

Flutter Task Manager App

Leveraging Back4App (BaaS) for Seamless Integration

This project presents a cloud-connected CRUD Task Manager Application, showcasing efficient cross-platform development with Flutter and Backend as a Service (BaaS) integration.

Project Details

Subject: Cross Platform Application Development

Student: Ravi Kumar | Bits ID: 2024MT12103

Source Code

[GitHub Repository](#)

Project Overview

Cross-Platform Power

Built with Flutter for a seamless cross-platform experience, integrated with Back4App as a robust Backend-as-a-Service.

Serverless Efficiency

Leverages Parse Server for all backend operations, including user authentication and database management, eliminating the need for custom server infrastructure.

Intuitive & Secure

Designed with a focus on a clean user interface, reliable cloud storage for tasks, and secure authentication protocols for data integrity.

Why Back4App (BaaS)?



No Backend Setup Required

Focus on your app's frontend without the complexities of backend infrastructure management.



Ready-Made Authentication System

Implement secure user login and management with pre-built authentication features.



Cloud Database with Real-Time Syncing

Store and synchronize data seamlessly across devices with a powerful, real-time cloud database.



Highly Scalable & Fast Deployment

Ensure your application can grow with your user base and deploy new features rapidly.

Key Features



User Registration & Login

Implement secure user authentication for your application.



CRUD Operations

Easily create, read, update, and delete tasks within the application.



Real-time Cloud Syncing

Ensure data is always up-to-date across all devices with seamless cloud synchronization.



Secure Logout

Protect user accounts with robust session invalidation upon logout.



Cross-platform UI

Deliver a consistent and engaging experience across various platforms with Flutter.

Technology Stack



Frontend: Flutter (Dart)

Crafting responsive and high-performance user interfaces for a seamless cross-platform experience.



Backend: Back4App (Parse Server)

Leveraging a robust backend-as-a-service for scalable server-side logic and API management.



Database: Back4App Cloud DB

Storing and managing application data securely with a flexible and scalable cloud database solution.



State Management: Provider

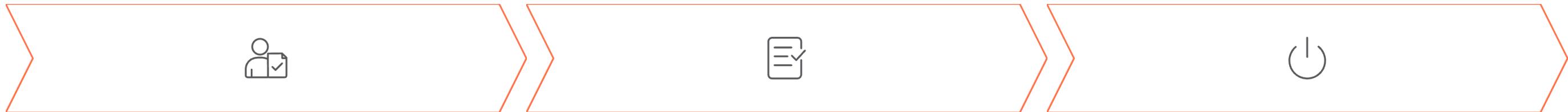
Efficiently managing application state within the Flutter frontend for predictable and maintainable code.



Version Control: GitHub

Collaborating on code and tracking changes with industry-standard version control for streamlined development.

Application Flow



Registration & Login

Users authenticate securely using the Parse User system to access the application.

