

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:gravity="center"
    android:padding="20dp"
    android:layout_margin="20dp"
    android:orientation="vertical"
    android:id="@+id/getOtpLayout"
    tools:context=".MainActivity">

    <ImageView
        android:layout_width="150dp"
        android:layout_height="150dp"
        android:layout_marginBottom="30dp"
```

```
android:src="@drawable/otp_sent"/>
```

```
<TextView
```

```
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="OTP Verification"  
    android:textSize="26dp"  
    android:textStyle="bold"  
    android:fontFamily="serif-monospace"  
    android:layout_marginBottom="20dp"/>
```

```
<TextView
```

```
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:layout_marginBottom="40dp"  
    android:fontFamily="serif-monospace"  
    android:gravity="center"  
    android:lineHeight="18dp"  
    android:text="@string/textToSendOtp"  
    android:textSize="14dp"  
    android:textStyle="normal" />
```

```
<TextView
```

```
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="Enter Mobile Number"  
    android:textSize="16dp"  
    android:fontFamily="serif-monospace"/>
```

```
<LinearLayout
```

```
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content">
```

```
<EditText
```

```
    android:id="@+id/disabledTextNumber"  
    android:layout_width="50dp"  
    android:layout_height="wrap_content"  
    android:text="+91"  
    android:maxLength="10"  
    android:textSize="18dp"  
    android:fontFamily="sans-serif"  
    android:gravity="center"  
    android:layout_marginBottom="20dp"  
    android:inputType="phone"  
    android:focusable="false"  
    android:allowClickWhenDisabled="false"/>
```

```
<EditText
```

```
    android:id="@+id/getNumber"  
    android:layout_width="150dp"  
    android:layout_height="wrap_content"  
    android:text=""  
    android:maxLength="10"  
    android:textSize="18dp"  
    android:fontFamily="sans-serif"  
    android:gravity="left"  
    android:layout_marginBottom="20dp"
```

```

        android:inputType="phone"/>

    </LinearLayout>

    <FrameLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content">

        <Button
            android:id="@+id/sendOtp"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:background="@color/material_dynamic_neutral_variant95"
            android:fontFamily="sans-serif-black"
            android:text="Get OTP"
            android:textSize="20dp"
            />

        <ProgressBar
            android:id="@+id/getOtpProgress"
            android:layout_width="40dp"
            android:layout_height="40dp"
            android:layout_gravity="center"
            android:visibility="gone"/>

    </FrameLayout>
</LinearLayout>

```

activity_type_otp.xml

```

<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".typeOtp"
    android:orientation="vertical"
    android:gravity="center"
    android:layout_margin="20dp"
    android:padding="20dp">

    <ImageView
        android:layout_width="150dp"
        android:layout_height="150dp"
        android:layout_marginBottom="30dp"
        android:src="@drawable/otp_received"/>

```

```
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="OTP Verification"
    android:textSize="26dp"
    android:textStyle="bold"
    android:fontFamily="serif-monospace"
    android:layout_marginBottom="20dp"/>
```

```
<TextView
    android:id="@+id/phoneNumberDisplay"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginBottom="40dp"
    android:fontFamily="serif-monospace"
    android:gravity="center"
    android:lineHeight="18dp"
    android:text="Enter the OTP sent to +91-9484645141"
    android:textSize="14dp"
    android:textStyle="normal" />
```

```
<GridLayout
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:rowCount="1"
    android:columnCount="6"
    android:layout_marginBottom="20dp"
    android:textAlignment="center">
```

```
<EditText
    android:id="@+id/otpBtn1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:paddingLeft="24dp"
    android:paddingRight="24dp"
    android:text=""
    android:inputType="number"
    android:textSize="20dp"
    android:maxLength="1"
    android:fontFamily="sans-serif"
    android:textFontWeight="800"
    android:gravity="center"
    android:focusable="true"/>
```

```
<EditText
    android:id="@+id/otpBtn2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:paddingLeft="24dp"
    android:paddingRight="24dp"
    android:text=""
    android:inputType="number"
    android:textSize="20dp"
    android:maxLength="1"
    android:fontFamily="sans-serif"
    android:textFontWeight="800"
```

```
android:gravity="center"/>
```

```
<EditText
```

```
    android:id="@+id/otpBtn3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:paddingLeft="24dp"
    android:paddingRight="24dp"
    android:text=""
    android:textSize="20dp"
    android:inputType="number"
    android:maxLength="1"
    android:fontFamily="sans-serif"
    android:textFontWeight="800"
    android:gravity="center"/>
```

```
<EditText
```

```
    android:id="@+id/otpBtn4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:paddingLeft="24dp"
    android:paddingRight="24dp"
    android:text=""
    android:inputType="number"
    android:textSize="20dp"
    android:maxLength="1"
    android:fontFamily="sans-serif"
    android:textFontWeight="800"
    android:gravity="center"/>
```

```
<EditText
```

```
    android:id="@+id/otpBtn5"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:paddingLeft="24dp"
    android:paddingRight="24dp"
    android:text=""
    android:inputType="number"
    android:textSize="20dp"
    android:maxLength="1"
    android:fontFamily="sans-serif"
    android:textFontWeight="800"
    android:gravity="center"
    android:focusable="true"/>
```

```
<EditText
```

```
    android:id="@+id/otpBtn6"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:paddingLeft="24dp"
    android:paddingRight="24dp"
    android:text=""
    android:inputType="number"
    android:textSize="20dp"
    android:maxLength="1"
    android:fontFamily="sans-serif"
    android:textFontWeight="800"
```

```

        android:gravity="center"
        android:focusable="true"/>

</GridLayout>

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:gravity="center"
    android:layout_marginBottom="18dp">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:fontFamily="serif-monospace"
        android:gravity="center"
        android:text="Dont't receive the OTP ?"
        android:textSize="14dp"
        android:textStyle="normal" />

    <TextView
        android:id="@+id/resendBtn"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Resend otp"
        android:textAllCaps="true"
        android:layout_marginLeft="5dp"
        android:textColor="#FD0000"
        android:textStyle="bold"
        android:cursorVisible="true"/>

</LinearLayout>

<FrameLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content">

    <Button
        android:id="@+id/verifyBtn"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:background="@color/material_dynamic_neutral_variant95"
        android:fontFamily="sans-serif-black"
        android:text="Verify and proceed"
        android:textAllCaps="true"
        android:textSize="20dp" />

    <ProgressBar
        android:id="@+id/verifyProgress"
        android:layout_width="40dp"
        android:layout_height="40dp"
        android:layout_gravity="center"
        android:visibility="gone"/>

