OTP Using Firebase-

Login With OTP Using Firebase. After Login Display Contact Number on Next Screen

1. Task Description

This task involves creating a mobile application feature that allows users to log in using OTP (One-Time Password) authentication, utilizing Firebase. The process involves the following steps:

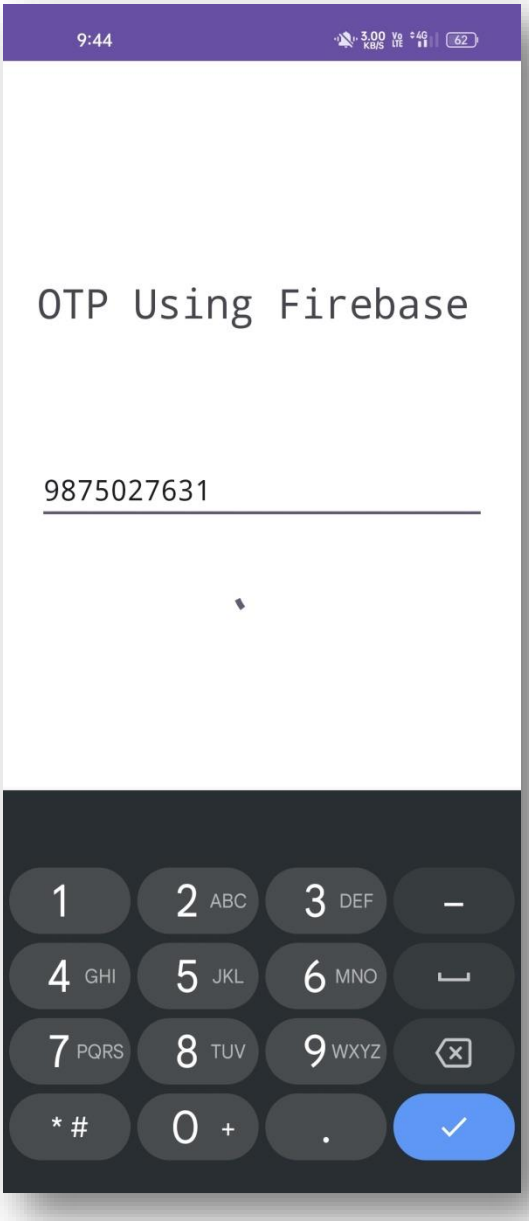
1. The user enters their mobile number on the first screen.
2. Upon clicking the "Get OTP" button, the app sends a request to Firebase Authentication to send an OTP to the entered mobile number.
3. Firebase generates and sends an OTP to the user’s mobile number.
4. The user enters the OTP on the next screen.
5. The app verifies the OTP using Firebase, and upon successful verification, logs in the user.
6. After login, the user is redirected to a third screen, where their mobile number is displayed.
7. Additionally, the user can log out from the third screen using a "Logout" button.

