D Y PATIL
RAMRAO ADIK INSTITUTE OF TECHNOLOGY
NAVI MUMBAI

Department of Information Technology
Academic -2021-22

Assignment No: 01

Subject: Mobile Application Development

Roll No.: 18IT1050

Name of Student: Soham Salkar

Class/Batch: A/A2

Date of Performance:

Date of Submission:

Grade:

Signature:

Soham Shikar

Q.1 Android operating system in a stock of software components which in roughly divided into five secfions and four main layers

Ans → Linux Kernel

At the bottom of the system layers in Linux. This provides a level of abstruction between the device hardware and it contains all the essential hardware drivers like cameras, keypad, display etc. The kernel handle all the things that linux is really good at such as network and a vast arrays of device drivers which takes the pain out of interfacing to periphiral hardware

→ libraries

On top of linux kernel is a set of libraries including open-source, web browser engine webkit, well known library like SQLite database which is a useful repository for storage and sharing of application data, libraries to play and second audio and video. SSL libraries are responsible for internal security etc

→ Android runtime

All the android application can be found at the top layer. You will writes your application to be installed at this layer only. Example of such application are contacts book browsers, games etc

→ Role of DVM:

The Dalvik virtual machine optimized for mobile devices. It optimizes the virtual machine for memory, battery ~~battery~~ life and performance.

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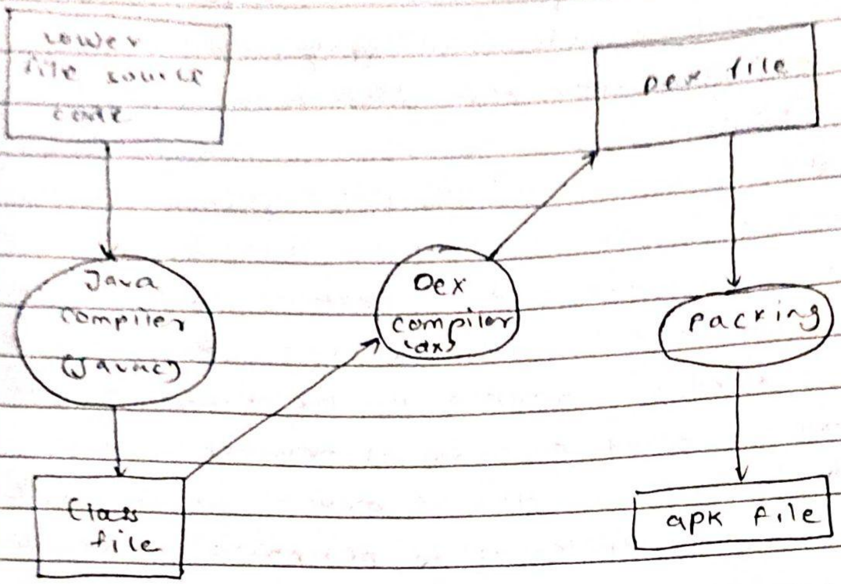
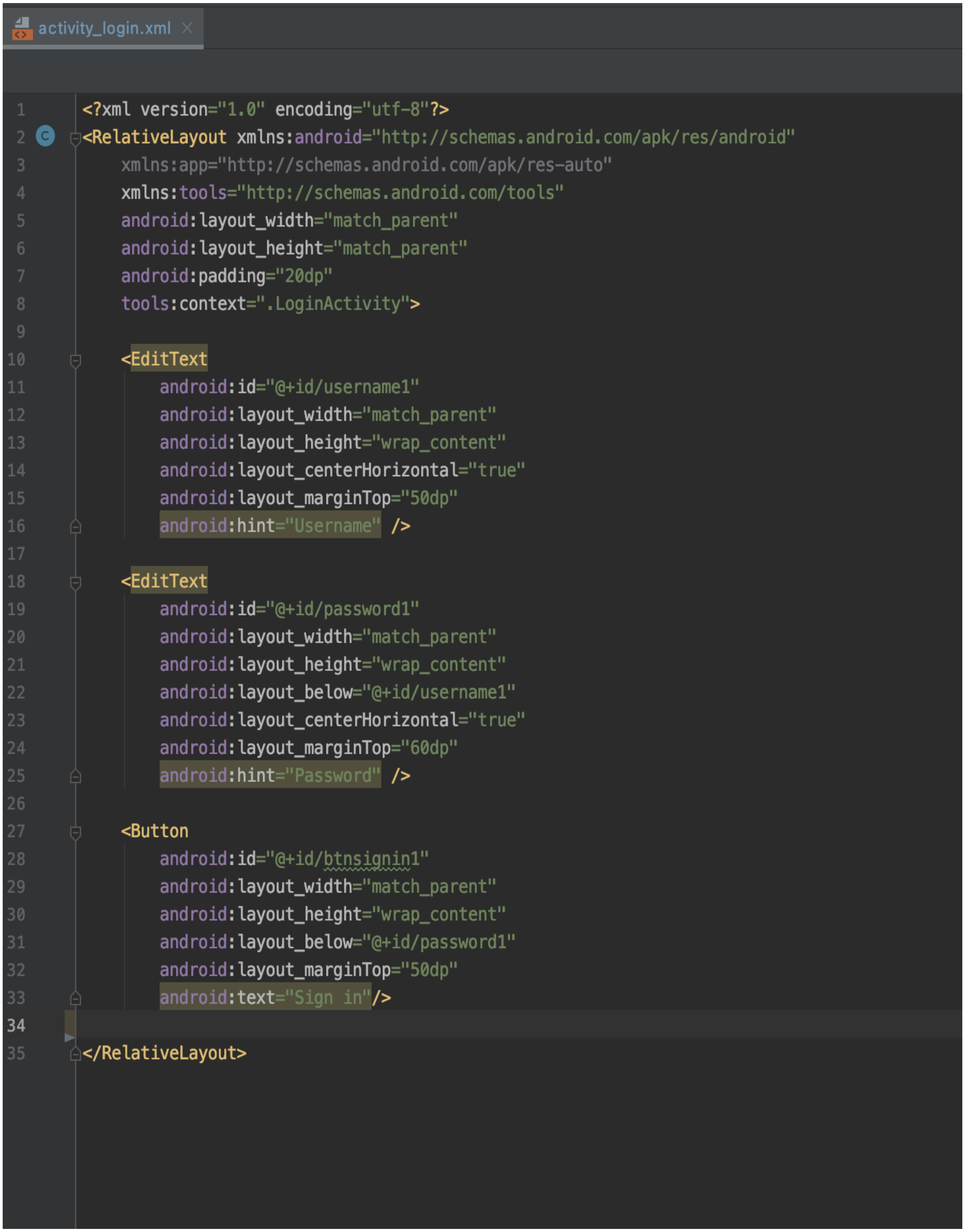
Isham Sattar