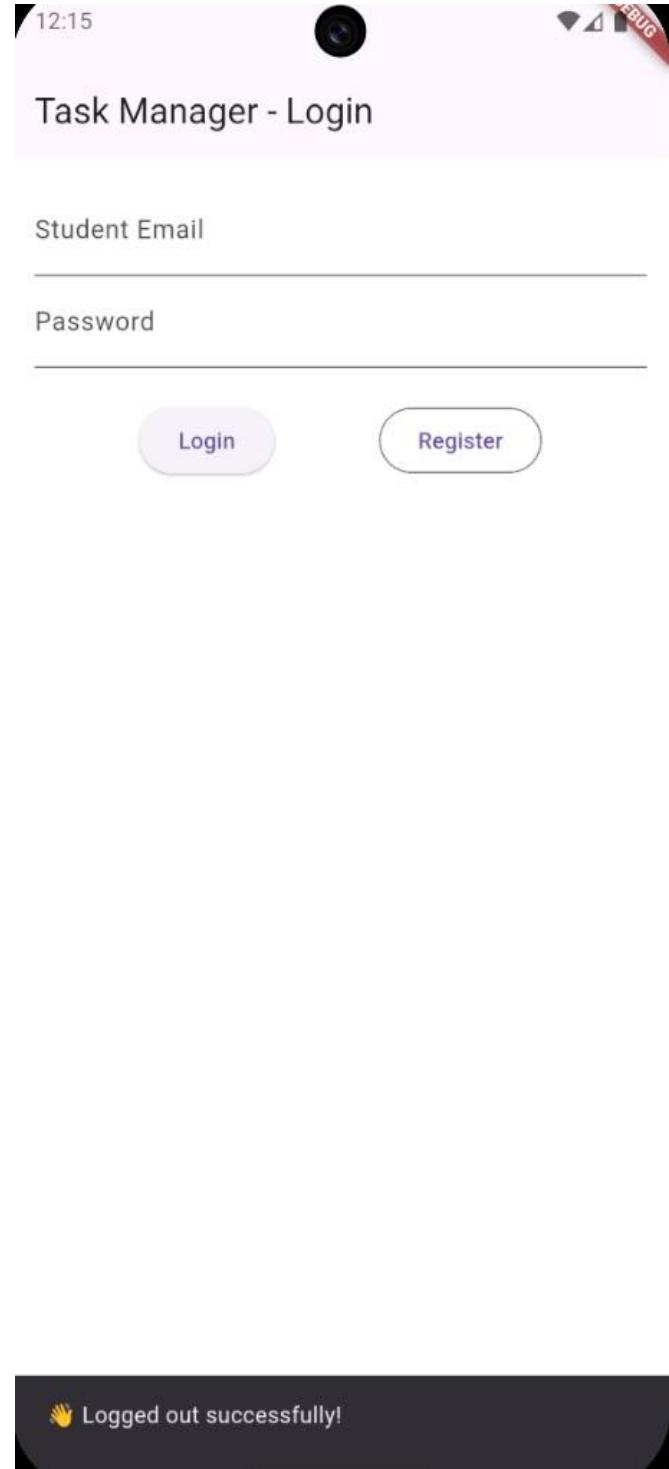
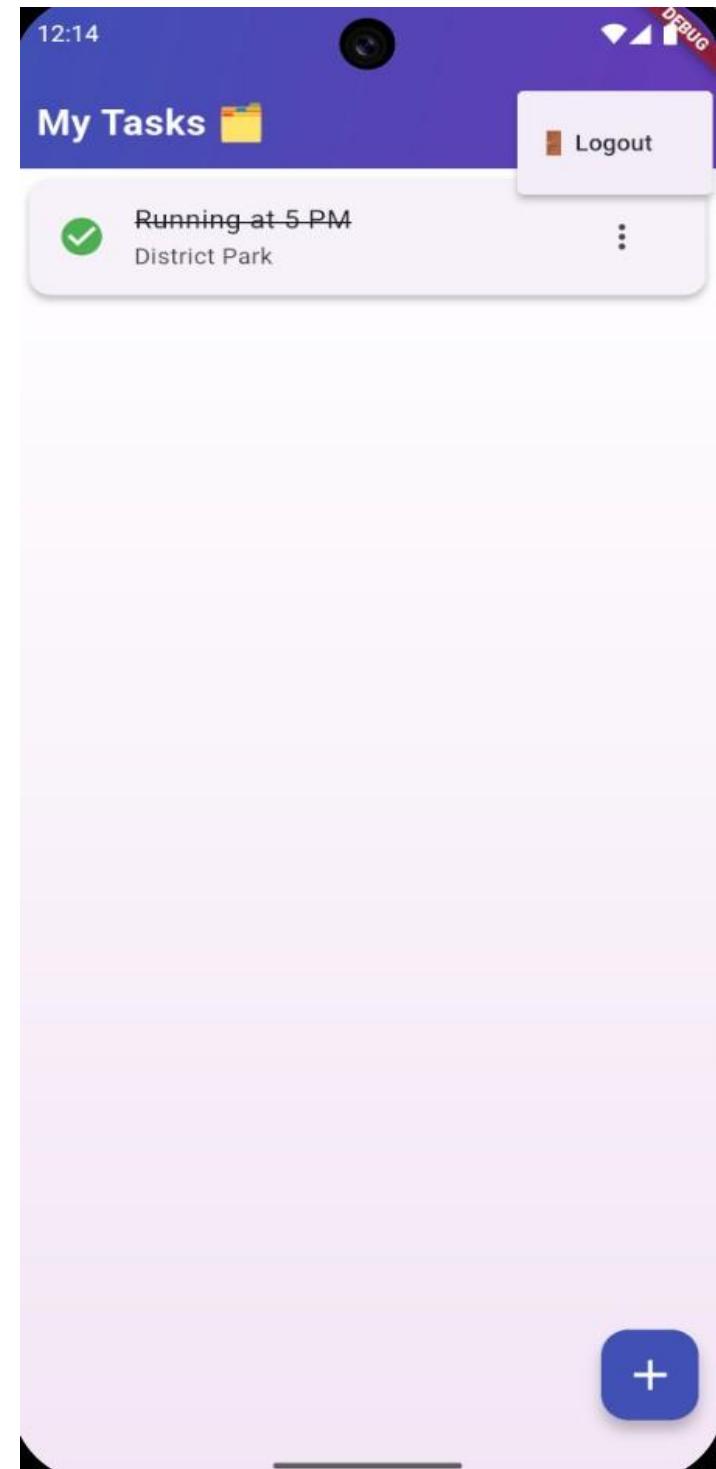