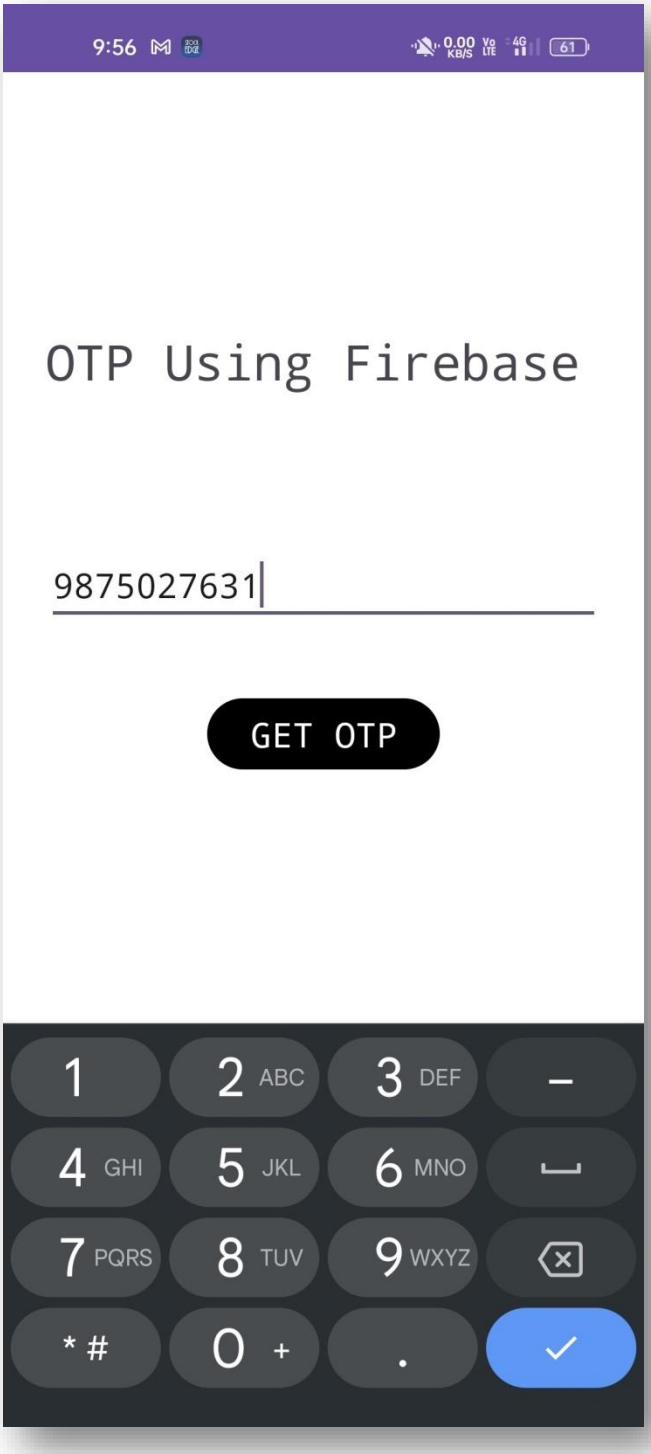
The aim of this task is to implement secure OTP-based login using Firebase's phone authentication feature and to handle UI elements that facilitate a smooth user experience.

2. **Task Output Screenshot**

- **Screen 1: Enter Mobile Number**

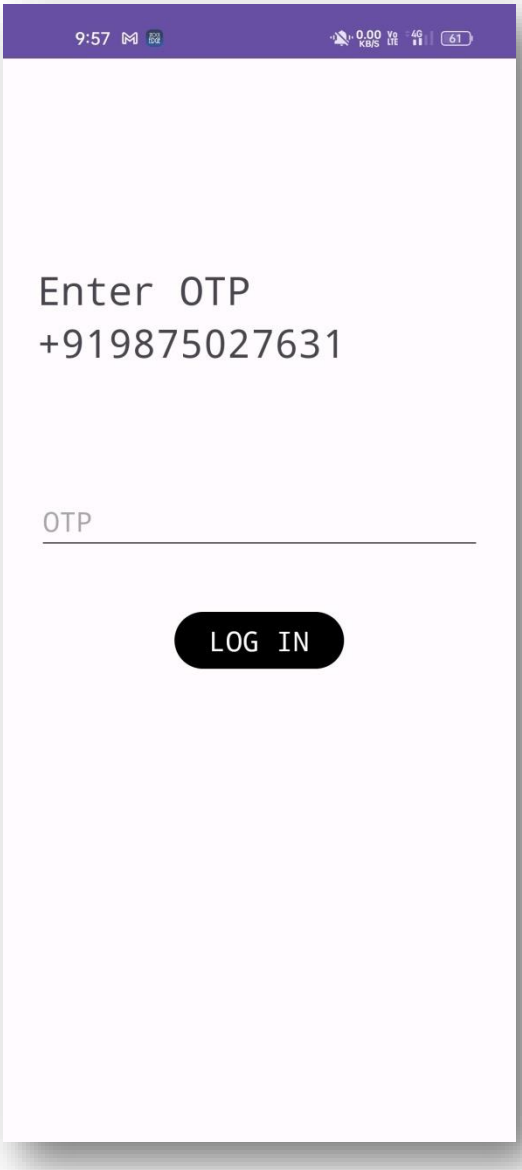
(In this task Only use the firebase test phone number.)




9:56
OTP Using Firebase
9875027631
GET OTP
1
2 ABC
3 DEF
4 GHI
5 JKL
6 MNO
7 PQRS
8 TUV
9 WXYZ
* #
0 +
.

