

# Unified Communication App

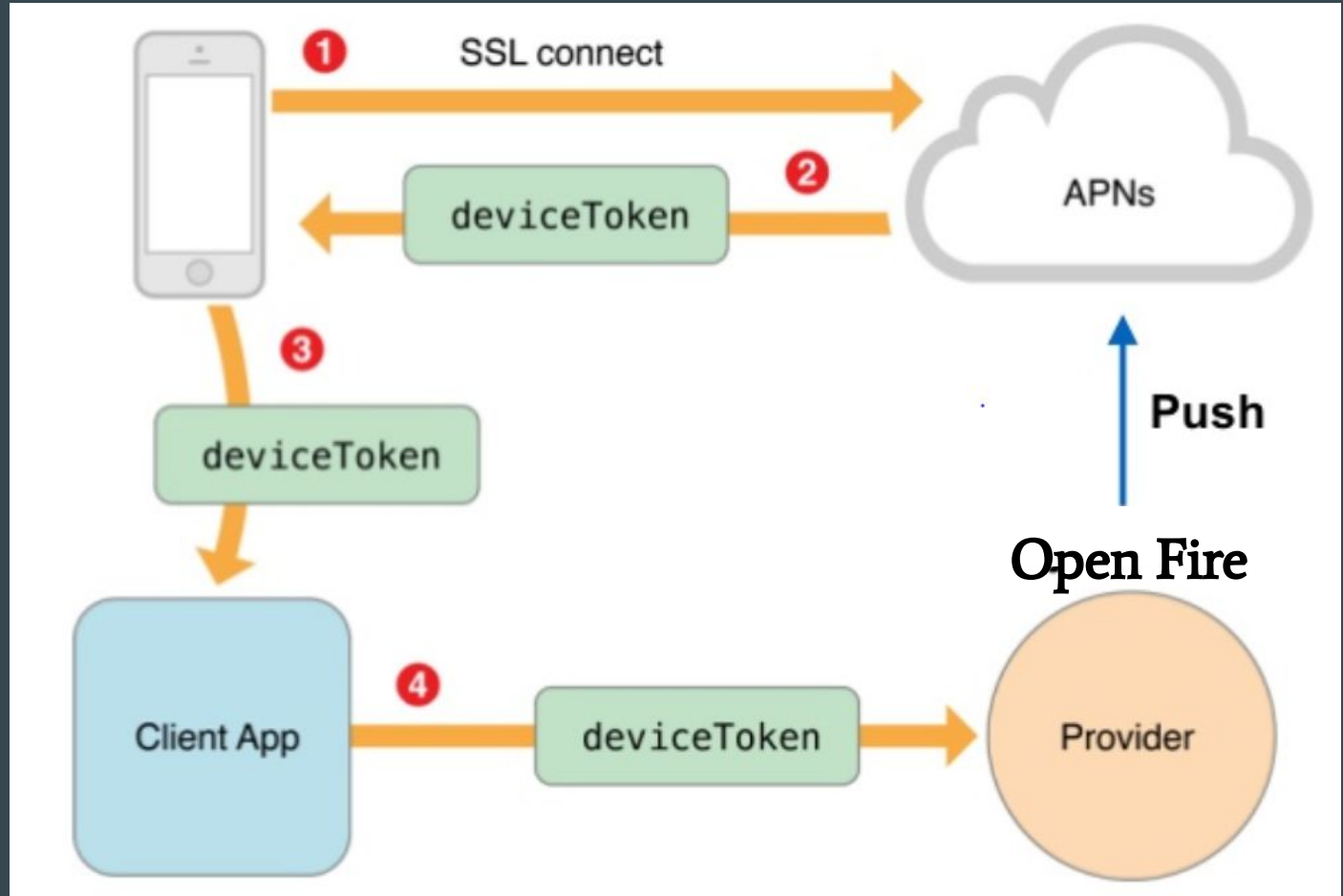


Invictus

# Architecture

- XMPP protocol implementation
- Administrative mode with console
- Easy user creation - by Admin
- SSL/TLS channel for secure data transfer