</FrameLayout>

</LinearLayout>

```

activity_verification_status.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".VerificationStatus"
    android:orientation="vertical"
    android:gravity="center"
    android:layout_margin="20dp"
    android:padding="20dp">

    <ImageView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginBottom="30dp"
        android:src="@drawable/phonenummer_background"/>

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Success!!!"
        android:textSize="30dp"
        android:textStyle="bold"
        android:fontFamily="serif-monospace"
        android:layout_marginBottom="10dp"/>

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginBottom="40dp"
        android:fontFamily="serif-monospace"
        android:gravity="center"
        android:lineHeight="18dp"
        android:text="Congratulations! You have been successfully
authenticated. "
        android:textSize="14dp"
        android:textStyle="normal" />

</LinearLayout>
```

MainActivity.java

```
package com.example.loginwithotp;

import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.util.Log;
import android.view.View;
import android.widget.Toast;

import com.example.loginwithotp.databinding.ActivityMainBinding;
import com.google.firebase.FirebaseException;
import com.google.firebase.auth.FirebaseAuth;
import com.google.firebase.auth.PhoneAuthCredential;
import com.google.firebase.auth.PhoneAuthOptions;
import com.google.firebase.auth.PhoneAuthProvider;

import java.util.ResourceBundle;
import java.util.concurrent.TimeUnit;

public class MainActivity extends AppCompatActivity {
    public ActivityMainBinding binding;
    private FirebaseAuth firebaseAuth;
    private PhoneAuthProvider.OnVerificationStateChangedCallbacks
phoneAuthPro;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        binding = ActivityMainBinding.inflate(getLayoutInflater());
        setContentView(binding.getRoot());

        firebaseAuth = FirebaseAuth.getInstance();

        binding.sendOtp.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                btnsendOtp();
            }
        });
    }

    public void btnsendOtp(){
        if (binding.getNumber().getText().toString().trim().isEmpty()){
            Toast.makeText(this, "Please enter your phone number...",
Toast.LENGTH_SHORT).show();
        } else if (binding.getNumber().getText().toString().trim().length()
!=10) {
            Toast.makeText(this, "Please enter valid phone number...",
Toast.LENGTH_SHORT).show();
        }else {
            getotpSend();
        }
    }
}
```



```

    }

    private void getotpSend() {
        binding.getOtpProgress.setVisibility(View.VISIBLE);
        binding.sendOtp.setVisibility(View.INVISIBLE);

        phoneAuthPro = new
PhoneAuthProvider.OnVerificationStateChangedCallbacks() {
            @Override
            public void onVerificationCompleted(@NonNull PhoneAuthCredential
credential) {}
            @Override
            public void onVerificationFailed(@NonNull FirebaseException e) {
                binding.getOtpProgress.setVisibility(View.GONE);
                binding.sendOtp.setVisibility(View.VISIBLE);

                // Toast.makeText(MainActivity.this,
binding.getNumber.getText().toString(), Toast.LENGTH_SHORT).show();
                Toast.makeText(MainActivity.this, e.getLocalizedMessage(),
Toast.LENGTH_LONG).show();
                Log.d("phoneError", "hello" + e.getLocalizedMessage());
            }
            @Override
            public void onCodeSent(@NonNull String verificationId,
@NonNull
PhoneAuthProvider.ForceResendingToken token) {
                binding.sendOtp.setVisibility(View.VISIBLE);
                binding.getOtpProgress.setVisibility(View.INVISIBLE);
                Log.d("verificationId: ", verificationId);
                Intent intent = new Intent(MainActivity.this, typeOtp.class);

intent.putExtra("phoneNumber", binding.getNumber.getText().toString().trim());
                intent.putExtra("verificationId", verificationId);
                startActivity(intent);
            }
        };

        PhoneAuthOptions options =
            PhoneAuthOptions.newBuilder(firebaseAuth)

                .setPhoneNumber("+91"+binding.getNumber.getText().toString().trim())
                    .setTimeout(60L, TimeUnit.SECONDS) // Timeout and
unit
                    .setActivity(this) // (optional)
Activity for callback binding
                    // If no activity is passed, reCAPTCHA verification
can not be used.
                    .setCallbacks(phoneAuthPro) //
OnVerificationStateChangedCallbacks
                    .build();
        PhoneAuthProvider.verifyPhoneNumber(options);
    }
}

```

typeOtp.java

```
package com.example.loginwithotp;

import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.text.Editable;
import android.text.TextWatcher;
import android.util.Log;
import android.view.View;
import android.widget.EditText;
import android.widget.Toast;

import com.example.loginwithotp.databinding.ActivityTypeOtpBinding;
import com.google.android.gms.tasks.OnCompleteListener;
import com.google.android.gms.tasks.Task;
import com.google.firebase.auth.AuthResult;
import com.google.firebase.auth.FirebaseAuth;
import com.google.firebase.auth.PhoneAuthCredential;
import com.google.firebase.auth.PhoneAuthProvider;

public class typeOtp extends AppCompatActivity {

    public @NonNull ActivityTypeOtpBinding binding;
    private String verificationId;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        binding = ActivityTypeOtpBinding.inflate(getLayoutInflater());
        setContentView(binding.getRoot());

        toChangeFocus();

        binding.phoneNumberDisplay.setText(String.format(
            "+91-%s", getIntent().getStringExtra("phoneNumber")
        ));

        verificationId = getIntent().getStringExtra("verificationId");
        // String verificationId = "986188" ;

        binding.resendBtn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Toast.makeText(typeOtp.this, "OTP send successfully.",
                    Toast.LENGTH_SHORT).show();
            }
        });

        binding.verifyBtn.setOnClickListener(new View.OnClickListener() {
```

```

@Override
public void onClick(View view) {
    binding.verifyProgress.setVisibility(View.VISIBLE);
    binding.verifyBtn.setVisibility(View.INVISIBLE);

    if (binding.otpBtn1.getText().toString().trim().isEmpty() ||
        binding.otpBtn2.getText().toString().trim().isEmpty() ||
        binding.otpBtn3.getText().toString().trim().isEmpty() ||
        binding.otpBtn4.getText().toString().trim().isEmpty() ||
        binding.otpBtn5.getText().toString().trim().isEmpty() ||
        binding.otpBtn6.getText().toString().trim().isEmpty()) {
        Toast.makeText(typeOtp.this, "Please enter OTP...",
Toast.LENGTH_SHORT).show();
    } else {
        if (verificationId != null) {
            String otp =
String.valueOf(binding.otpBtn1.getText().toString().trim()) +
String.valueOf(binding.otpBtn2.getText().toString().trim()) +
String.valueOf(binding.otpBtn3.getText().toString().trim()) +
String.valueOf(binding.otpBtn4.getText().toString().trim()) +
String.valueOf(binding.otpBtn5.getText().toString().trim()) +
String.valueOf(binding.otpBtn6.getText().toString().trim());

            Toast.makeText(typeOtp.this, otp,
Toast.LENGTH_SHORT).show();
            Toast.makeText(typeOtp.this, verificationId,
Toast.LENGTH_SHORT).show();

            PhoneAuthCredential credential =
PhoneAuthProvider.getCredential(verificationId, otp);
            FirebaseAuth.getInstance()
                .signInWithCredential(credential)
                .addOnCompleteListener(new
OnCompleteListener<AuthResult>() {
                    @Override
                    public void onComplete(@NonNull Task<AuthResult>
task) {

                        if (task.isSuccessful()) {

binding.verifyProgress.setVisibility(View.VISIBLE);

binding.verifyBtn.setVisibility(View.INVISIBLE);

                                Intent intent = new Intent(typeOtp.this,
VerificationStatus.class);

                                intent.setFlags(Intent.FLAG_ACTIVITY_CLEAR_TASK |
Intent.FLAG_ACTIVITY_NEW_TASK);

                                startActivity(intent);
                            } else {