- **Screen 2: Enter OTP**

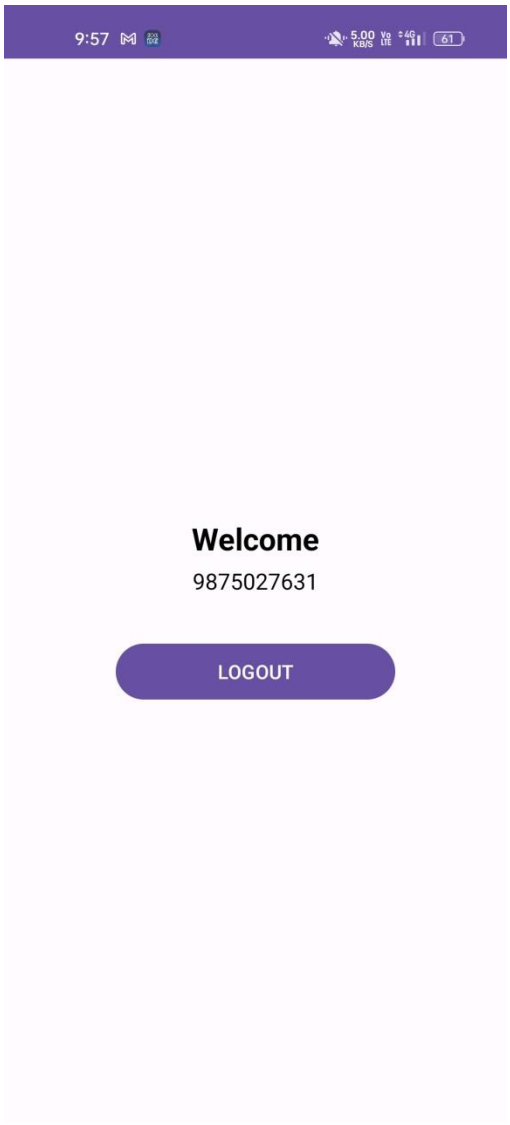
(Attach a screenshot of the screen where the user enters the received OTP.)



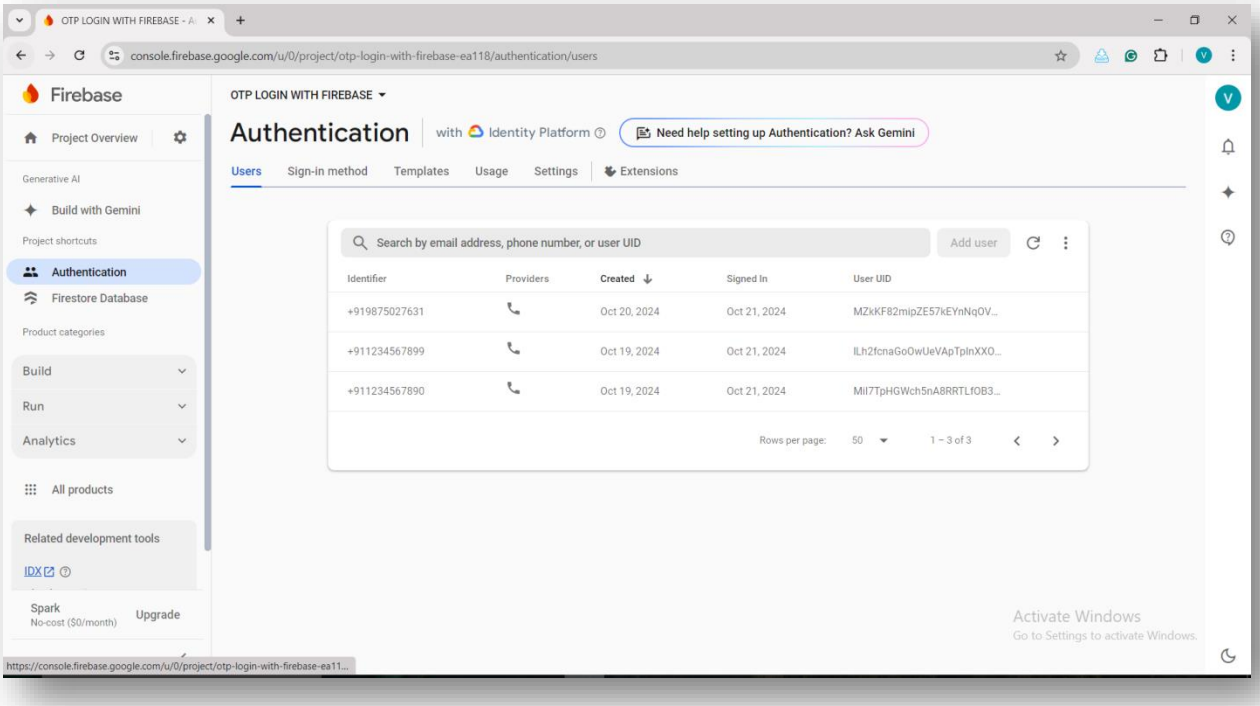

9:57
Enter OTP
+919875027631
654321
1 2 3 –
4 5 6
7 8 9
, 0 .

