

# Slip 1

Question: See slip description above — code and XML provided below.

```
// SplashActivity.java
package com.example.slip1;

import android.content.Intent;
import android.os.Bundle;
import android.os.Handler;
import android.os.Looper;
import androidx.appcompat.app.AppCompatActivity;

public class SplashActivity extends AppCompatActivity {
    @Override protected void onCreate(Bundle s) {
        super.onCreate(s);
        setContentView(R.layout.activity_splash);
        new Handler(Looper.getMainLooper()).postDelayed(() -> {
            startActivity(new Intent(SplashActivity.this, MainActivity.class));
            finish();
        }, 1500);
    }
}

// MainActivity.java
package com.example.slip1;
import android.os.Bundle;
import androidx.appcompat.app.AppCompatActivity;
public class MainActivity extends AppCompatActivity {
    @Override protected void onCreate(Bundle s){
        super.onCreate(s);
        setContentView(R.layout.activity_main);
    }
}

// res/layout/activity_splash.xml
<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent" android:layout_height="match_parent"
    android:background="#FFFFFF">
    <ImageView android:layout_width="200dp" android:layout_height="200dp"
        android:layout_gravity="center" android:src="@mipmap/ic_launcher"
        android:contentDescription="logo"/>
</FrameLayout>

// res/layout/activity_main.xml
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent" android:layout_height="match_parent"
    android:gravity="center" android:orientation="vertical">
    <TextView android:layout_width="wrap_content" android:layout_height="wrap_content"
        android:text="Welcome" android:textSize="24sp"/>
</LinearLayout>
```

## Slip 2

Question: See slip description above — code and XML provided below.

```
// DBHelper.java (Student)
package com.example.slip2;
import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;

public class DBHelper extends SQLiteOpenHelper {
    public DBHelper(Context c){ super(c,"College.db",null,1); }
    @Override public void onCreate(SQLiteDatabase db) {
        db.execSQL("CREATE TABLE IF NOT EXISTS Student(roll INTEGER PRIMARY KEY, name TEXT, address TEXT, percentage REAL");
    }
    @Override public void onUpgrade(SQLiteDatabase db,int o,int n){
        db.execSQL("DROP TABLE IF EXISTS Student"); onCreate(db);
    }
    public boolean insertStudent(int roll,String name,String addr,double per){
        ContentValues cv=new ContentValues();
        cv.put("roll",roll); cv.put("name",name); cv.put("address",addr); cv.put("percentage",per);
        long r=getWritableDatabase().insert("Student",null,cv);
        return r!=-1;
    }
    public Cursor getAll(){ return getReadableDatabase().rawQuery("SELECT * FROM Student", null); }
}

// MainActivity.java
package com.example.slip2;
import android.database.Cursor; import android.os.Bundle;
import android.widget.ArrayAdapter; import android.widget.Button; import android.widget.ListView;
import androidx.appcompat.app.AppCompatActivity;
import java.util.ArrayList;

public class MainActivity extends AppCompatActivity {
    DBHelper db;
    @Override protected void onCreate(Bundle s){
        super.onCreate(s); setContentView(R.layout.activity_main);
        db = new DBHelper(this);
        Button btnInsert = findViewById(R.id.btnInsert);
        Button btnShow = findViewById(R.id.btnShow);
        ListView lv = findViewById(R.id.lv);

        btnInsert.setOnClickListener(v -> {
            db.insertStudent(1,"Alice","Addr1",72.5);
            db.insertStudent(2,"Bob","Addr2",65.0);
            db.insertStudent(3,"Cathy","Addr3",81.2);
            db.insertStudent(4,"David","Addr4",58.3);
            db.insertStudent(5,"Eve","Addr5",69.4);
        });
        btnShow.setOnClickListener(v -> {
            Cursor c = db.getAll();
            ArrayList<String> arr = new ArrayList<>();
            while(c.moveToNext()){
                arr.add(c.getInt(0)+" - "+c.getString(1)+" - "+c.getString(2)+" - "+c.getDouble(3));
            }
            lv.setAdapter(new ArrayAdapter<>(this, android.R.layout.simple_list_item_1, arr));
        });
    }
}

// res/layout/activity_main.xml
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="vertical" android:padding="16dp" android:layout_width="match_parent" android:layout_height="wrap_content">
    <Button android:id="@+id/btnInsert" android:layout_width="match_parent" android:layout_height="wrap_content"/>
    <Button android:id="@+id/btnShow" android:layout_width="match_parent" android:layout_height="wrap_content"/>
    <ListView android:id="@+id/lv" android:layout_width="match_parent" android:layout_height="wrap_content"/>
</LinearLayout>
```