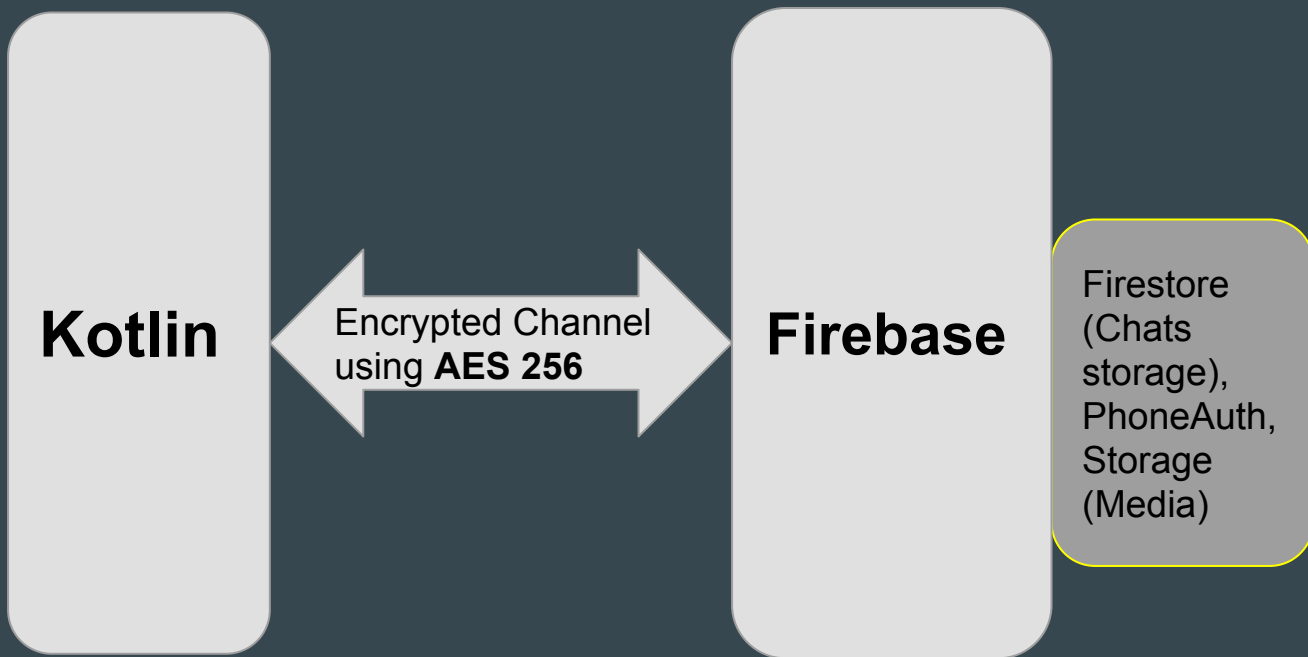
# Data Flow



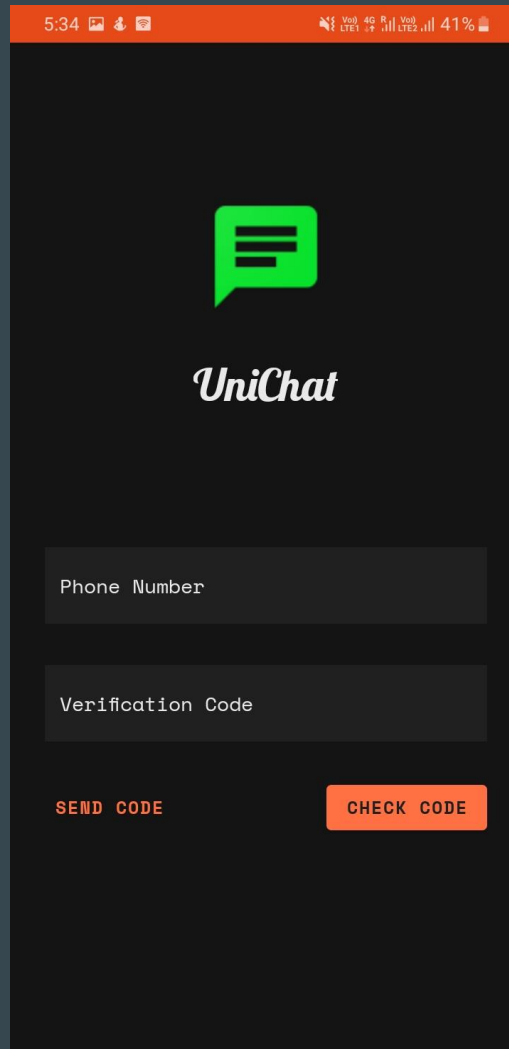
# Previous Implementation and Results

# Architecture

- Front End - Kotlin