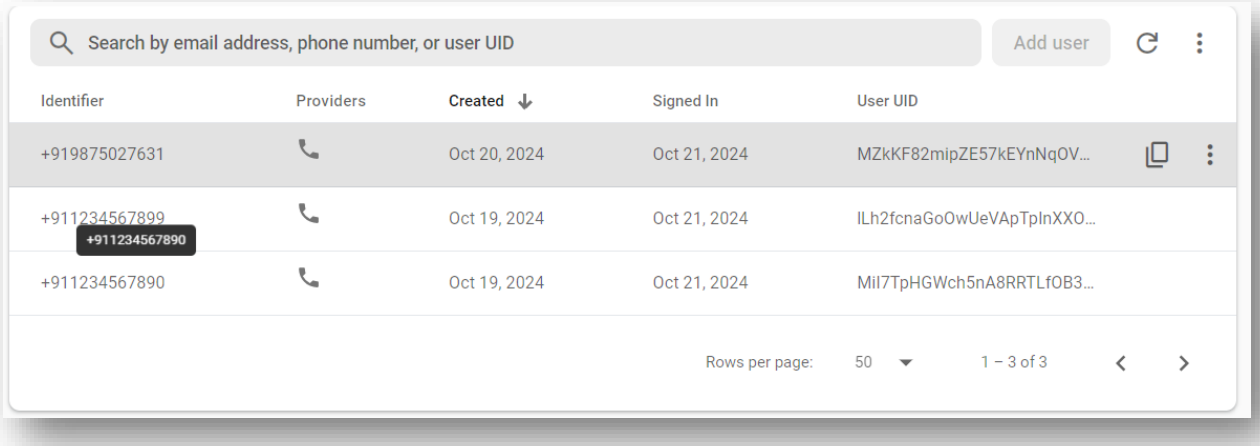
- **Screen 3: Mobile Number Displayed**

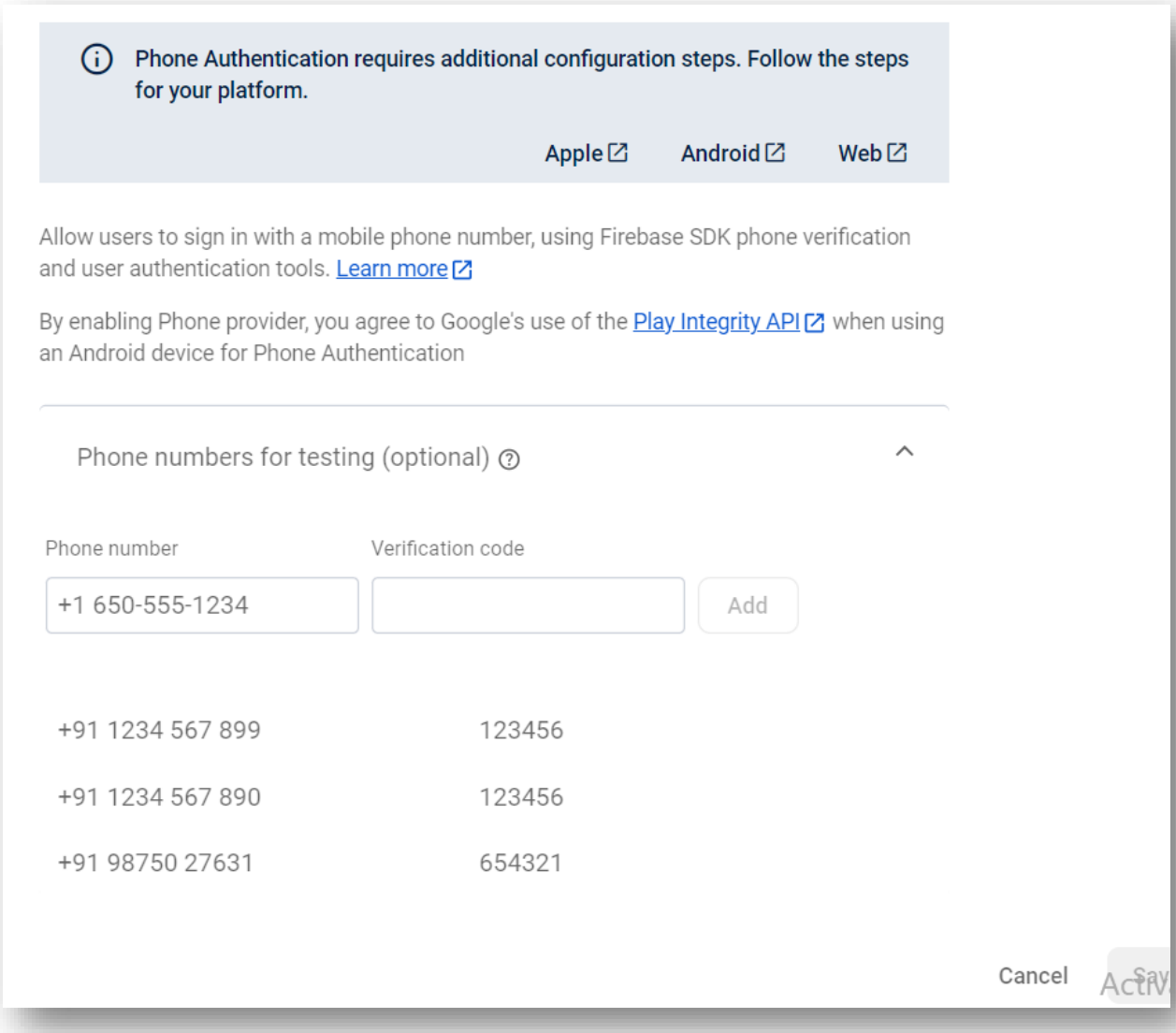
(Attach a screenshot of the final screen where the mobile number is displayed after successful login.)