## Slip 3

Question: See slip description above — code and XML provided below.

```
// MainActivity.java (Prime checker)
package com.example.slip3;
import android.os.Bundle; import android.widget.Button; import android.widget.EditText; import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {
    @Override protected void onCreate(Bundle s){
        super.onCreate(s); setContentView(R.layout.activity_main);
        EditText et = findViewById(R.id.et);
        Button btn = findViewById(R.id.btn);
        TextView tv = findViewById(R.id.tv);
        btn.setOnClickListener(v -> {
            String t = et.getText().toString().trim();
            if(t.isEmpty()){ tv.setText("Enter number"); return; }
            int n = Integer.parseInt(t);
            if(n < 2){ tv.setText("Not Prime"); return; }
            boolean prime = true;
            for(int i=2;i<=Math.sqrt(n);i++) if(n % i == 0){ prime=false; break; }
            tv.setText(prime ? "Prime" : "Not Prime");
        });
    }
}

// res/layout/activity_main.xml
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="vertical" android:padding="16dp" android:layout_width="match_parent" android:layout_height="wrap_content">
    <EditText android:id="@+id/et" android:layout_width="match_parent" android:layout_height="wrap_content"
        android:inputType="number" android:hint="Enter number"/>
    <Button android:id="@+id	btn" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1"/>
    <TextView android:id="@+id/tv" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1"/>
</LinearLayout>
```

## Slip 4

Question: See slip description above — code and XML provided below.

```
// MainActivity.java (Calculator)
package com.example.slip4;
import android.os.Bundle; import android.view.View;
import android.widget.Button; import android.widget.EditText; import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity implements View.OnClickListener {
    EditText e1,e2; TextView tv;
    @Override protected void onCreate(Bundle s){
        super.onCreate(s); setContentView(R.layout.activity_main);
        e1 = findViewById(R.id.e1); e2 = findViewById(R.id.e2); tv = findViewById(R.id.tv);
        int[] ids = {R.id.add,R.id.sub,R.id.mul,R.id.div};
        for(int id: ids) findViewById(id).setOnClickListener(this);
    }
    @Override public void onClick(View v){
        double a = Double.parseDouble(e1.getText().toString()), b = Double.parseDouble(e2.getText().toString());
        double r=0;
        switch(v.getId()){
            case R.id.add: r=a+b; break;
            case R.id.sub: r=a-b; break;
            case R.id.mul: r=a*b; break;
            case R.id.div: r=a/b; break;
        }
        tv.setText(String.valueOf(r));
    }
}

// res/layout/activity_main.xml (includes two EditTexts, four buttons, and result TextView)
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="vertical" android:padding="16dp" android:layout_width="match_parent" android:layout_height="wrap_content">
    <EditText android:id="@+id/e1" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1"/>
    <EditText android:id="@+id/e2" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1"/>
    <LinearLayout android:layout_width="match_parent" android:layout_height="wrap_content" android:orientation="horizontal">
        <Button android:id="@+id/add" android:layout_width="0dp" android:layout_weight="1" android:layout_height="wrap_content"/>
        <Button android:id="@+id/sub" android:layout_width="0dp" android:layout_weight="1" android:layout_height="wrap_content"/>
        <Button android:id="@+id/mul" android:layout_width="0dp" android:layout_weight="1" android:layout_height="wrap_content"/>
        <Button android:id="@+id/div" android:layout_width="0dp" android:layout_weight="1" android:layout_height="wrap_content"/>
    </LinearLayout>
    <TextView android:id="@+id/tv" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1"/>
</LinearLayout>
```

