

Qzone

DEC 2, 2025

A Location Based Survey Platform

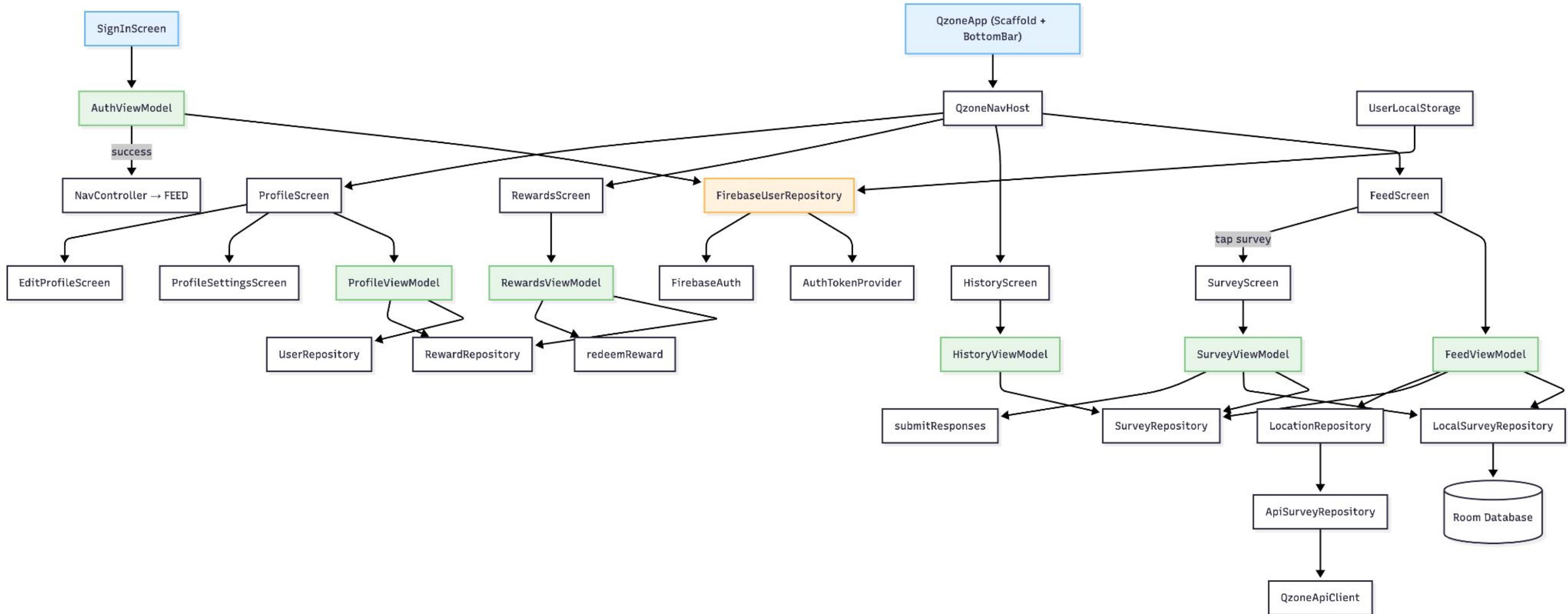
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Live Demo

The image shows a mobile application interface with a dark theme. At the top, there is a header bar with the time "9:57", signal strength, and battery level indicators. Below the header, the main content area is divided into several sections:

- Rewards Section:** Displays two promotional offers:
 - \$10 McDonalds:** \$10 voucher for any menu purchase, valid until February 2026. Includes a "Redeem" button.
 - KFC 25% OFF:** Get 25% off your next KFC meal, valid until March 2026.
- Nearby Surveys Section:** Shows "Boston, Massachusetts" with "2 completed nearby". It lists two surveys:
 - Market Research Survey:** Your opinions matter! Help us understand market trends and preferences. Location: Brookline, Massachusetts. 4 questions.
 - Quick Feedback Survey:** A quick 2-question survey. Location: Brookline, Massachusetts. 2 questions.
- Bottom Navigation Bar:** Features four tabs: Home, History, Rewards (highlighted), and Profile. There is also a "Top" button and a "Shake device to refresh" instruction.

Architecture Overview



Crash handling

1. Exception swallowing: Use try/catch/expect to throw an exception to handle I/O errors
2. Null safety: The methods return a nullable SharedPreferences; if the initialization routine hasn't been called, operations safely return null (no NullPointerException)
3. Firebase: Firebase parts will rethrows the CancellationException to prevent the coroutine from becoming uncancelable due to catching a general Exception.

Testing/debugging approach

1. We use user local storage combined with firebase repository to debug. (Frontend + backend log)

Stretch goals in progress or descoped

What we completed:

1. shake to refresh
2. In app reward redemption
3. Active Search and Filtering

What is in progressing:

1. Interactive Map View
2. Advanced Accessibility Feature



Work Division

Xuetong: Java Backend / API,
login/register, data storage

Yifei: Survey flow, question UI,
rewards and redemption logic

Zhenyang: UI/UX design,
History page, Profile page,

October 23, 2025 – November 23, 2025

Overview

12 Active pull requests

12

Merged pull requests

0

Open pull requests

Summary

Excluding merges, **4 authors** have pushed **48 commits** to main and **60 commits** to all branches.

On main, **91 files** have changed and there have been
10,527 additions and 14 deletions