- Back End - Firebase



# Front End



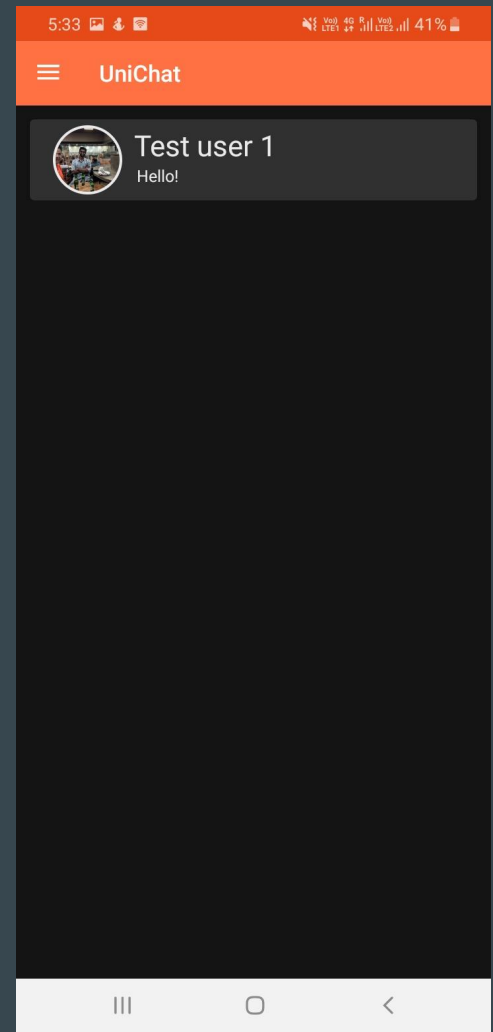
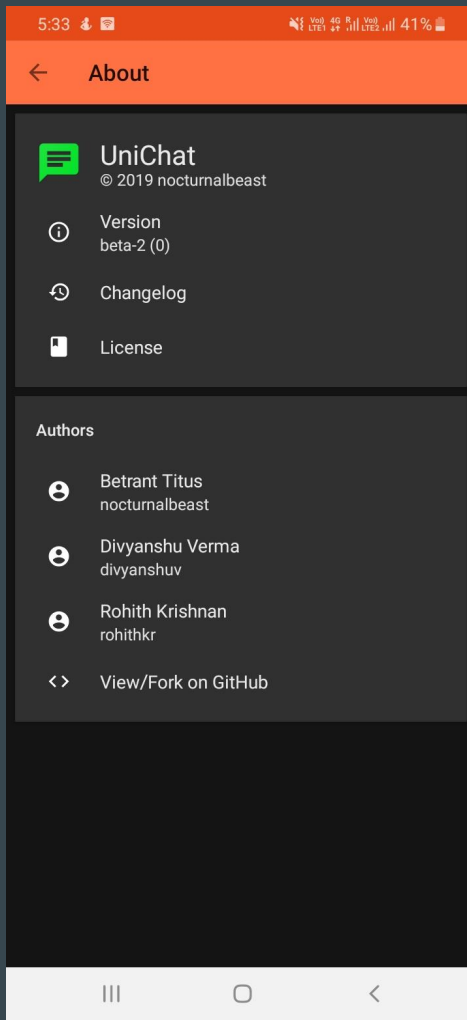
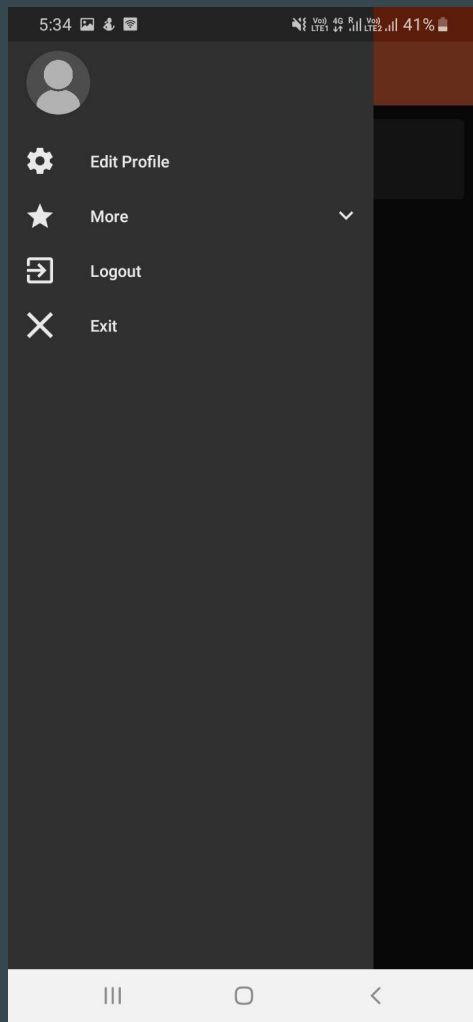
# Back End - Firebase

