CREATivators: Web and Mobile Development for Advertisement 1.0

Positive Pathways Mobile Application

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Problem
- Members currently use traditional communication methods such as e-mail and phone.
- No dedicated repository of information about the Positive Pathways Program (PPP).
- Agendas and minutes of monthly meetings are not centralized.

Solution
- Dedicated mobile application for communication and information.
- Pages dedicated to the programs, members, partners, and other information about PPP.
- Agendas of future monthly meetings and minutes of past meetings collected in one location.

Requirements
- General users can view profiles, programs, partners, and training materials without an account.
- With an account, Members can edit their individual profile pages as well as their respective program pages.
- Additionally, Members can view and edit meeting agendas and minutes.

Implementation
- MongoDB for database organization.
- Mongoose for database operations.
- mLab for remote database hosting.
- Express for routing requests and responses to/from server.
- NodeJS for server operations.

Summary
- General users may find information about Positive Pathways' programs, partners, members and meetings.
- Members may edit their profiles, programs, and meetings.
- Application data guarded against tampering through user authentication system.

Object Design
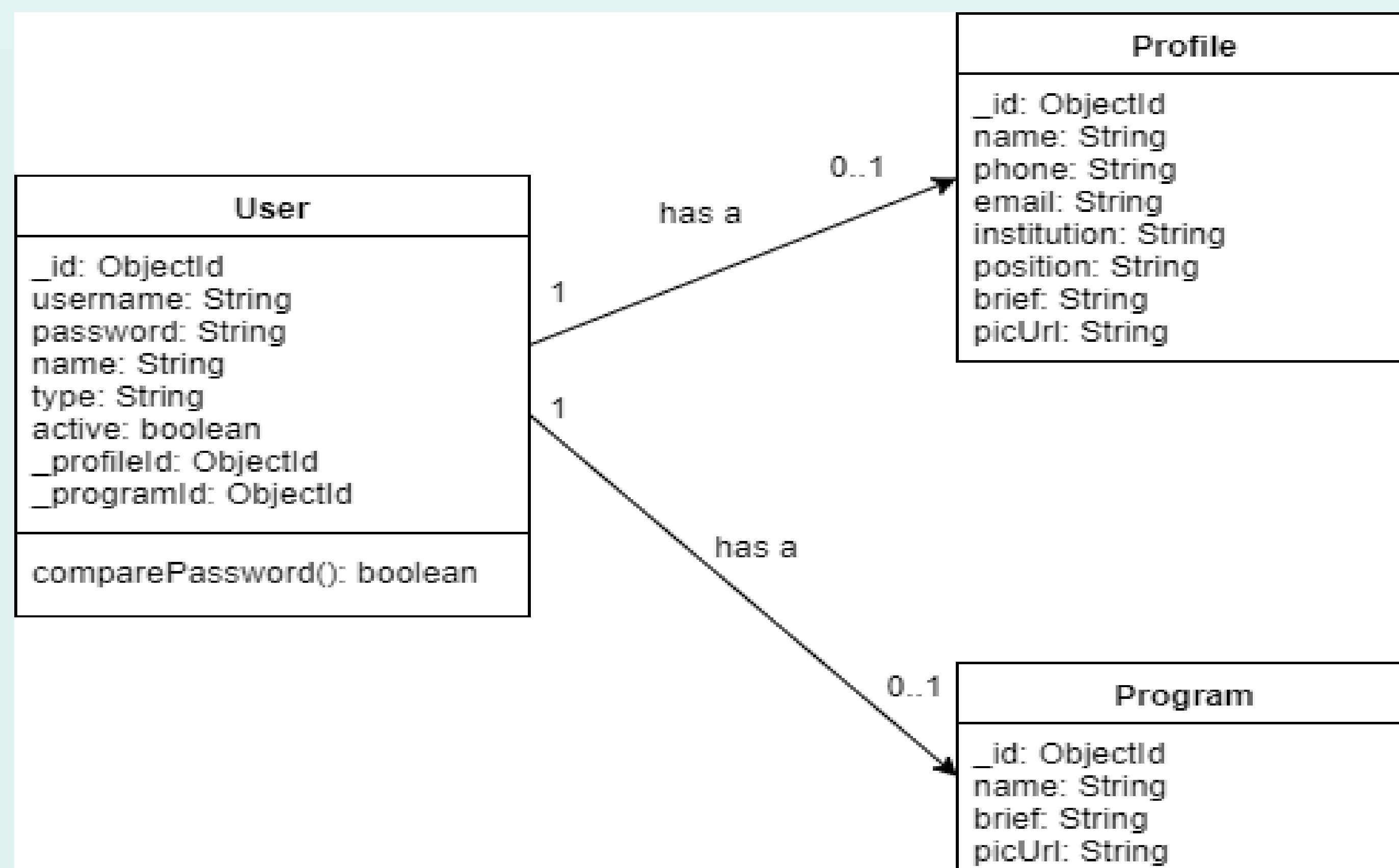Four entities in database: User, Profile, Program, and Meeting