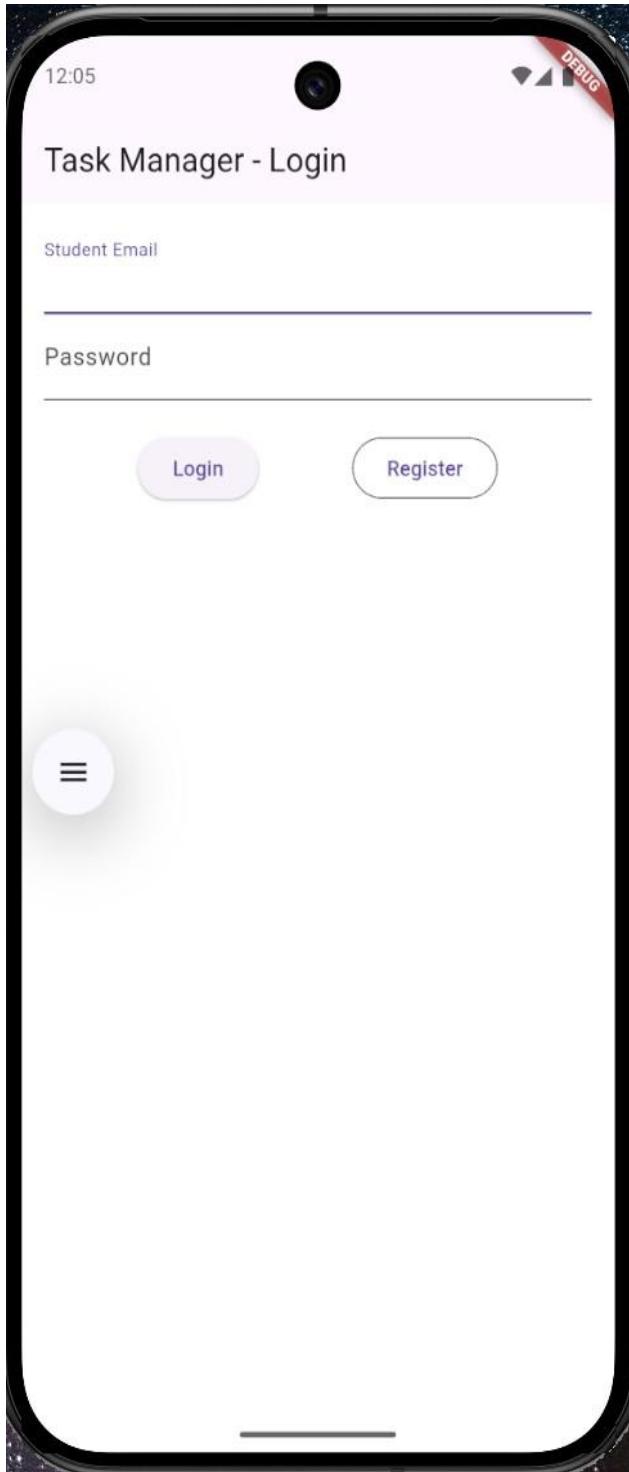
Task Management

