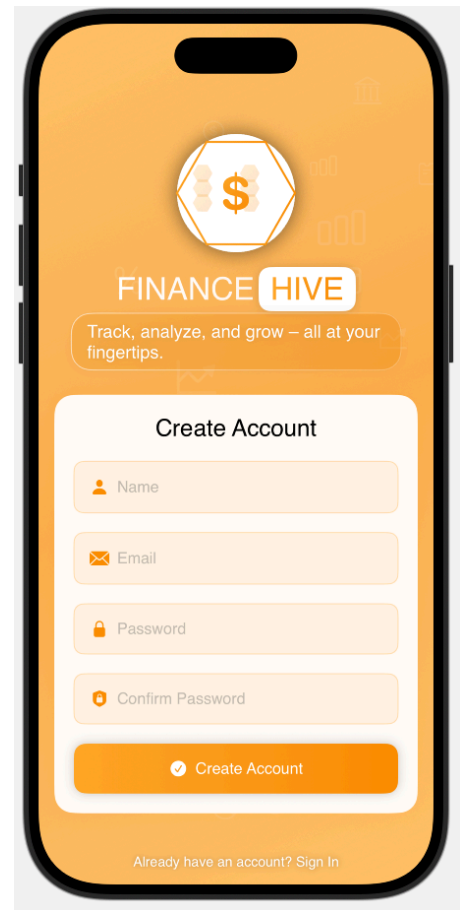


Finance Hive – AI-Powered Personal Finance Assistant App: Track, Analyze, and Grow all at your fingertips.

1. 🔍 Project Overview

- Project Title: Finance Hive
- Lead Developer: Sai Pulavarthy
- Co-Developer: Kiran BK
- Start Date: January 2025
- Platform: iOS
- Language & Framework: Swift with SwiftUI
- Development Environment: Xcode
- Architecture Style: MVVM-like with SwiftUI Stores
- Current Phase (as of June 24, 2025): Week 5 – Visualizations & AI Features



2. 🎯 Project Objective

Finance Hive is an AI-powered personal finance app that helps users, especially students and beginners, manage money smartly. It combines budgeting, stock tracking, learning resources, AI chat, and gamified

experiences in one seamless platform. The app aims to make finance feel approachable, fun, and educational.

1. Dashboard View

- Purpose: Provides a financial snapshot with income, expenses, and balance.

- Key Components:
 - Welcome message with the user's name
 - Summary cards for:

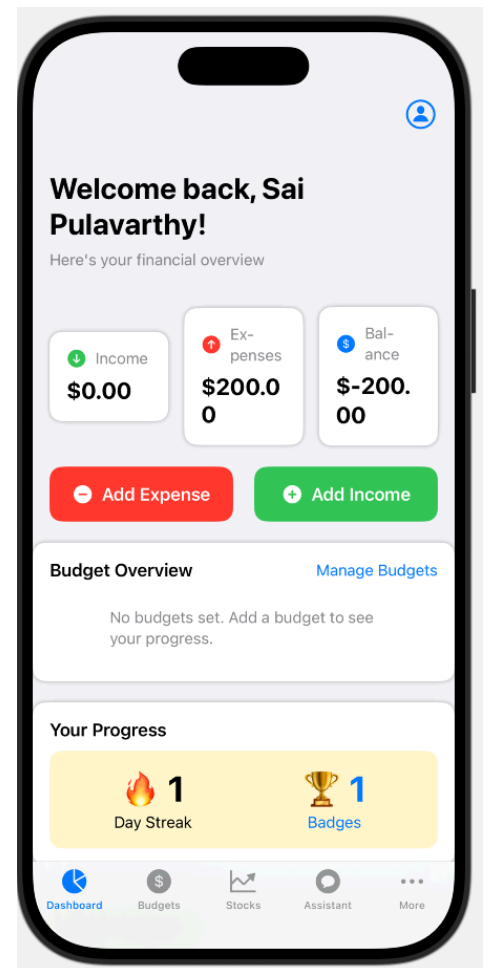
● Income

● Expenses

● Balance

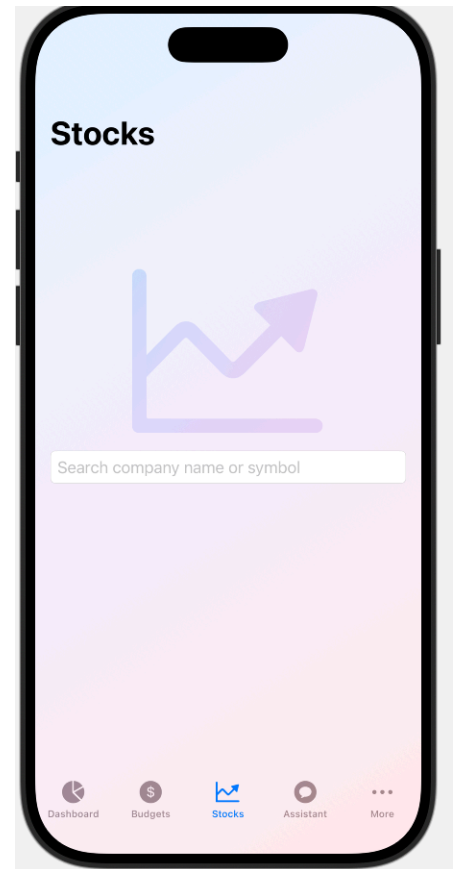
- Budget overview section with time filters (1Y to 10Y)
- Placeholder for progress chart (to be added)

- **Future Enhancements:**
 - Ring/line chart for budget usage
 - AI-generated monthly summaries



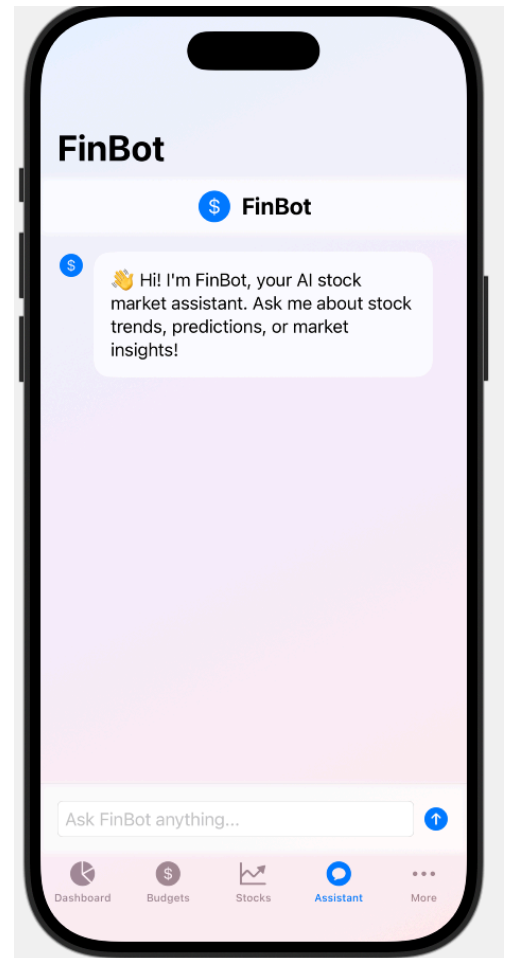
2. Stock View

- Purpose: Displays stock market insights and user portfolio progress
- Current Status:
 - Layout UI implemented
 - No real-time stock data yet
 - StockStore exists but uses mock/static data
- Future Enhancements:
 - Real-time data via Alpha Vantage / CoinGecko API
 - Mini stock simulator
 - Finbot analysis on selected stocks



3. Assistant View (Finbot)

- Purpose: A conversational AI assistant that helps with:
 - Explaining financial concepts
 - Answering questions on budgeting/investing
 - Offering spending insights or challenges
- Current Status:
 - Basic shell UI built
 - No natural language processing is integrated yet
- Planned Upgrades:
 - Integration with OpenAI / LLMs for NLP
 - Optional Finbot customization (tone, appearance)
 - Contextual prompts based on recent user activity