- A User may have up to one Profile and/or Program associated with it.

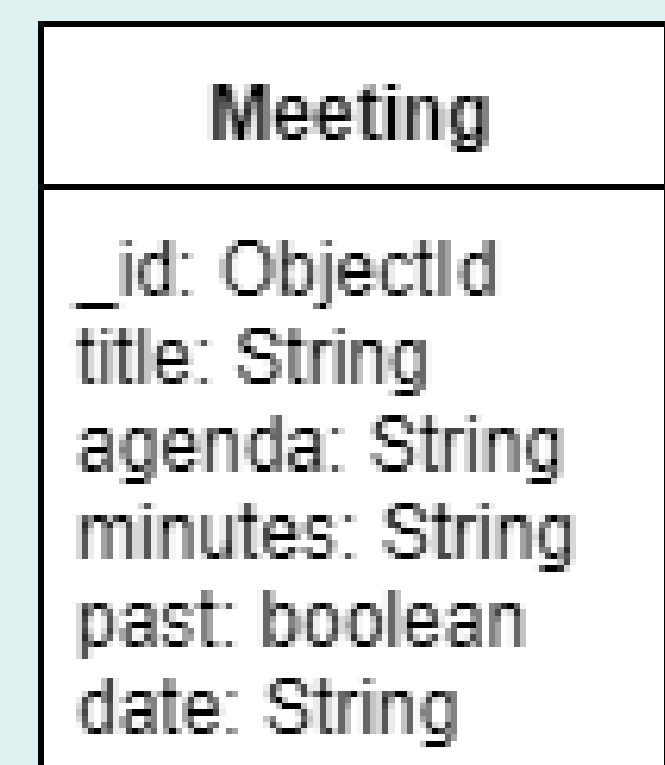Fig. 1: User entity with Profile and Program associations.

Fig. 2: Meeting entity.