## Slip 5

Question: See slip description above — code and XML provided below.

```
// MainActivity.java (ImageSwitcher)
package com.example.slip5;
import android.os.Bundle;
import android.widget.ImageSwitcher;
import android.widget.ImageView;
import android.widget.Button;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {
    int[] imgs = {android.R.drawable.ic_menu_camera, android.R.drawable.ic_menu_gallery, android.R.drawable.ic_menu_manage};
    int idx = 0;
    @Override protected void onCreate(Bundle s){
        super.onCreate(s); setContentView(R.layout.activity_main);
        ImageSwitcher is = findViewById(R.id.imageSwitcher);
        is.setFactory(() -> {
            ImageView iv = new ImageView(this);
            iv.setScaleType(ImageView.ScaleType.CENTER_INSIDE);
            return iv;
        });
        is.setImageResource(imgs[idx]);
        findViewById(R.id.btnNext).setOnClickListener(v -> {
            idx = (idx + 1) % imgs.length; is.setImageResource(imgs[idx]);
        });
    }
}

// res/layout/activity_main.xml
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="vertical" android:gravity="center" android:padding="16dp" android:layout_width="match_parent"
    android:layout_height="wrap_content">
    <ImageSwitcher android:id="@+id/imageSwitcher" android:layout_width="200dp" android:layout_height="200dp"/>
    <Button android:id="@+id	btnNext" android:layout_width="wrap_content" android:layout_height="wrap_content" android:layout_gravity="center"/>
</LinearLayout>
```

## Slip 6

Question: See slip description above — code and XML provided below.

```
// DBHelper.java (Employee)
package com.example.slip6;
import android.content.ContentValues; import android.content.Context;
import android.database.Cursor; import android.database.sqlite.SQLiteDatabase; import android.database.sqlite.SQLiteOpenHelper;

public class DBHelper extends SQLiteOpenHelper {
    public DBHelper(Context c){ super(c,"Emp.db",null,1); }
    @Override public void onCreate(SQLiteDatabase db){ db.execSQL("CREATE TABLE IF NOT EXISTS Employee(E_id INTEGER PRIMARY KEY, name TEXT, address TEXT, pho TEXT);");
    @Override public void onUpgrade(SQLiteDatabase db,int o,int n){ db.execSQL("DROP TABLE IF EXISTS Employee");}
    public boolean insertEmployee(int id,String name,String addr,String pho){
        ContentValues cv=new ContentValues(); cv.put("E_id",id); cv.put("name",name); cv.put("address",addr); cv.put("pho",pho);
        long r=getWritableDatabase().insert("Employee",null,cv); return r!=-1;
    }
    public Cursor getAll(){ return getReadableDatabase().rawQuery("SELECT * FROM Employee", null); }
}

// MainActivity.java (insert & show)
package com.example.slip6;
import android.database.Cursor; import android.os.Bundle; import android.widget.ArrayAdapter; import android.widget.ListView;
import androidx.appcompat.app.AppCompatActivity; import java.util.ArrayList;

public class MainActivity extends AppCompatActivity {
    DBHelper db; @Override protected void onCreate(Bundle s){
        super.onCreate(s); setContentView(R.layout.activity_main);
        db=new DBHelper(this);
        Button ins=findViewById(R.id.ins), show=findViewById(R.id.show);
        ListView lv=findViewById(R.id.lv);
        ins.setOnClickListener(v -> {
            db.insertEmployee(1,"A","Addr1","111");
            db.insertEmployee(2,"B","Addr2","222");
            db.insertEmployee(3,"C","Addr3","333");
            db.insertEmployee(4,"D","Addr4","444");
            db.insertEmployee(5,"E","Addr5","555");
        });
        show.setOnClickListener(v -> {
            Cursor c=db.getAll(); ArrayList<String> a=new ArrayList<>();
            while(c.moveToNext()) a.add(c.getInt(0)+" - "+c.getString(1)+" - "+c.getString(2)+" - "+c.getString(3));
            lv.setAdapter(new ArrayAdapter<>(this, android.R.layout.simple_list_item_1, a));
        });
    }
}

// res/layout/activity_main.xml
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android" android:orientation="vertical" android:layout_width="match_parent" android:layout_height="wrap_content">
    <Button android:id="@+id/ins" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1"/>
    <Button android:id="@+id/show" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1"/>
    <ListView android:id="@+id/lv" android:layout_width="match_parent" android:layout_height="wrap_content"/>
</LinearLayout>
```