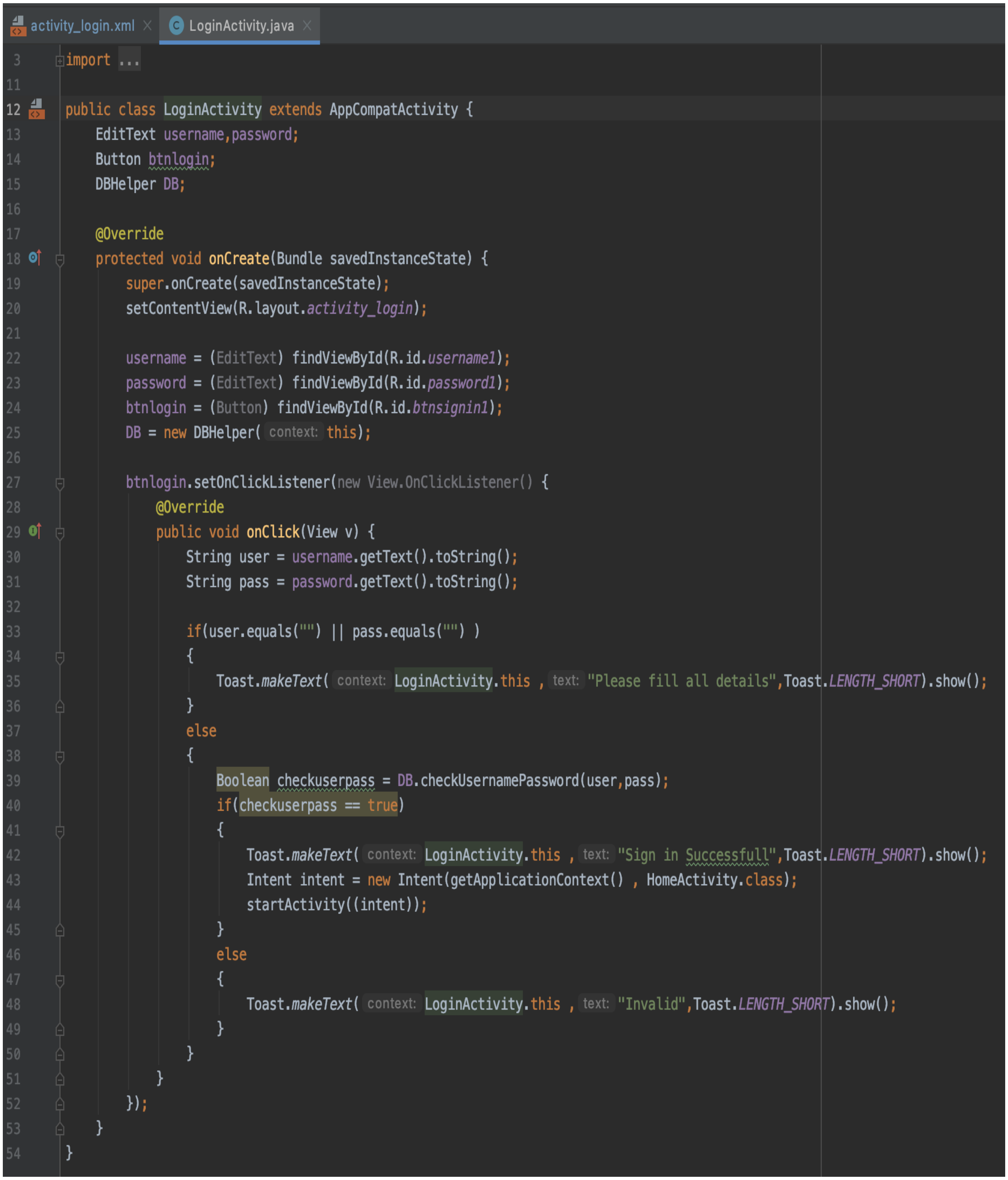
The javac tool takes all the class, files of your application and generates a single, dex file It is platform specific tool. The android assets packing tool (aapt) handles the packagin process.