System Design

Three types of Users determine access:
- Members – Modify associated profile and program as well as meetings.
- Moderators – Approve new accounts, associate users with profiles and programs, and make modifications.
- Administrators – Modify any entity in database, including performing deletions.
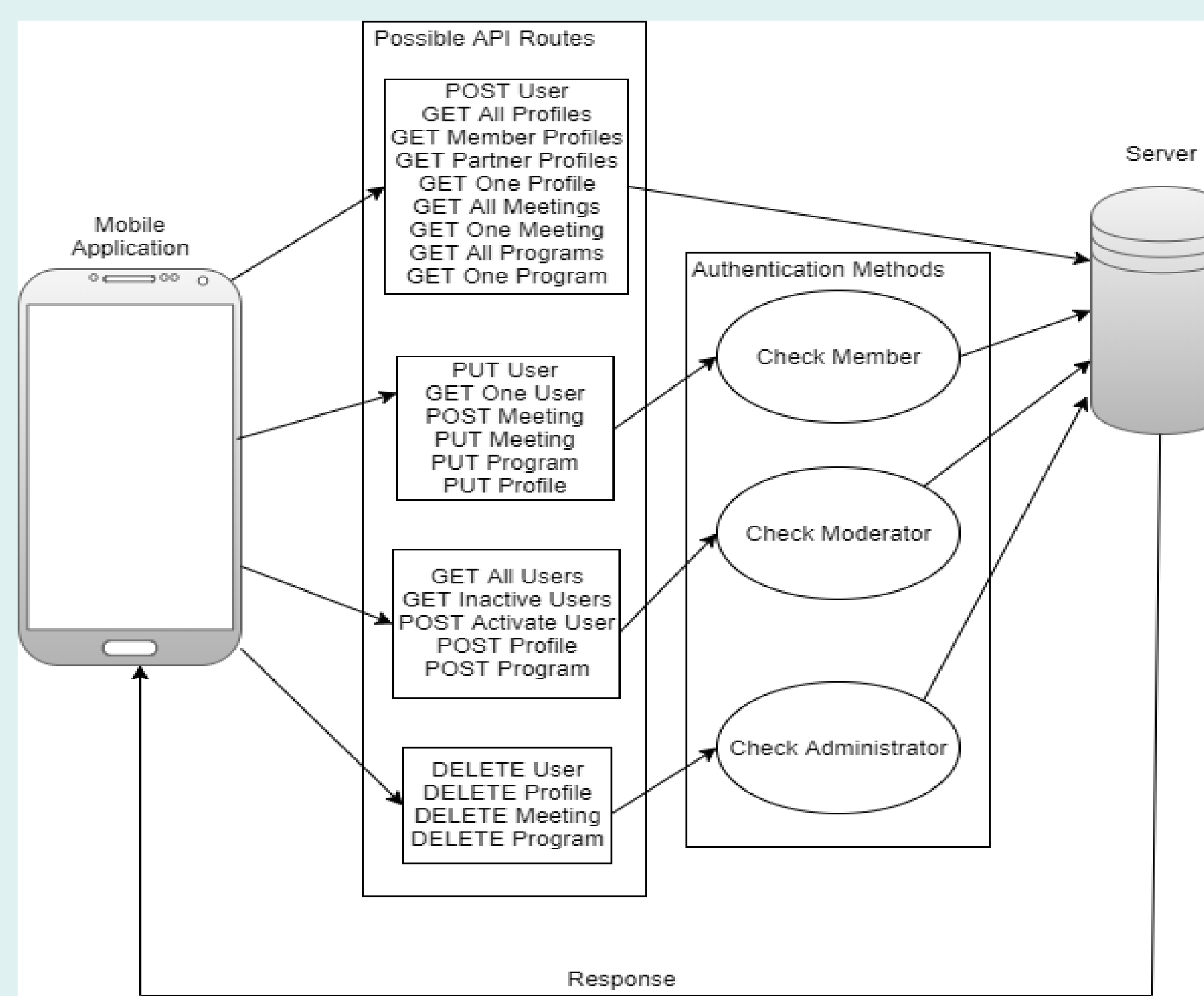- Administrators may perform Member and Moderator actions, Moderators may perform Member actions.
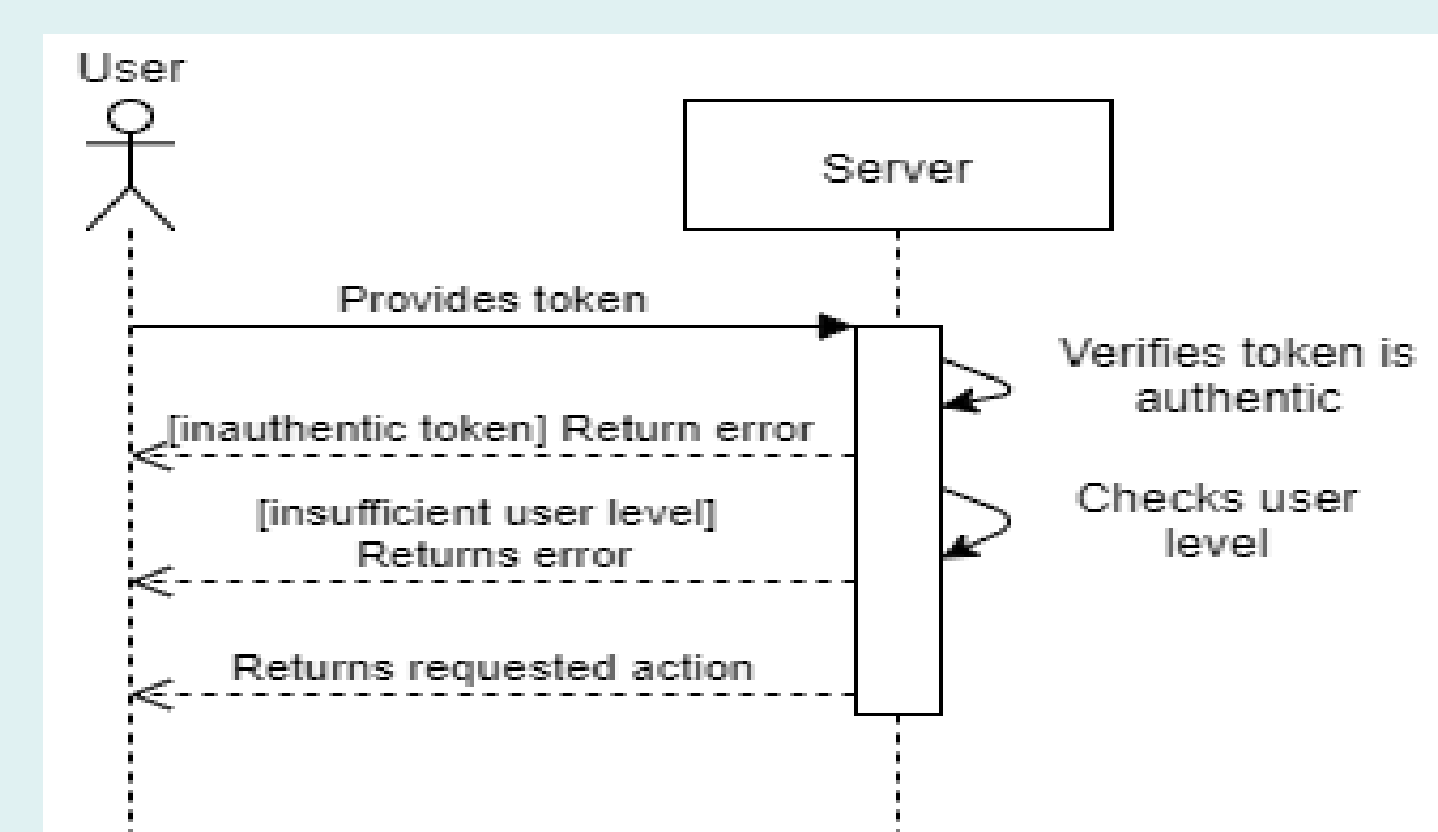