Perform CRUD operations (Create, Read, Update, Delete) on tasks. All task data is securely stored and managed in the Back4App cloud database.

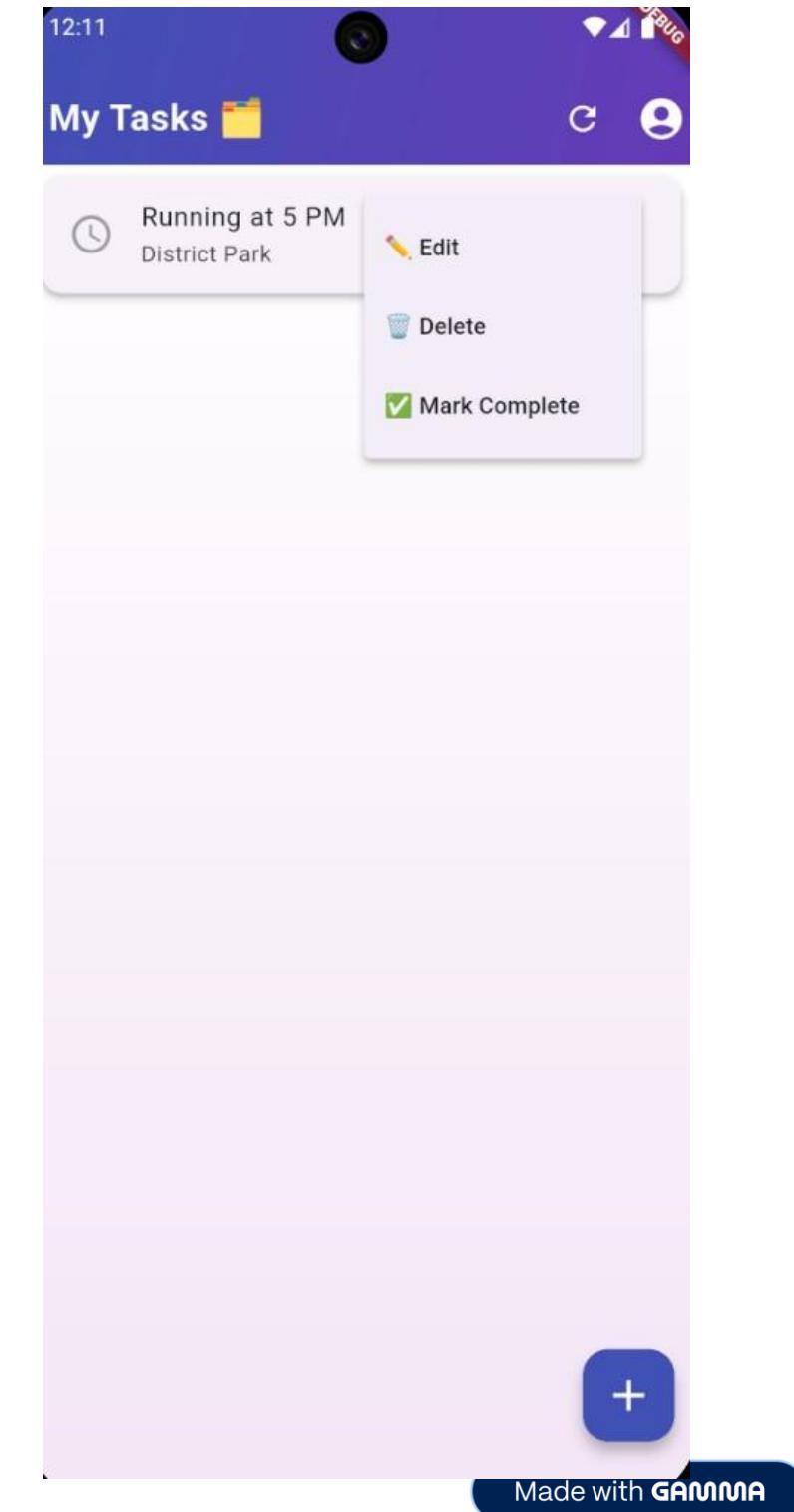
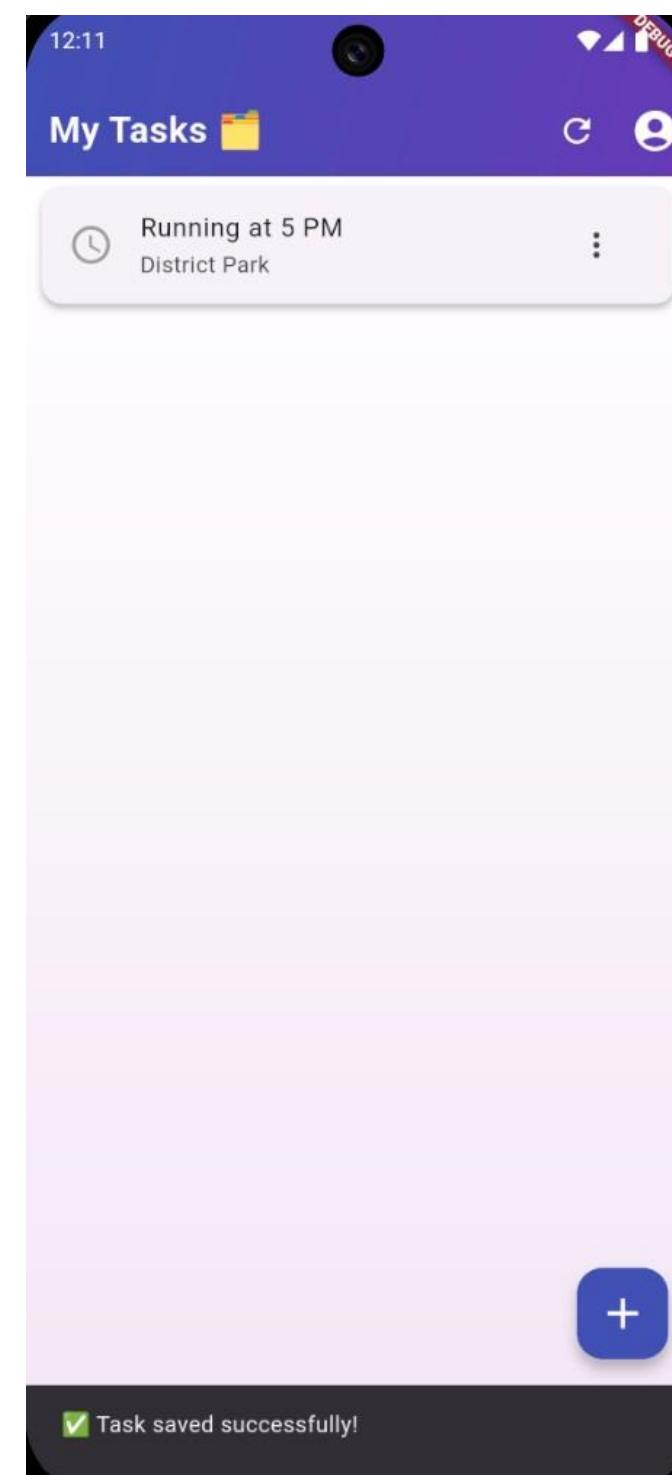