```

```

binding.verifyProgress.setVisibility(View.INVISIBLE);

binding.verifyBtn.setVisibility(View.VISIBLE);
                                Log.d("task not successfull : ",
String.valueOf(task.getException()));
                                Toast.makeText(typeOtp.this, "Invalid
OTP..", Toast.LENGTH_SHORT).show();
                                }
                                }
                                });
                                }
                                }
                                });
                                }

}

private void toChangeFocus() {
    binding.otpBtn1.addTextChangedListener(new TextWatcher() {
        @Override
        public void beforeTextChanged(CharSequence charSequence, int i,
int i1, int i2) {}
        @Override
        public void onTextChanged(CharSequence charSequence, int i, int
i1, int i2) {
            binding.otpBtn2.requestFocus();
        }
        @Override
        public void afterTextChanged(Editable editable) {}
    });
    binding.otpBtn2.addTextChangedListener(new TextWatcher() {
        @Override
        public void beforeTextChanged(CharSequence charSequence, int i,
int i1, int i2) {}
        @Override
        public void onTextChanged(CharSequence charSequence, int i, int
i1, int i2) {
            binding.otpBtn3.requestFocus();
        }
        @Override
        public void afterTextChanged(Editable editable) {}
    });
    binding.otpBtn3.addTextChangedListener(new TextWatcher() {
        @Override
        public void beforeTextChanged(CharSequence charSequence, int i,
int i1, int i2) {}
        @Override
        public void onTextChanged(CharSequence charSequence, int i, int
i1, int i2) {
            binding.otpBtn4.requestFocus();
        }
        @Override
        public void afterTextChanged(Editable editable) {}
    });
    binding.otpBtn4.addTextChangedListener(new TextWatcher() {
        @Override

```

```

        public void beforeTextChanged(CharSequence charSequence, int i,
int i1, int i2) {}
        @Override
        public void onTextChanged(CharSequence charSequence, int i, int
i1, int i2) {
            binding.otpBtn5.requestFocus();
        }
        @Override
        public void afterTextChanged(Editable editable) {}
    });
    binding.otpBtn5.addTextChangedListener(new TextWatcher() {
        @Override
        public void beforeTextChanged(CharSequence charSequence, int i,
int i1, int i2) {}
        @Override
        public void onTextChanged(CharSequence charSequence, int i, int
i1, int i2) {
            binding.otpBtn6.requestFocus();
        }
        @Override
        public void afterTextChanged(Editable editable) {}
    });
}
}

```

verificationStatus.java

```

package com.example.loginwithotp;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

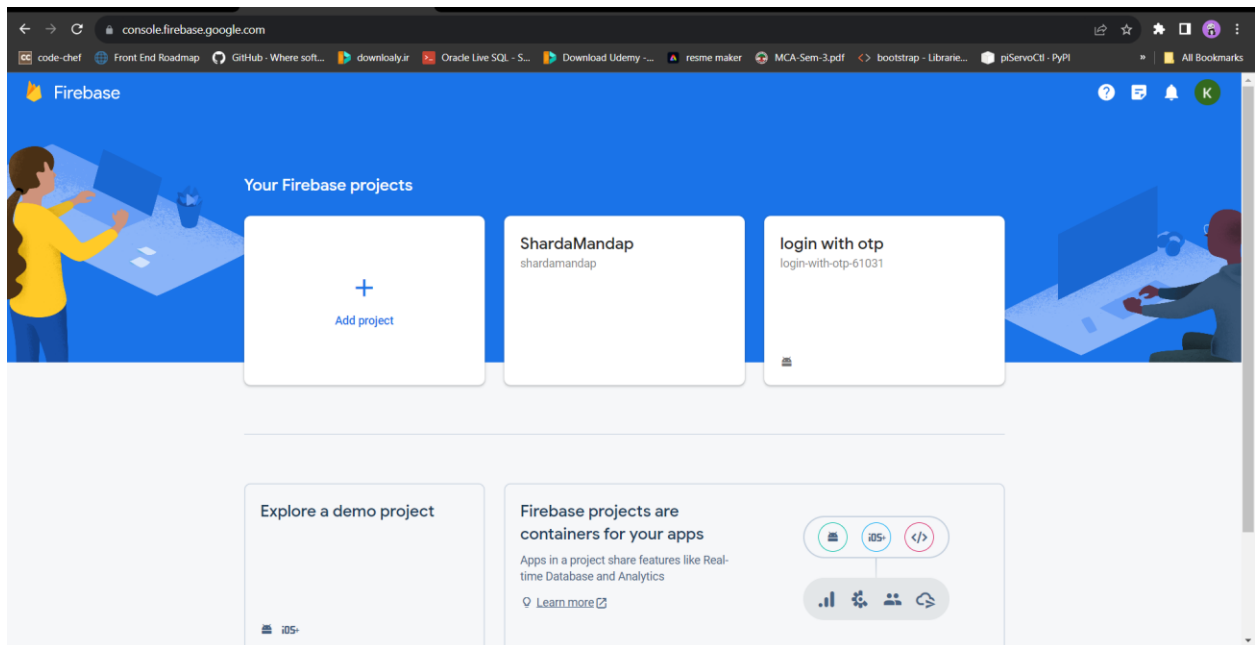
public class VerificationStatus extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_verification_status);
    }
}

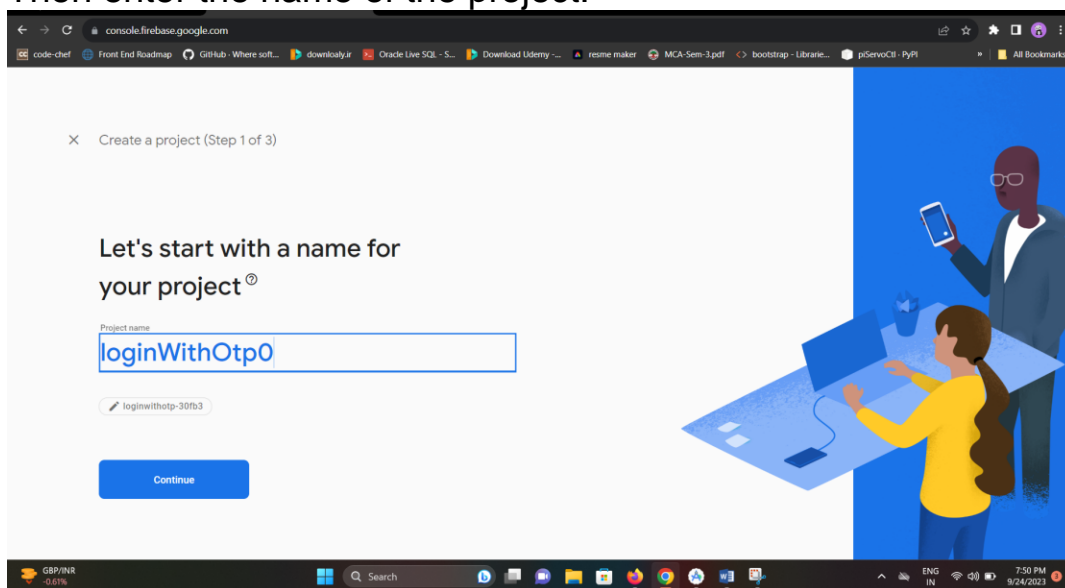
```