Fig. 3: Authentication Design.

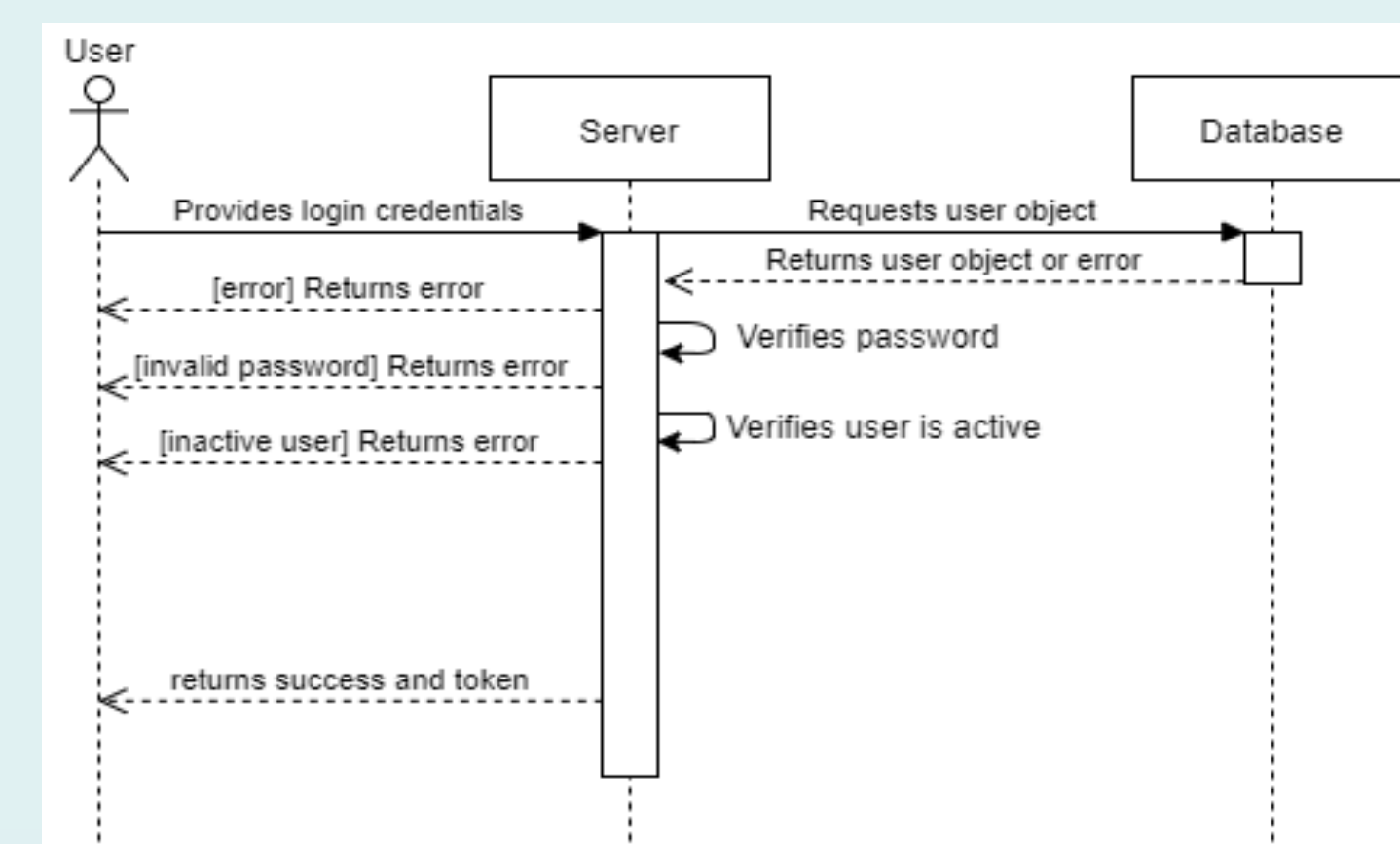Fig. 4: Token Verification Sequence Diagram

Fig. 5: User Authentication Sequence Diagram

Verification
Postman used to test API calls.