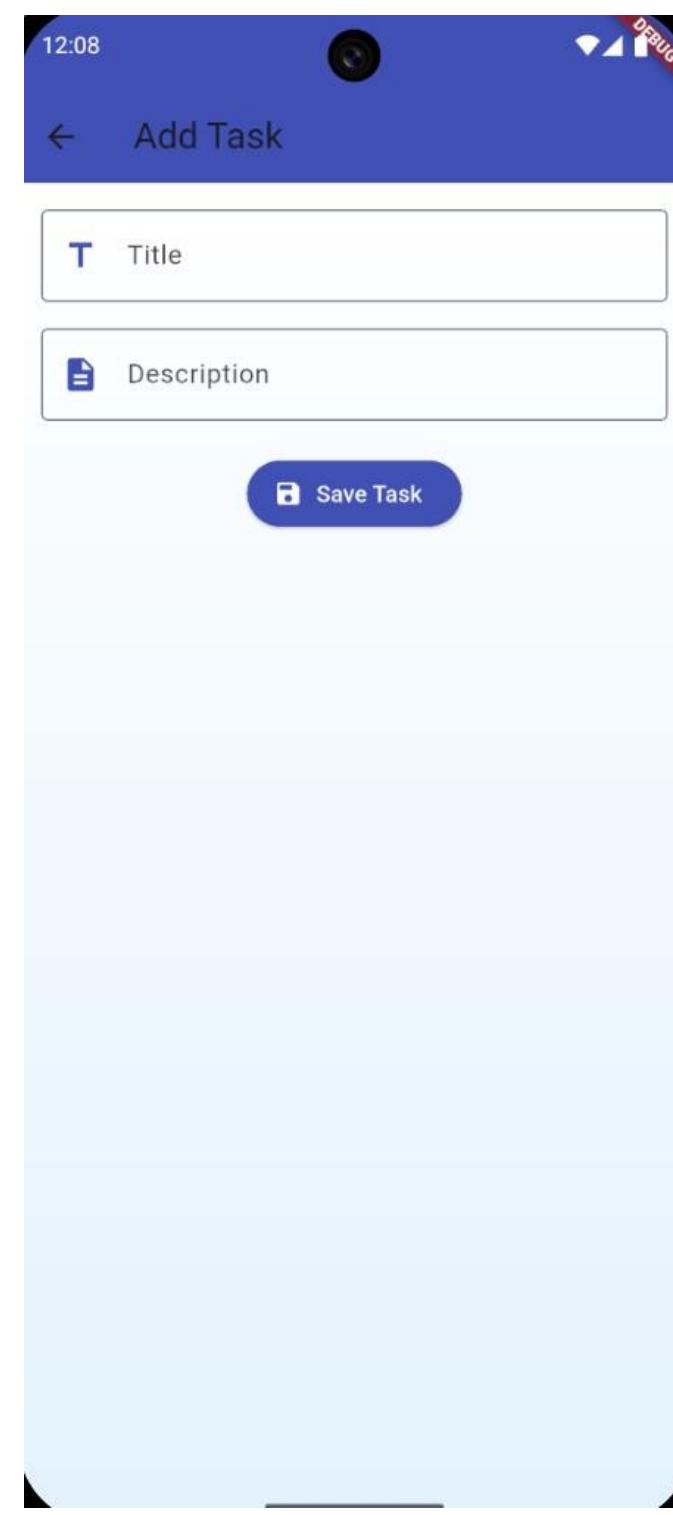
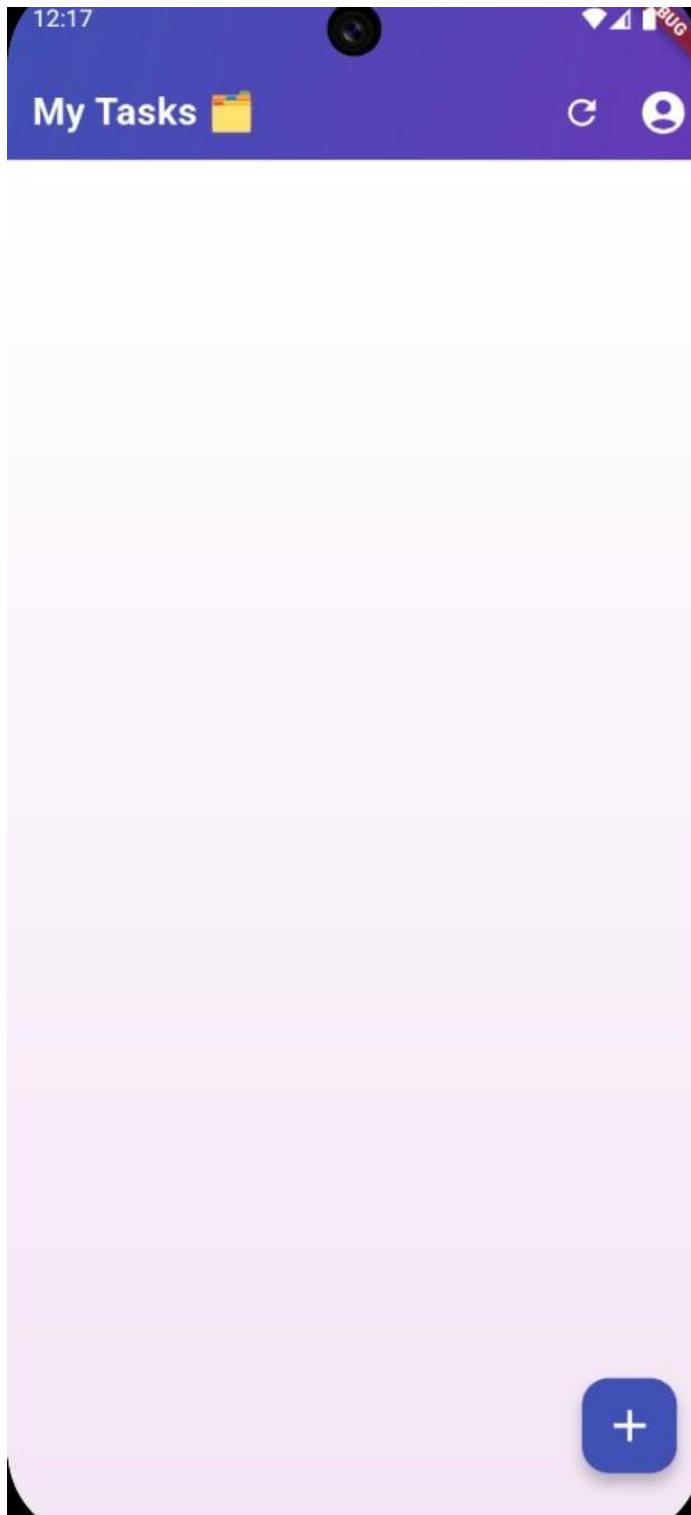
Logout