To Create and register our project in firebase follow the following steps :

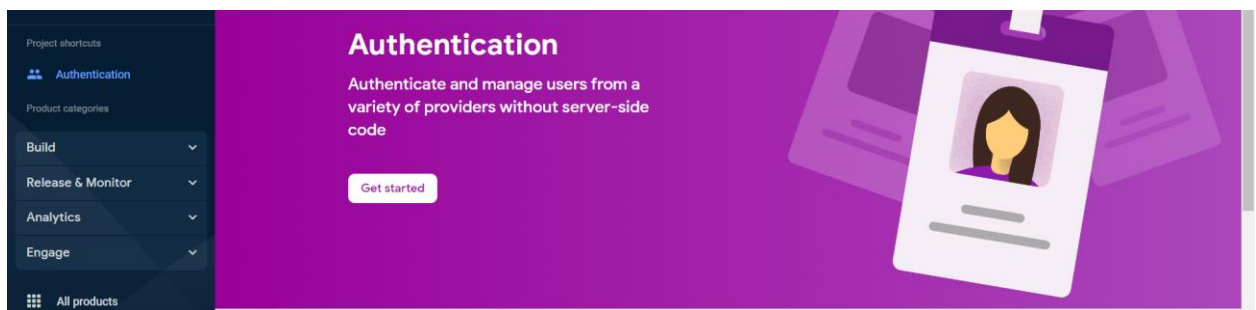
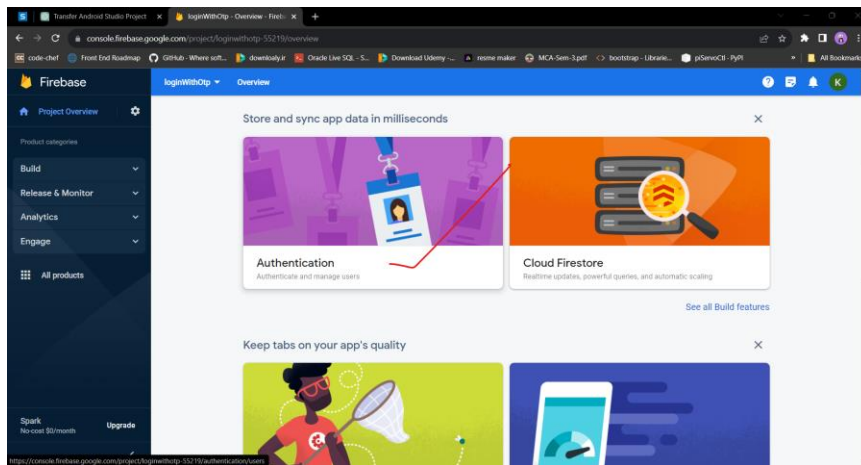
1. Open the link : <https://console.firebase.google.com/>
2. Then click on + Add Project



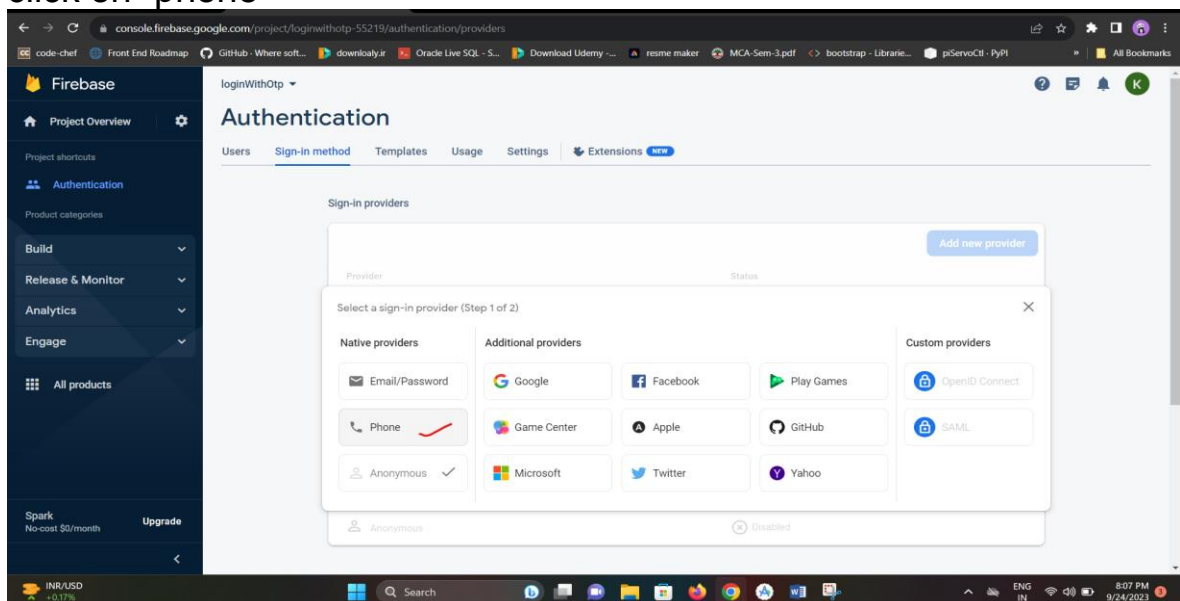
3. Then enter the name of the project.



