

TODO LIST: Track, manage, and conquer your daily tasks.

Introduction

TaskMaster is a simple and efficient to-do list app designed to help you stay organized and productive. Built with Flutter, the app allows you to easily add, edit, and delete tasks, while providing secure login and logout functionality. With its intuitive interface, TaskMaster makes task management effortless by keeping everything in one place. Whether you're tracking personal goals, work-related tasks, or daily chores, TaskMaster helps you prioritize and manage your to-do list with ease, ensuring you stay on top of what matters most.

Problem Statement

Managing tasks efficiently is a challenge for many individuals who struggle with staying organized and keeping track of their daily activities. Most people often forget important tasks or feel overwhelmed by a lack of structure. Additionally, many to-do list apps are cluttered with unnecessary features or complicated interfaces, which detract from the user experience and productivity.

Solution

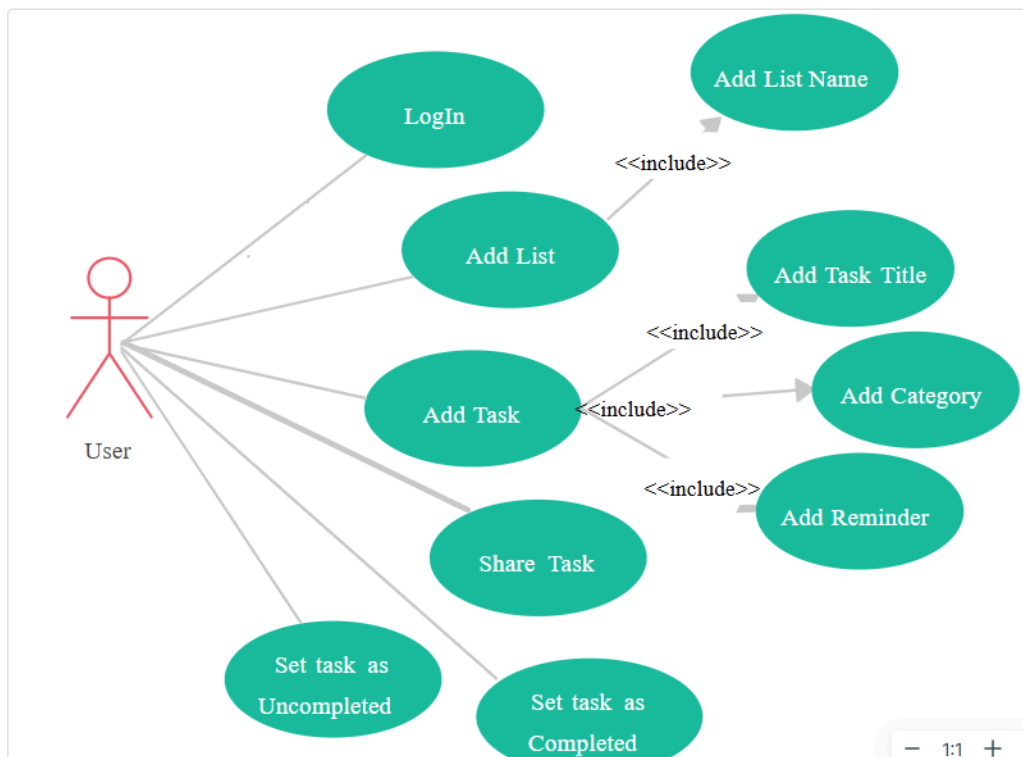
TaskMaster addresses this issue by providing a simple, user-friendly platform that focuses solely on essential task management features. The app allows users to easily create, edit, and delete tasks while maintaining secure login and logout functionality. With its intuitive interface and minimalistic design, TaskMaster ensures users can efficiently manage their tasks without any distractions, helping them stay organized and productive every day.