Fig. 6: Example Test Case and Result for User Authentication

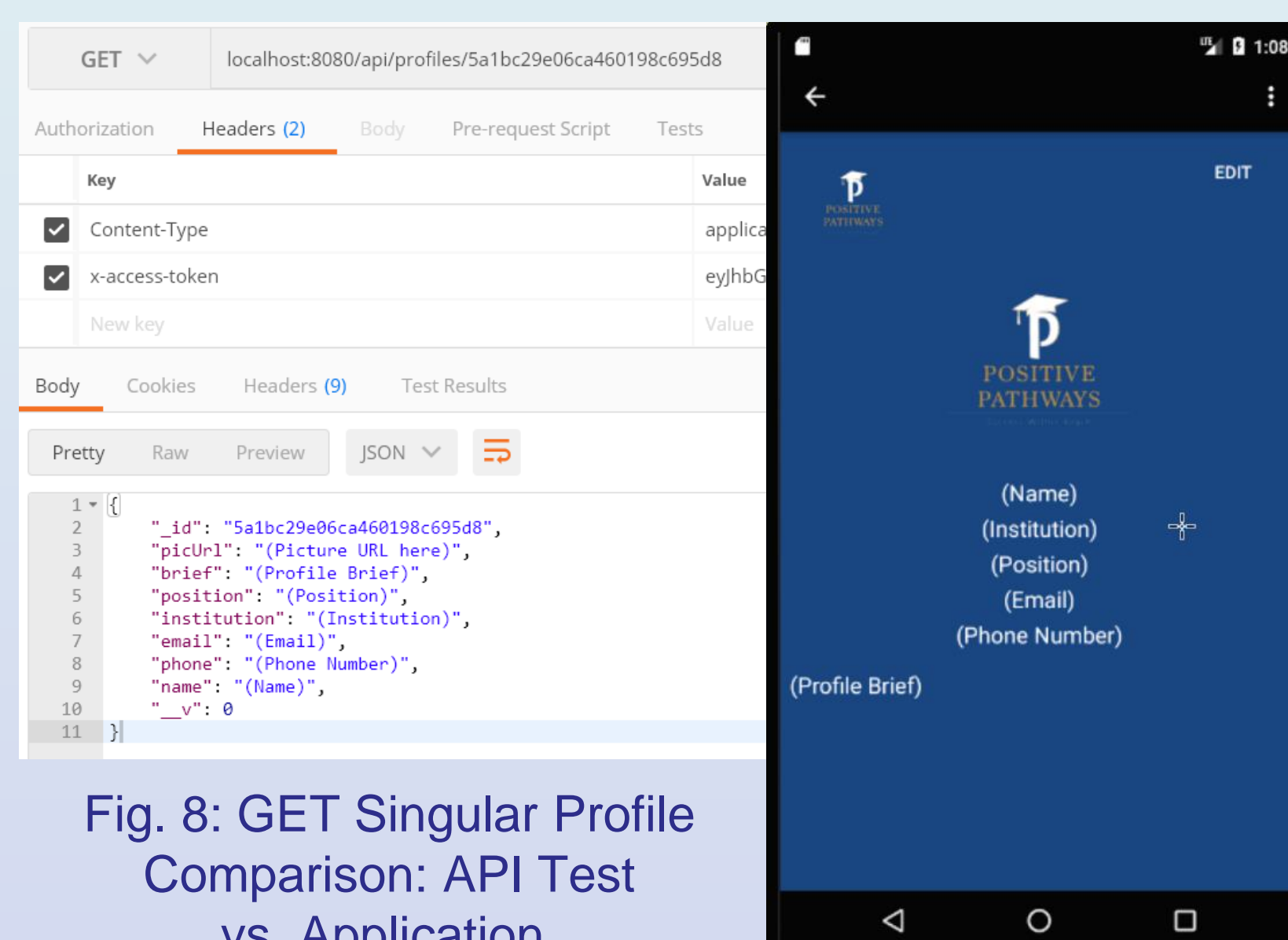Fig. 7: Example Test Case and Result for Token Verification