The screenshot shows the Firebase console interface. The left sidebar contains the following sections:

- Project Overview**
- Develop**
  - Authentication
  - Database
  - Storage
  - Hosting
  - Functions
  - ML Kit
- Quality**
  - Crashlytics
  - Performance
  - Test Lab
  - App Distribution
- Analytics**
- Extensions**
- Spark** (Free \$0/month) with an **Upgrade** button.

The main content area is titled **Database** and shows the **Cloud Firestore** database. The breadcrumb path is **chatChannels > 0yZVR0TISuYgXh7dc69S > messages > V471N2g6szIsOos40DOS**. The **Data** tab is selected, showing a collection of **messages**. The collection contains two documents:

- Document 1:** `sharedKey: "qWQWGCeqnQAycWbi"`, `userIds` (array containing `"0oBZcy7eNTPUS8Q7TK47W97TxC"` and `"3sjBqJheTOVMA8SmEy5JR0M08S"`).
- Document 2:** `recipientID: "3sjBqJheTOVMA8SmEy5JR0M08S2"`, `senderID: "0oBZcy7eNTPUS8Q7TK47W97TxC3"`, `senderName: "AAlice"`, `text: "+z5SiBU2TJf4+7fiQC7zmg=="`, `time: 26 July 2019 at 11:28:36 UTC+5:30`, `type: "text"`.





# Features - Done

- Authentication using Mobile Number and OTP
- Establish Peer to Peer Communication
- New user Onboarding
- Completed for Peer to Peer Communication:
  - Send text and media in real time
  - End to End Encryption (AES 256)
  - Server Admin Console (Powered by Firebase)
  - Built in contact details (Rudimentary Version)

# Task Split

- Group Chat/ Broadcast
  - TODO Feature - Admin can assign tasks to his team
  - Self destruct message
  - RBAC