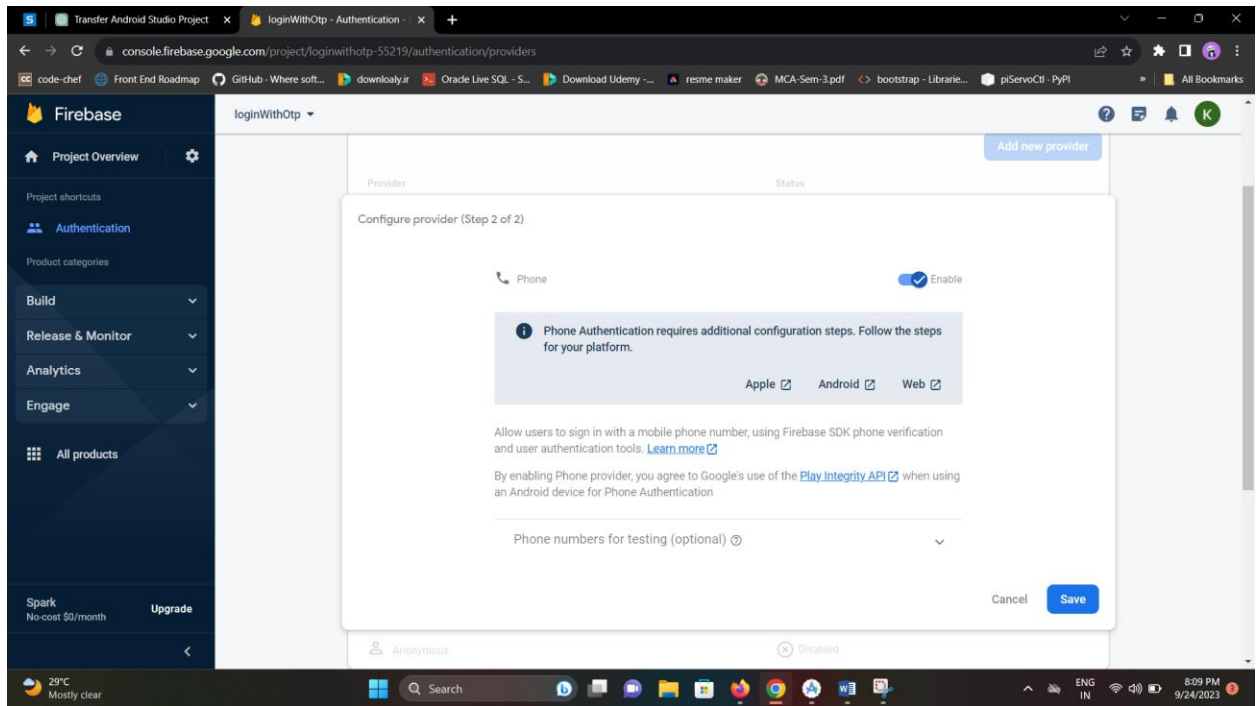
4. And click to Continue, then Create a project and lastly continue.
5. After that choose the Authentication card menu and then Get Started



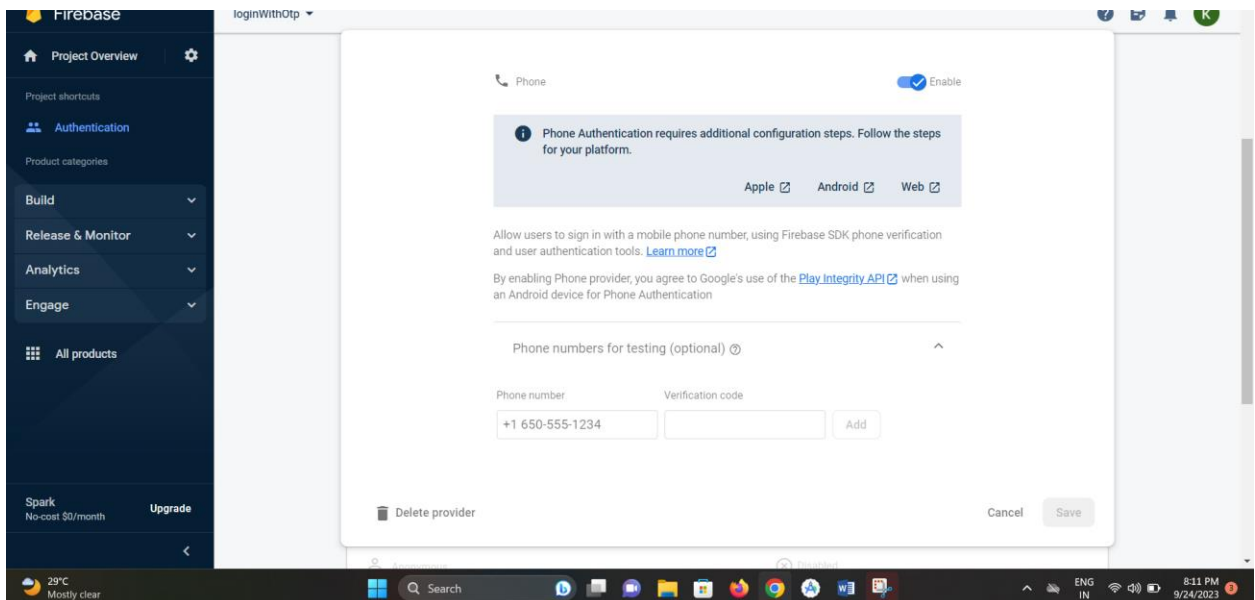
6. In that go to Sign-in method and Click on Add new provider and then click on "phone"