## Slip 7

Question: See slip description above — code and XML provided below.

```
// MainActivity.java (Lifecycle demo)
package com.example.slip7;
import android.os.Bundle; import android.util.Log;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {
    private static final String TAG = "LifeDemo";
    @Override protected void onCreate(Bundle s){ super.onCreate(s); setContentView(R.layout.activity_main); Log.d(TAG, "onCreate"); }
    @Override protected void onStart(){ super.onStart(); Log.d(TAG, "onStart"); }
    @Override protected void onResume(){ super.onResume(); Log.d(TAG, "onResume"); }
    @Override protected void onPause(){ super.onPause(); Log.d(TAG, "onPause"); }
    @Override protected void onStop(){ super.onStop(); Log.d(TAG, "onStop"); }
    @Override protected void onDestroy(){ super.onDestroy(); Log.d(TAG, "onDestroy"); }
}

// res/layout/activity_main.xml
<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android" android:layout_width="match_parent" android:layout_height="match_parent">
    <TextView android:layout_width="wrap_content" android:layout_height="wrap_content" android:text="Open Logcat" />
</FrameLayout>
```

## Slip 8

Question: See slip description above — code and XML provided below.

```
// DBHelper.java (Customer)
package com.example.slip8;
import android.content.ContentValues; import android.content.Context;
import android.database.Cursor; import android.database.sqlite.SQLiteDatabase; import android.database.sqlite.SQLiteOpenHelper;

public class DBHelper extends SQLiteOpenHelper {
    public DBHelper(Context c){ super(c,"Cust.db",null,1); }
    @Override public void onCreate(SQLiteDatabase db){ db.execSQL("CREATE TABLE IF NOT EXISTS Customer(id INTEGER PRIMARY KEY, name TEXT, addr TEXT, phone TEXT);");
    @Override public void onUpgrade(SQLiteDatabase db,int o,int n){ db.execSQL("DROP TABLE IF EXISTS Customer");
    public boolean insertCustomer(String name,String addr,String ph){ ContentValues cv=new ContentValues(); cv.put("name",name);
    cv.put("addr",addr);
    cv.put("phone",ph);
    db.insert("Customer",null,cv);
    return true;
}
}

// MainActivity.java
package com.example.slip8;
import android.database.Cursor; import android.os.Bundle; import android.widget.ArrayAdapter; import android.widget.ListView;
import androidx.appcompat.app.AppCompatActivity; import java.util.ArrayList;

public class MainActivity extends AppCompatActivity {
    DBHelper db; EditText etName,etAddr,etPhone; Button ins,show; ListView lv;
    @Override protected void onCreate(Bundle s){
        super.onCreate(s); setContentView(R.layout.activity_main);
        db=new DBHelper(this); etName=findViewById(R.id.etName); etAddr=findViewById(R.id.etAddr); etPhone=findViewById(R.id.etPhone);
        ins=findViewById(R.id.ins); show=findViewById(R.id.show); lv=findViewById(R.id.lv);
        ins.setOnClickListener(v -> db.insertCustomer(etName.getText().toString(), etAddr.getText().toString(), etPhone.getText().toString()));
        show.setOnClickListener(v -> {
            Cursor c=db.getAll(); ArrayList<String> a=new ArrayList<>();
            while(c.moveToNext()) a.add(c.getInt(0)+" - "+c.getString(1)+" - "+c.getString(2)+" - "+c.getString(3));
            lv.setAdapter(new ArrayAdapter<>(this, android.R.layout.simple_list_item_1, a));
        });
    }
}

// res/layout/activity_main.xml for Customer
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android" android:orientation="vertical" android:layout_width="match_parent" android:layout_height="wrap_content">
    <EditText android:id="@+id/etName" android:layout_width="match_parent" android:layout_height="wrap_content"/>
    <EditText android:id="@+id/etAddr" android:layout_width="match_parent" android:layout_height="wrap_content"/>
    <EditText android:id="@+id/etPhone" android:layout_width="match_parent" android:layout_height="wrap_content"/>
    <Button android:id="@+id/ins" android:layout_width="match_parent" android:layout_height="wrap_content"/>
    <Button android:id="@+id/show" android:layout_width="match_parent" android:layout_height="wrap_content"/>
    <ListView android:id="@+id/lv" android:layout_width="match_parent" android:layout_height="wrap_content"/>
</LinearLayout>
```