Q.2 activity_log.xml

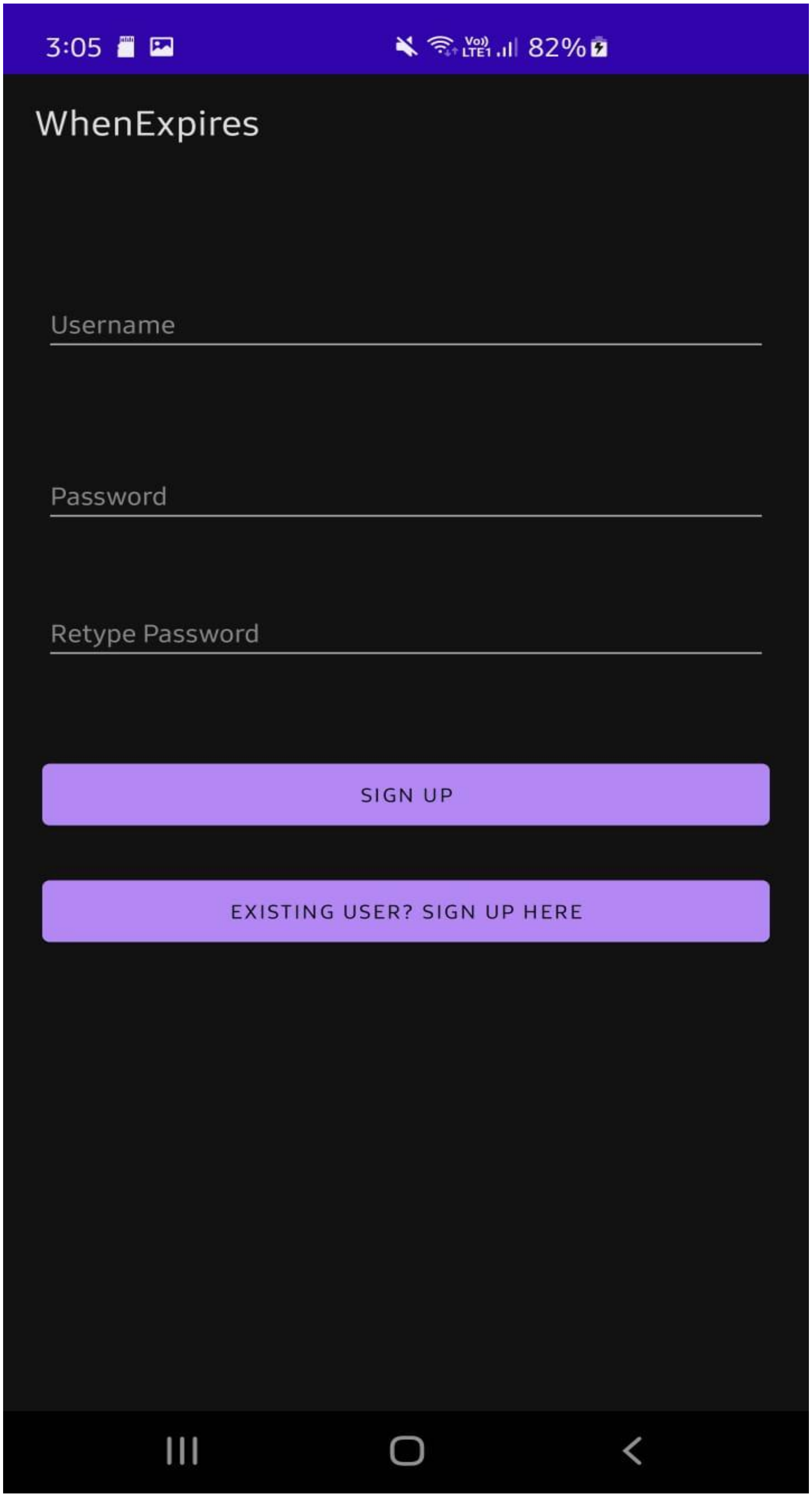


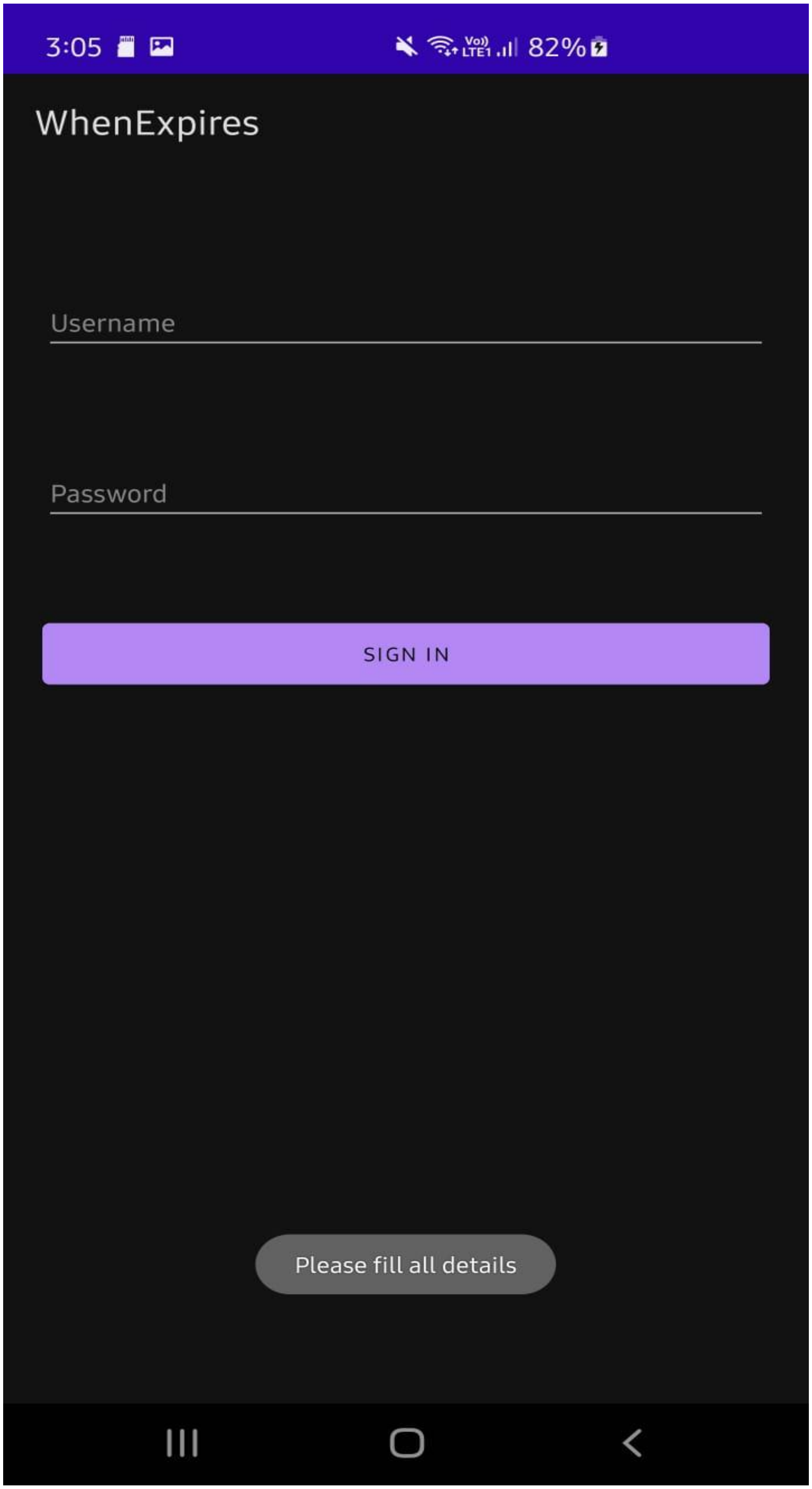
```xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:padding="20dp"
    tools:context=".LoginActivity">

    <EditText
        android:id="@+id/username1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="50dp"
        android:hint="Username" />

    <EditText
        android:id="@+id/password1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_below="@+id/username1"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="60dp"
        android:hint="Password" />

    <Button
        android:id="@+id/btnsignin1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_below="@+id/password1"
        android:layout_marginTop="50dp"
        android:text="Sign in"/>

</RelativeLayout>
```