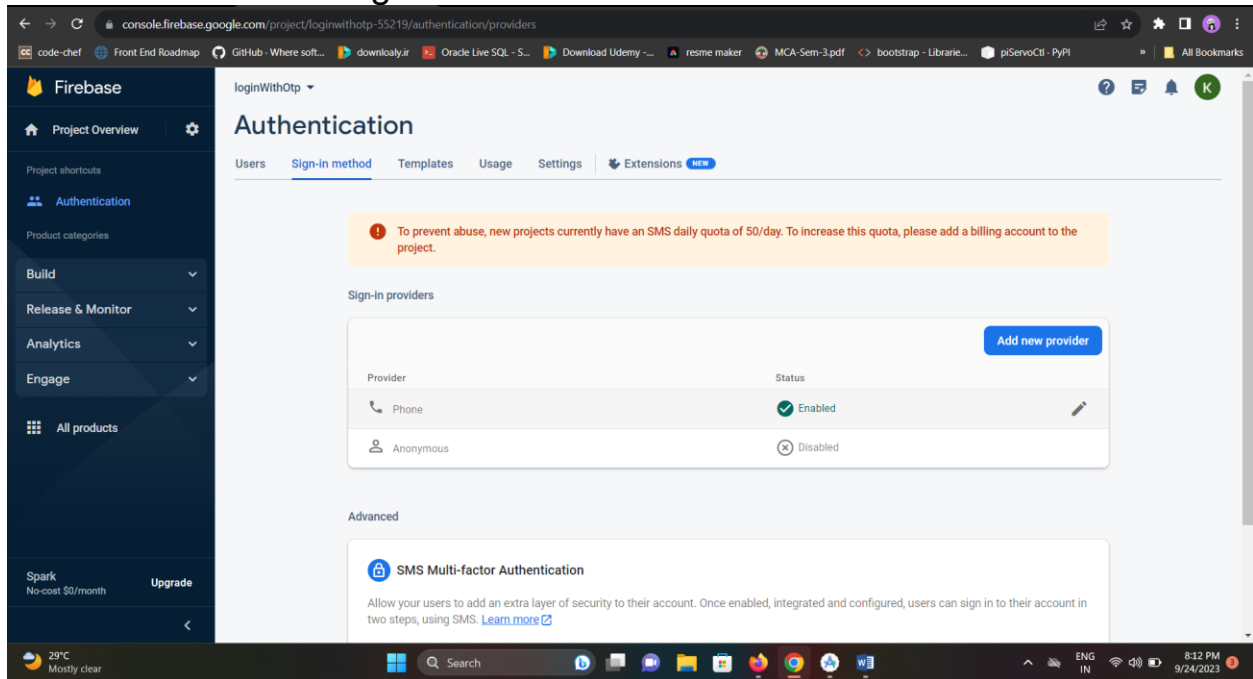
7. Then click on “enable” and “save”.



8. You can also add the predefined Phone Number for testing purpose.

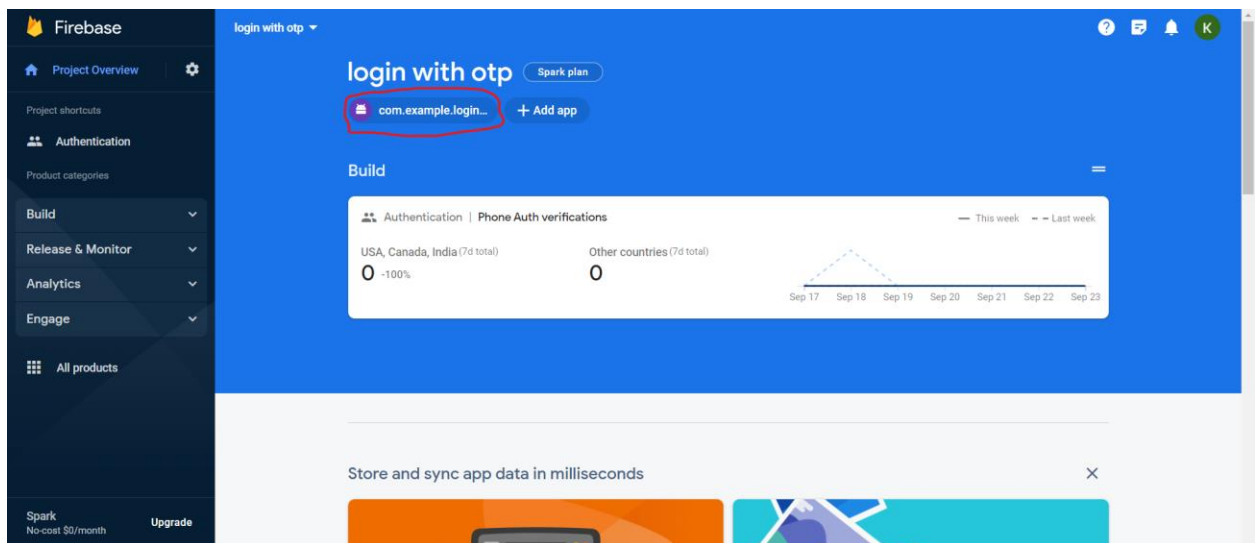


9. Then after saving the status will be “enabled”.



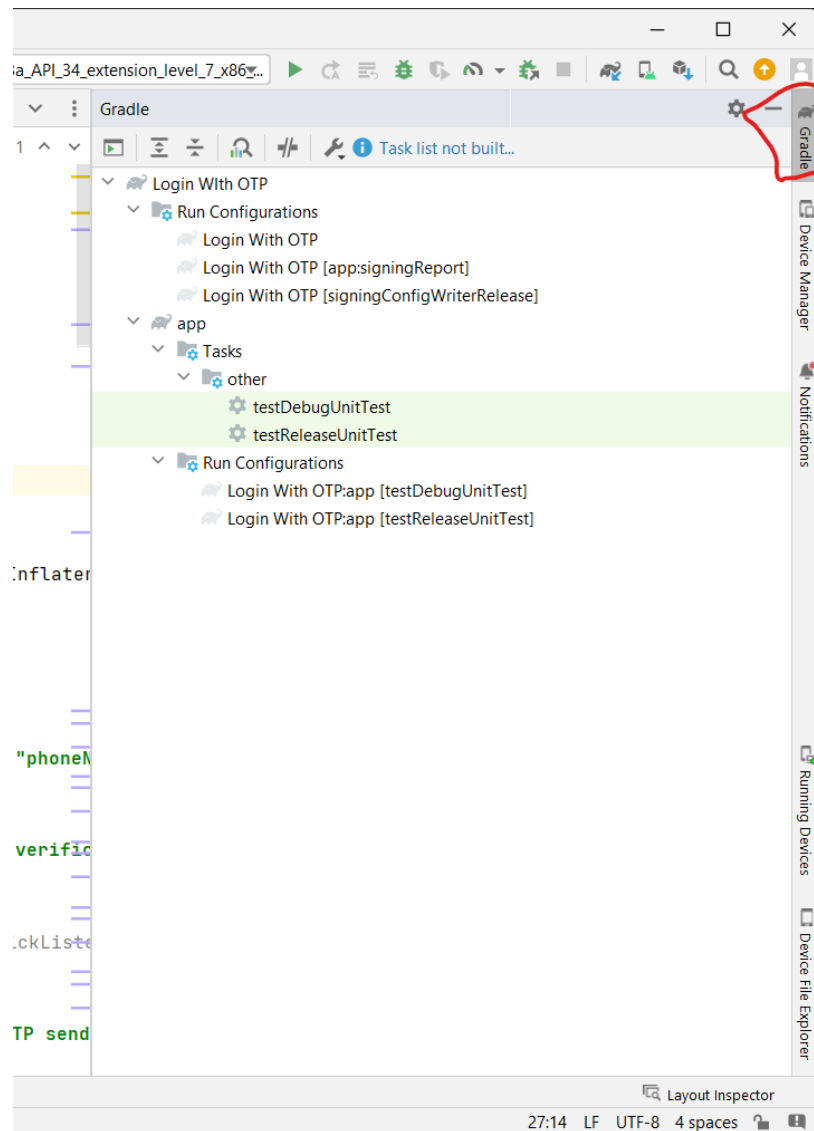
10. After that go to Project Overview Section.