## Slip 9

Question: See slip description above — code and XML provided below.

```
// MainActivity.java (Power & Average)
package com.example.slip9;
import android.content.Intent; import android.os.Bundle; import android.widget.Button; import android.widget.EditText;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {
    @Override protected void onCreate(Bundle s){
        super.onCreate(s); setContentView(R.layout.activity_main);
        EditText e1=findViewById(R.id.e1), e2=findViewById(R.id.e2);
        Button bp=findViewById(R.id.bp), ba=findViewById(R.id.ba);
        bp.setOnClickListener(v -> {
            double a=Double.parseDouble(e1.getText().toString()), b=Double.parseDouble(e2.getText().toString());
            startActivity(new Intent(this, ResultActivity.class).putExtra("res", Math.pow(a,b)));
        });
        ba.setOnClickListener(v -> {
            double a=Double.parseDouble(e1.getText().toString()), b=Double.parseDouble(e2.getText().toString());
            startActivity(new Intent(this, ResultActivity.class).putExtra("res", (a+b)/2.0));
        });
    }
}

// ResultActivity.java
package com.example.slip9;
import android.os.Bundle; import android.widget.TextView; import androidx.appcompat.app.AppCompatActivity;
public class ResultActivity extends AppCompatActivity {
    @Override protected void onCreate(Bundle s){ super.onCreate(s); setContentView(R.layout.activity_result); dou
}

// res/layout/activity_main.xml
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android" android:orientation="vertical" android:<EditText android:id="@+id/e1" android:layout_width="match_parent" android:layout_height="wrap_content" android:<EditText android:id="@+id/e2" android:layout_width="match_parent" android:layout_height="wrap_content" android:<Button android:id="@+id/bp" android:layout_width="match_parent" android:layout_height="wrap_content" android:<Button android:id="@+id/ba" android:layout_width="match_parent" android:layout_height="wrap_content" android:</LinearLayout>

// res/layout/activity_result.xml
<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android" android:layout_width="match_parent" and<TextView android:id="@+id/tv" android:layout_width="wrap_content" android:layout_height="wrap_content" andro:</FrameLayout>
```