loginActivity.java



```
import ...

public class LoginActivity extends AppCompatActivity {
    EditText username,password;
    Button btnlogin;
    DBHelper DB;

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

        username = (EditText) findViewById(R.id.username1);
        password = (EditText) findViewById(R.id.password1);
        btnlogin = (Button) findViewById(R.id.btnsignin1);
        DB = new DBHelper( context: this);

        btnlogin.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String user = username.getText().toString();
                String pass = password.getText().toString();

                if(user.equals("") || pass.equals("") )
                {
                    Toast.makeText( context: LoginActivity.this , text: "Please fill all details",Toast.LENGTH_SHORT).show();
                }
                else
                {
                    Boolean checkuserpass = DB.checkUsernamePassword(user,pass);
                    if(checkuserpass == true)
                    {
                        Toast.makeText( context: LoginActivity.this , text: "Sign in Successfull",Toast.LENGTH_SHORT).show();
                        Intent intent = new Intent(getApplicationContext() , HomeActivity.class);
                        startActivity((intent));
                    }
                    else
                    {
                        Toast.makeText( context: LoginActivity.this , text: "Invalid",Toast.LENGTH_SHORT).show();
                    }
                }
            }
        });
    }
}
```


3:05
82%
WhenExpires
Username
Password
Retype Password
SIGN UP
EXISTING USER? SIGN UP HERE



Please fill all details

Soham sulla

Q.3 In Android , it is quite usual for users to witnees a jump from one application to another as a part of the whole process, for example searching for a location on the browser and witnessing a direct jump into google maps or receiving payment link in messages application (sms) and on clicking jumping to paypal or gpay . This process of taking users from one application to another is achieved by passing the intent to the system, Intents in general are used for navigation among various activities within the same application but note is not limited to one single application ie, they can be utilized from moving from one application to another as well.

Intents could be implicit , for instance calling intended action and explict as well such as opening , another activity after som operation like onClick or anything else

	Explicit Intent	Implicit Intent
(i)	They are those in which user has a clear vision and knows exactly which activity can handle the requests Ex. when you have a listview seen on top of each item you will go to detail activity intent=Intent(application context, detail activity::java)	Implicit intends do not name a specific component like explict intent, instedd declare a general action to perform, which allows a component from more app to handle Ex. when you tap ~~share~~ button in any app you see gmail blue-tooth etc. here user sends a request is implici.

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(1) Explicit intent can do specific application action which is set by the code like changing activity, downloading the file inbackground.	(1) It specifies the only action to be performed and does not directly specify Android components.
3) In explicit intent you can pass data to other activity by using the putExtra method and retrieve by usin getIntent() eg. val intent=Intent(this, secondActivity::class.java) apply { putExtra("key","new")} Second screen val secondIntent=intent.getStrin Extra("key")	(3) Here we just mention the action in the intent and os decides which application are suitable to handle the task, action across this different applicati.
(4) They are used for communication inside the application like changing activities inside the application	(4) They are used for communication across two different application.