Screenshots

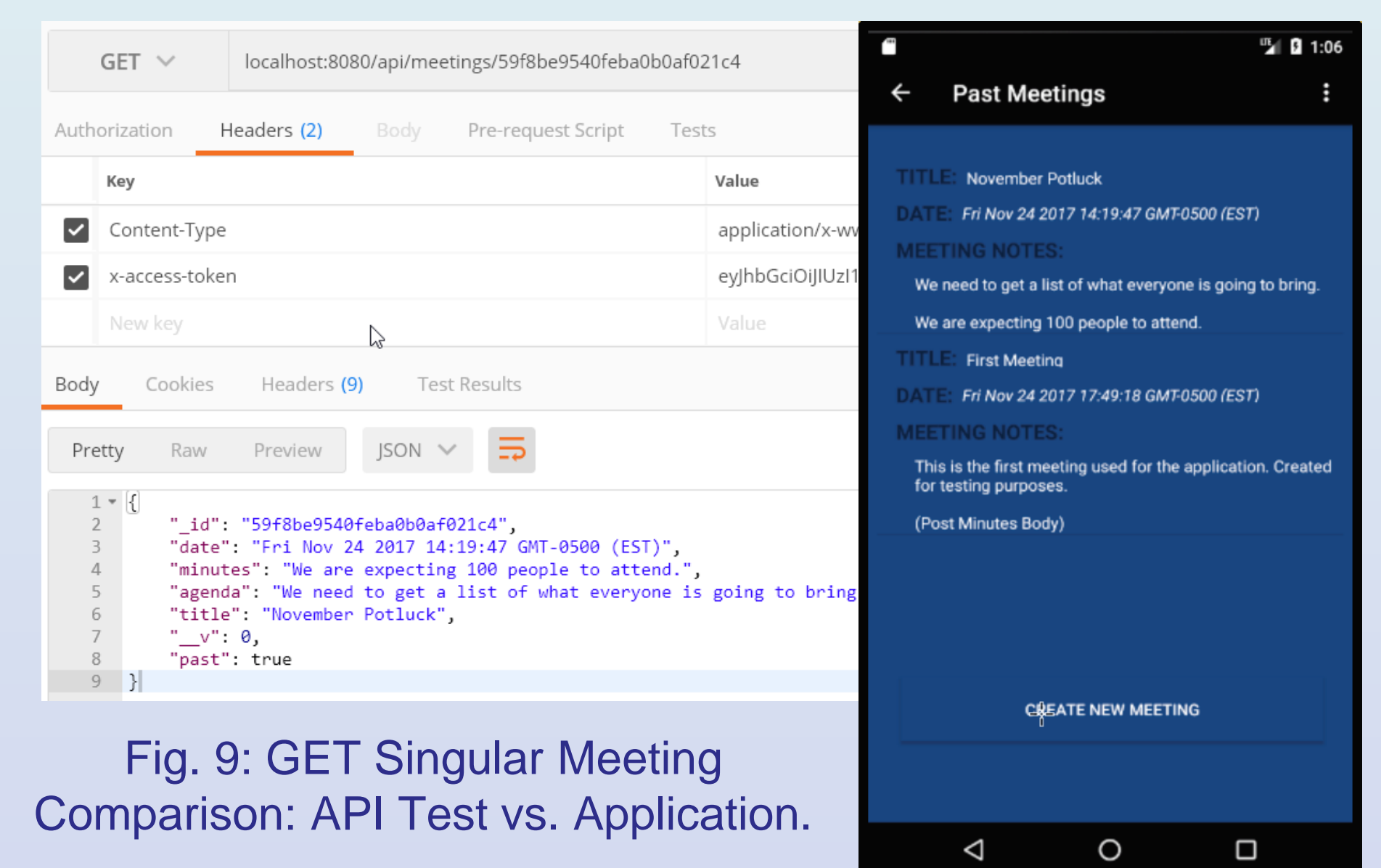Fig. 8: GET Singular Profile Comparison: API Test vs. Application.

Fig. 9: GET Singular Meeting Comparison: API Test vs. Application.

Acknowledgements