Ensures secure session invalidation, protecting user data upon exiting the application.

Application Screenshots



Application Screenshots



Back4app Dashboard Screenshots

This screenshot shows the Back4app dashboard for the 'task-manager-flutter' app. The main view displays the 'Task' database with one object. The object has the following fields:

objectId	String	createdAt	Date	updatedAt	Date	ACL	ACL	title	String	description	String
64HA9tAVqr		12 Nov 2025 at 18:5...		12 Nov 2025 at 18:5...		Public Read + Write		Running at 5 PM		District Park	

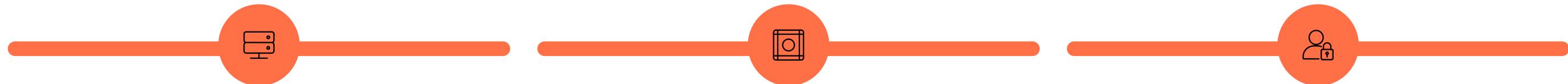
The sidebar on the left lists other database classes: _Role (0), _Session (1), _User (2), B4aVehicle (0), Task (1), Index Manager, Admin App, Cloud Code, API, Push Notifications, AI Tools, and Support.

This screenshot shows the Back4app dashboard for the 'task-manager-flutter' app. The main view displays the '_User' database with two objects. The objects have the following fields:

objectId	String	emailVerified	Boolean	ACL	ACL	updatedAt	Date	authData	Object*	username	String*
Yc6PgstuVL		(undefined)		Yc6PgstuVL		12 Nov 2025 at 17:0...		(undefined)		rvyadav76@gmail.com	
70bKbXOQFR		(undefined)		70bKbXOQFR		12 Nov 2025 at 18:4...		(undefined)		rvkumar@gmail.com	

The sidebar on the left lists other database classes: _Role (0), _Session (1), _User (2), B4aVehicle (0), Task (0), Index Manager, Admin App, Cloud Code, API, Push Notifications, AI Tools, and Support.

Learnings from the Project



Understanding Backend-as-a-Service model

Integrating Flutter with Parse SDK

Implementing secure authentication



Managing state using Provider

Building and testing APK for Android

Thank You!

I appreciate your attention and engagement throughout this presentation. Feel free to connect with us for further discussions.



Submitted By

Ravi Kumar



BITS ID

2024MT12103



GitHub Repository

[flutter-back4App-task-manager](#)