- **Screen 4: Firebase console**






Phone Authentication requires additional configuration steps. Follow the steps for your platform.
Apple
Android
Web
Allow users to sign in with a mobile phone number, using Firebase SDK phone verification and user authentication tools. Learn more
By enabling Phone provider, you agree to Google's use of the Play Integrity API when using an Android device for Phone Authentication
Phone numbers for testing (optional)
Phone number
Verification code
+1 650-555-1234
Add
+91 1234 567 899
123456
+91 1234 567 890
123456
+91 98750 27631
654321
Cancel

3. Widget/Algorithm Used In Task

Widgets:

- **EditText Widget**
  Used to capture user input:
  - In the first screen for entering the mobile number.
  - In the second screen for entering the OTP.
    Example:
    <EditText android:id="@+id/main_number" android:hint="Mobile Number" ... />
    <EditText android:id="@+id/Verify_number" android:hint="OTP" ... />
- **Button Widget**
  Used for performing actions such as:
  - Requesting OTP (on the first screen).
  - Logging in after entering OTP (on the second screen).
    Example:
    <Button android:id="@+id/main_getotp" android:text="GET OTP" ... />
    <Button android:id="@+id/Verify_login" android:text="LOG IN" ... />
- **TextView Widget**
  Used for displaying static content like:
  - Titles and instructions (e.g., "OTP Using Firebase", "Enter OTP").
  - Displaying the mobile number after login.
    Example:
    <TextView android:id="@+id/mobile_number" android:text="Mobile Number" ... />
- **ProgressBar Widget**
  Used to indicate progress when waiting for OTP verification.
  Example:
  <ProgressBar android:id="@+id/progressbar" android:visibility="gone" ... />

Firebase Authentication Algorithm:

- **Firebase Phone Authentication**
  Firebase Authentication is used to handle the OTP generation and verification process.
  Steps:

    1. **Request OTP**: When the user clicks the "Get OTP" button, Firebase sends an OTP to the provided mobile number.
    2. **OTP Verification**: The user enters the OTP on the second screen. Firebase then verifies whether the entered OTP matches the one sent to the user.
    3. **Login and Navigation**: If the OTP is verified successfully, the user is logged in, and the app navigates to the next screen, displaying the mobile number.

  Key Firebase Functions Used:

    - PhoneAuthProvider.verifyPhoneNumber(): This function initiates the OTP request to the provided phone number.
    - FirebaseAuth.getInstance().signInWithCredential(): This function verifies the OTP and logs the user in if it's valid.