11. Click on “com.example.login...” then to setting Icon

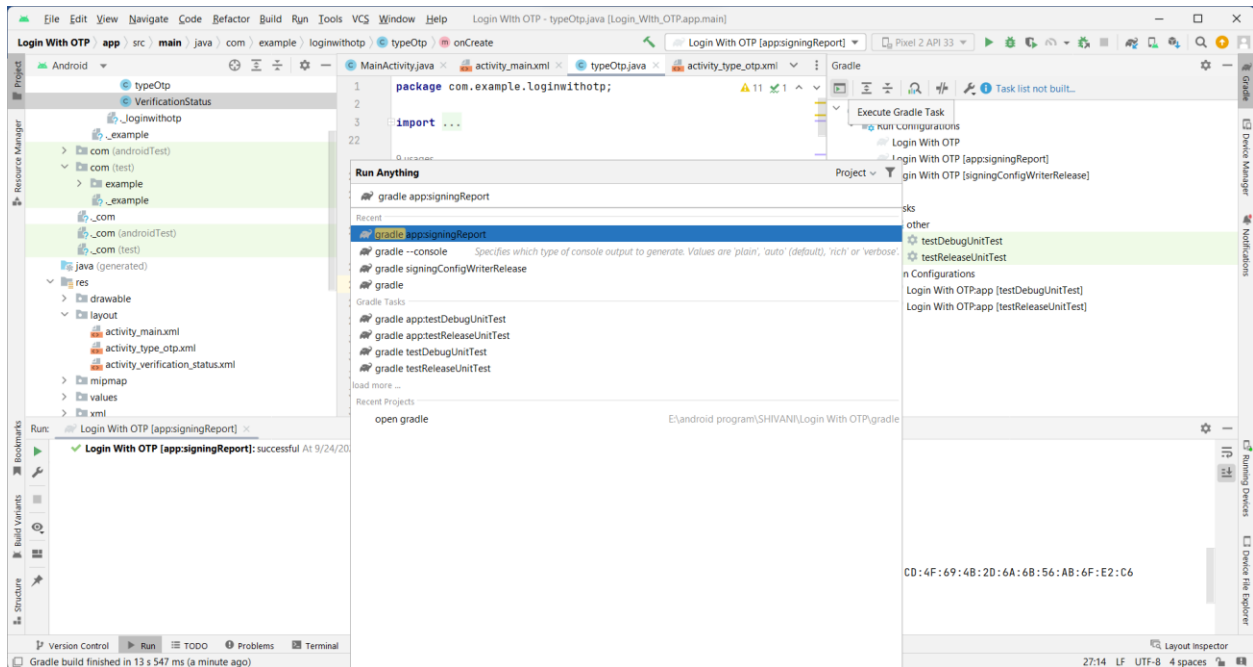


12. After that move to bottom at “SDK setup and configuration”, now there we have to set the “SHA Certificate fingerprints”

- Now to get that SHA-1 certificate number we have to get in android studio in that
 - To the right side we will see the “gradle”



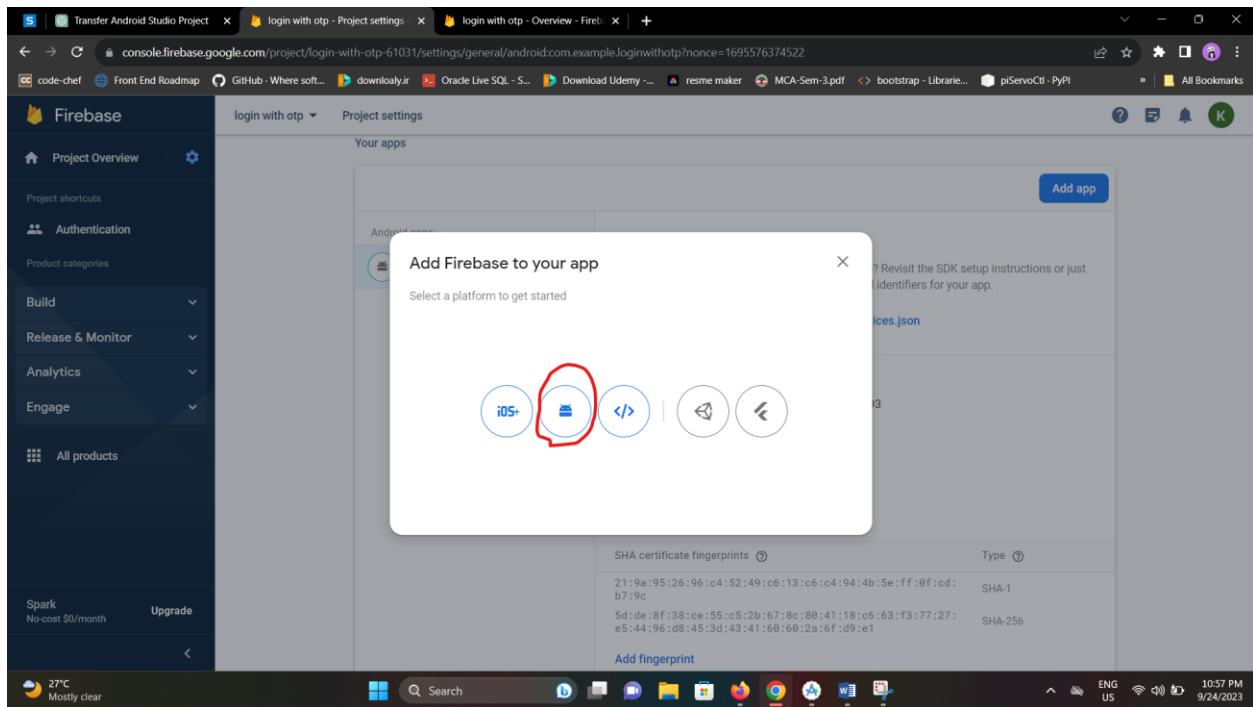
- Then click on “Execute Gradle Task icon” and type “signingReport” and enter



- After that at bottom of the page you will see the console will open and in that there will be various certificate numbers.
- Now copy the “SHA1 and SHA-256” certificate number that is below
 - > Task :app:signingReport

