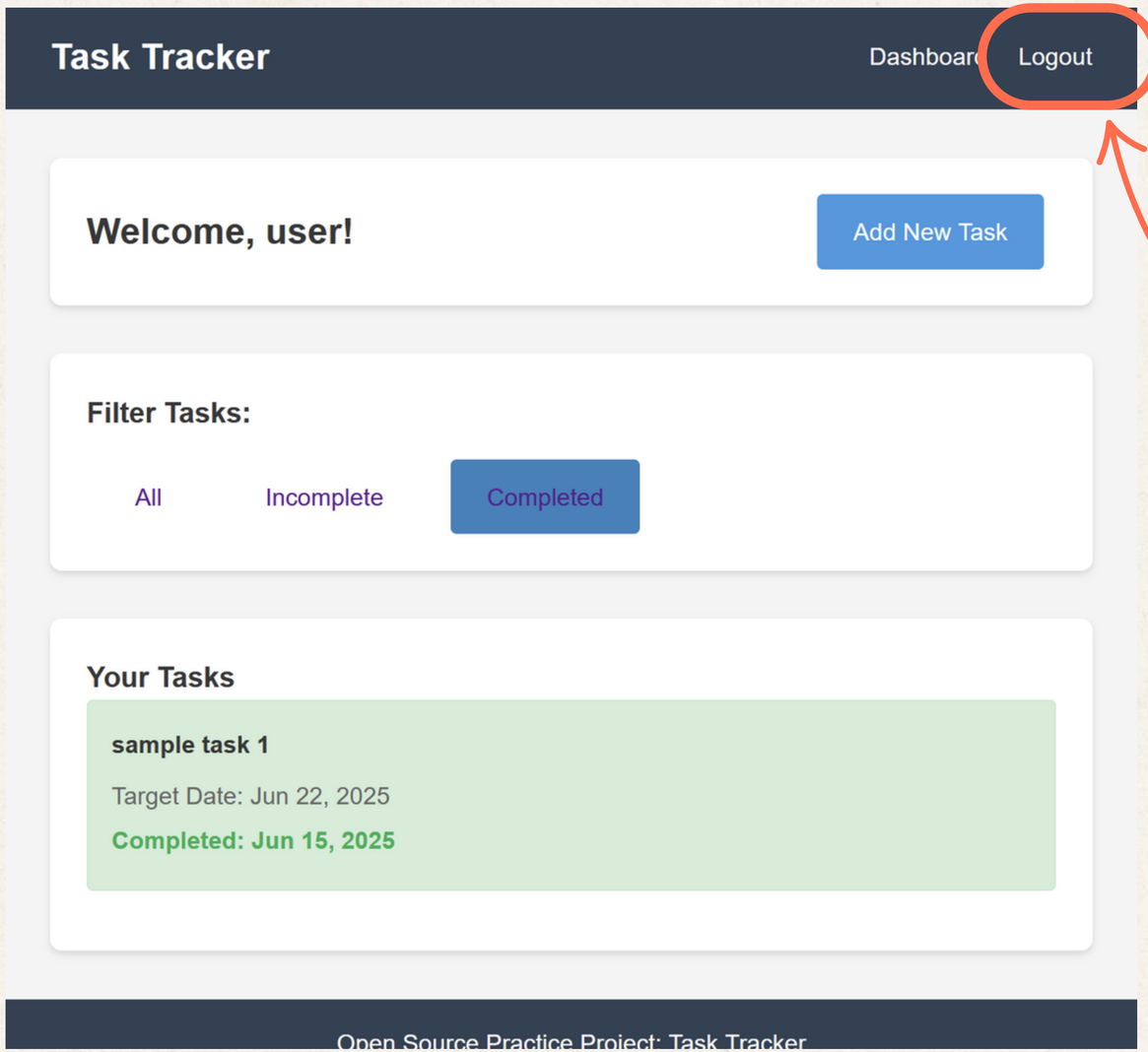


Dashboard Filter Options



Shows only completed tasks

Dashboard



When done using the app

Click on logout

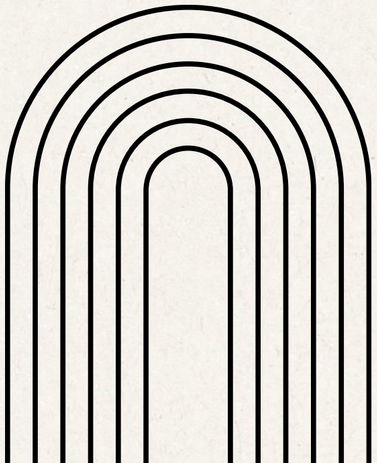
It will go back to the homepage

Conclusion

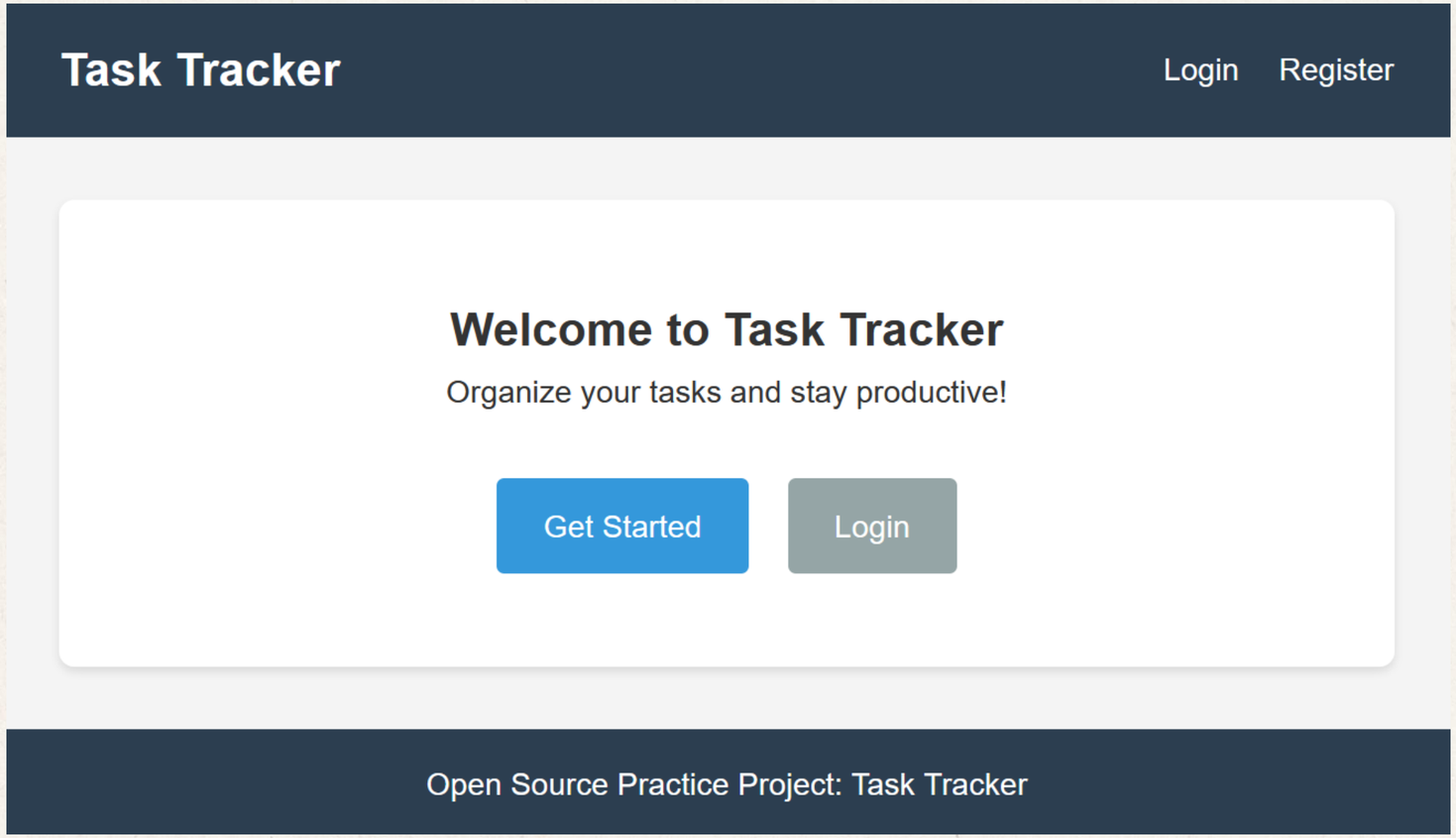
While it is a simple web app, we still had to go through a lot of documentation on the different aspects in building the application. Our lack of experience in using PHP and MySQL was a challenge but a great opportunity to broaden our knowledge.

We would have liked to implement more features but we ran out of time. Maybe we can keep working on it as a side-project in the future.

Overall, it was an invaluable learning experience. There were a lot of lessons in teamwork, the importance of open source software, and learning how to build a simple app. This was only our **first** attempt at building open source software, our **next** attempts will definitely be much better.



Thank you!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