4. Community Tab

- Purpose: Space for users to share progress, tips, and challenges.
 - Status: Static layout with placeholder content.
 - Planned Features:
 - Comment threads, challenges
 - Moderation system and rules
 - Anonymous posting (optional toggle)
-

5. Achievements View

- Purpose: Encourage habit-building via gamification.
 - Features:
 - Unlock badges (e.g., “First Budget Created”, “5 Days Logged In”)
 - Progress bar toward the next achievement
 - Future Enhancements:
 - Badge sharing on the community tab
 - Visual trophy case design
-

6. Learn View

- Purpose: Educational section to teach financial concepts.
 - Design: Card-based content (e.g., What is budgeting? How do credit scores work?)
 - Add-ons in progress:
 - Beginner vs. Advanced filtering
 - Link Learn cards to real app actions (e.g., "Try It Now")
-

7. Simulation View

- Purpose: Let users simulate financial decisions without risk
 - Example Use Cases:
 - Simulate investing \$500 in stocks
 - See what happens if you increase your monthly savings
 - Upcoming Additions:
 - Historical market simulation
 - AI scenario suggestions
-

8. Profile Button & BeginnerPromptView

- Feature: On first launch, users are prompted to select Beginner/Advanced mode.
- Benefit: Tailors the app to different skill levels
- Future Plan: Add an "Edit Mode Preference" setting under Profile

-

4. Architecture Overview

Main Files:

- `ContentView.swift`: Root view handling user authentication and screen routing.
- `MainTabView.swift`: Hosts the navigation tabs and subviews.
- `TransactionStore`, `UserStore`, `StockStore`, `AchievementsStore`: ObservableObject-based state managers.

Testing:

- `Finance_AI_AppUITests.swift`: App-level UI tests.
- `Finance_AI_AppUITestsLaunchTests.swift`: Launch performance screenshot test.

State Management:

- SwiftUI's `@StateObject`, `@ObservedObject`, and `@Binding` for dynamic UI.

5. 🎨 Design Principles

Principle	Explanation
Simplicity First	Clear visual structure and guided workflows
AI with Empathy	Finbot offers conversational support without being overwhelming

Gamification	Motivates users with achievements, streaks, and leaderboards
Beginner Friendly	Users can toggle between “Beginner” and “Advanced” views
Clean Modular Design	Reusable SwiftUI views with consistent styling

7. 🤝 Collaboration Guidelines

- Use GitHub Projects for task breakdown and tracking
 - Assign features in modules (e.g., Finbot, Achievements, Learn View)
 - Keep all Stores well-documented with comments for state structure
 - Maintain one **main** and one **dev** branch — merge via PRs
-

8. 🚀 Deployment Plan

Item	Details
Target OS	iOS 15 and up
Deployment Method	App Store (TestFlight → Public Release)
Monetization Plan	Freemium model (free core features, optional premium add-ons)
Privacy & Compliance	Add Privacy Policy & Terms of Use pages (mandatory)
Initial Release Goal	Between August and November 2025
Long-term Vision	Expand to Android, integrate Plaid or Yodlee APIs, and add language localization

9. 📱 Key UI Elements (As of June 24)

- ✅ Personalized dashboard with summary cards
 - ✅ Budget filter tabs (1Y to 10Y)
 - 🟡 Budget Progress chart – placeholder in place
 - ✅ Tab bar with icons (Dashboard, Add, Stocks, Assistant, More)
 - ✅ Beginner onboarding screen
 - 🟡 Finbot text interface in progress
-

10. 📄 Summary

Finance Hive aims to be more than a finance app — it's an **AI-powered mentor, educator, and accountability partner** in your pocket. It stands out through:

- Conversational AI
- Gamified financial learning
- Community-based challenges
- Beautiful and intuitive SwiftUI design

By targeting students and beginners with a smart and supportive experience, Finance Hive is designed to grow into a trusted personal finance companion.