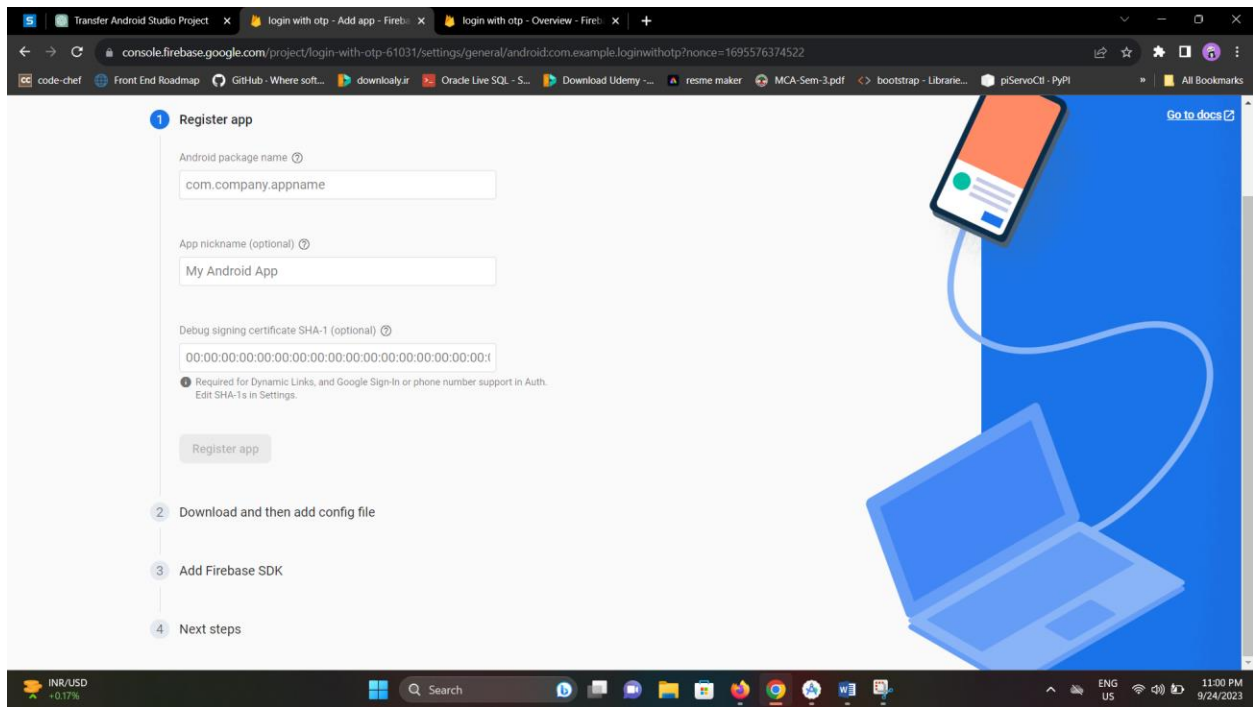


13. Then click on “Add app”. It will pop up a menu click on android icon.

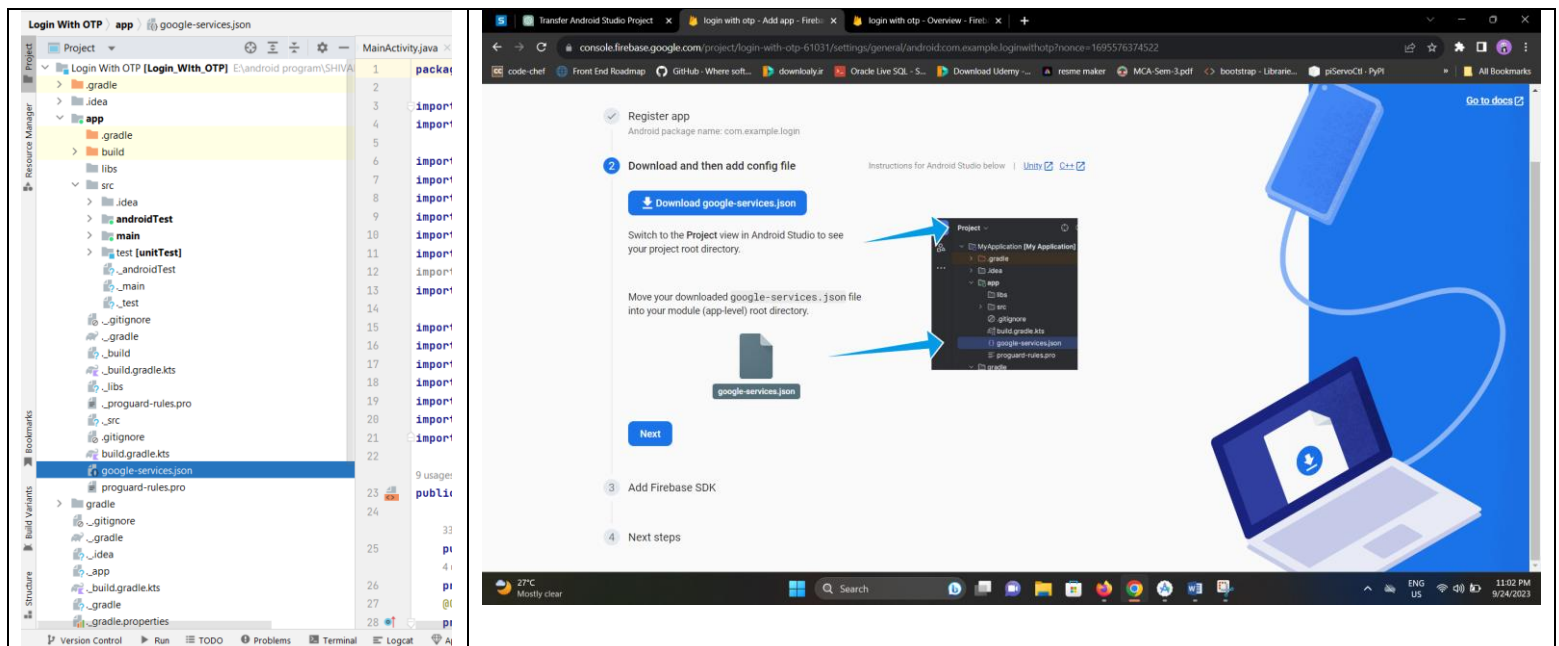


14. After that page will open in which we have to fill the details regarding the app and will generate one file

Add Firebase to your Android app



15. Then add that file to app > src > google-services.json



16. Then have to “Add the plugin as a dependency to your project-level build.gradle file” and follow the same steps.
17. Now after doing that click to next and then back to console.
18. By this we will register our app with firebase.