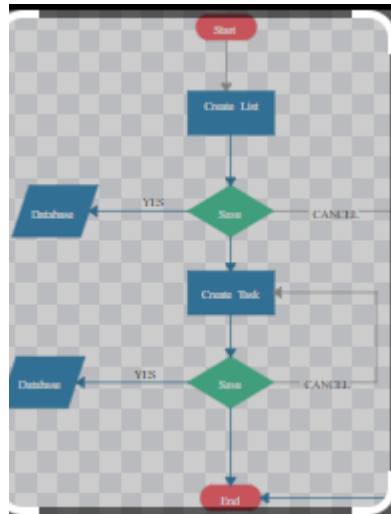
Features

- **Task Creation:** Add new tasks with titles and descriptions.
- **Task Editing:** Edit existing tasks with ease.
- **Task Deletion:** Remove completed or unnecessary tasks.
- **Secure Login:** Safe authentication to access your tasks.
- **Task Tracking:** Easily view and manage your to-do list.
- **Logout Functionality:** Securely log out after use for privacy.

Design and Architecture

TaskMaster is built using Flutter, following a Material Design approach for a clean, intuitive interface. The app uses `StatefulWidget`s to dynamically update the task list. It operates with SQLite or Hive for local data storage, ensuring offline functionality. Authentication is handled securely with Firebase Authentication. The app follows the Model-View-Controller (MVC) architecture, separating task data, UI, and logic. The design is responsive, ensuring a seamless experience on both phones and tablets.





Flow Diagram ER Diagram

Implementation Details

Task Creation:

- Users can add tasks by entering a title and optional description.
- Input validation ensures that no empty tasks are created.
- Tasks are saved locally using **SQLite** or **Hive** for offline access.

Task Editing:

- Existing tasks can be edited by updating their title, description, or completion status.
- Changes are immediately saved to local storage to ensure data consistency.

Task Deletion:

- Users can delete tasks by swiping them away or selecting a delete option.
- Deleted tasks are removed from local storage.

Login and Authentication:

- Secure login is implemented using **Firebase Authentication**.
- Users authenticate via email/password, ensuring their tasks are tied to their account.

- A logout feature clears the session and returns users to the login screen.

Task List Management:

- The **Home Screen** displays a list of tasks, with options to add, edit, or delete them.
- Tasks are fetched from local storage upon app launch and updated in real time.

Data Persistence:

- Tasks are stored locally using **SQLite** or **Hive**, ensuring that data is retained even after the app is closed or the device is offline.

UI and UX:

- The app uses **Flutter's Material Design** components for a modern, responsive layout.
- Tasks are displayed with clear titles, descriptions, and completion statuses.
- Navigation is intuitive, with simple transitions between screens.

Error Handling:

- The app includes error handling for user input, login issues, and data storage problems, ensuring smooth functionality even during unexpected scenarios.

Offline Functionality:

- All features, including adding, editing, and deleting tasks, work offline without requiring an internet connection, ensuring full data privacy.

← Login

Email

Password

Login

Don't have an account? Sign Up

Verification email sent! Please verify your email.

To Do List

Add

Task List

☐ wash dishes

Delete

Edit

☒ edit resume

Delete

Edit

☐ finish Codex course

Delete

Edit

Completed: 1 | Uncompleted: 2

TO DO List

Input the tasks below

☐ shopping

☐ painting

Future Scope

In the future, your To-Do list app could be enhanced with features like user authentication for multiple accounts, cloud data sync for cross-device access, and task categories and priority levels for better organization. You could add due dates and push notifications for reminders, as well as subtasks and task dependencies for more complex workflows. Dark mode, custom themes, and collaborative task management would improve user experience, while task analytics could help users track their productivity. Additionally, voice input for task creation and recurring tasks could further enhance the app's functionality.

Conclusion

The To-Do list app offers a simple yet effective way to manage tasks with features like adding, editing, and deleting tasks. Users can easily modify existing tasks or remove them, ensuring they can stay organized and keep track of their responsibilities. This app provides a user-friendly interface for managing daily tasks and can be expanded in the future with features like syncing, reminders, and task categorization for enhanced productivity.