## Slip 10

Question: See slip description above — code and XML provided below.

```
// MainActivity.java (String ops)
package com.example.slip10;
import android.os.Bundle; import android.widget.Button; import android.widget.EditText; import android.widget.R
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {
    @Override protected void onCreate(Bundle s){
        super.onCreate(s); setContentView(R.layout.activity_main);
        EditText et = findViewById(R.id.et); RadioGroup rg = findViewById(R.id.rg); TextView tv = findViewById(R.id.
        Button btn = findViewById(R.id.btn);
        btn.setOnClickListener(v -> {
            String str = et.getText().toString();
            int id = rg.getCheckedRadioButtonId();
            String res = "";
            if(id == R.id.rbUpper) res = str.toUpperCase();
            else if(id == R.id.rbLower) res = str.toLowerCase();
            else if(id == R.id.rbLen) res = String.valueOf(str.length());
            else if(id == R.id.rbTrim) res = str.trim();
            tv.setText(res);
        });
    }
}

// res/layout/activity_main.xml
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android" android:orientation="vertical" android:>
    <EditText android:id="@+id/et" android:layout_width="match_parent" android:layout_height="wrap_content" android:>
        <RadioGroup android:id="@+id/rg" android:layout_width="match_parent" android:layout_height="wrap_content">
            <RadioButton android:id="@+id/rbUpper" android:layout_width="wrap_content" android:layout_height="wrap_content" android:>
            <RadioButton android:id="@+id/rbLower" android:layout_width="wrap_content" android:layout_height="wrap_content" android:>
            <RadioButton android:id="@+id/rbLen" android:layout_width="wrap_content" android:layout_height="wrap_content" android:>
            <RadioButton android:id="@+id/rbTrim" android:layout_width="wrap_content" android:layout_height="wrap_content" android:>
        </RadioGroup>
        <Button android:id="@+id	btn" android:layout_width="match_parent" android:layout_height="wrap_content" android:>
        <TextView android:id="@+id/tv" android:layout_width="match_parent" android:layout_height="wrap_content" android:>
    </LinearLayout>
```

## Slip 11

Question: See slip description above — code and XML provided below.

```
// MainActivity.java (Armstrong & Perfect)
package com.example.slip11;
import android.os.Bundle; import android.widget.Button; import android.widget.EditText; import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {
    @Override protected void onCreate(Bundle s){
        super.onCreate(s); setContentView(R.layout.activity_main);
        EditText et = findViewById(R.id.et); Button btn = findViewById(R.id.btn); TextView tv = findViewById(R.id.tv);
        btn.setOnClickListener(v -> {
            int n = Integer.parseInt(et.getText().toString());
            int tmp = n, sum = 0, digits = String.valueOf(n).length();
            while(tmp>0){ int d = tmp % 10; sum += Math.pow(d, digits); tmp /= 10; }
            boolean isArm = (sum == n);
            int s2 = 1;
            for(int j=2;j<=n/2;j++) if(n % j == 0) s2 += j;
            boolean isPerfect = (n != 1 && s2 == n);
            tv.setText("Armstrong: " + isArm + "\nPerfect: " + isPerfect);
        });
    }
}

// res/layout/activity_main.xml
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android" android:orientation="vertical" android:layout_width="match_parent" android:layout_height="wrap_content">
    <EditText android:id="@+id/et" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1"/>
    <Button android:id="@+id	btn" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1"/>
    <TextView android:id="@+id/tv" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1"/>
</LinearLayout>
```

## Slip 12

Question: See slip description above — code and XML provided below.

```
// MainActivity.java (ListView insert/delete/search)
package com.example.slip12;
import android.os.Bundle; import android.widget.ArrayAdapter; import android.widget.Button; import android.widget.ListView;
import androidx.appcompat.app.AppCompatActivity;
import java.util.ArrayList;

public class MainActivity extends AppCompatActivity {
    ArrayList<String> list; ArrayAdapter<String> adapter;
    @Override protected void onCreate(Bundle s){
        super.onCreate(s); setContentView(R.layout.activity_main);
        list = new ArrayList<>(); adapter = new ArrayAdapter<>(this, android.R.layout.simple_list_item_1, list);
        ListView lv = findViewById(R.id.lv); lv.setAdapter(adapter);
        EditText et = findViewById(R.id.et);
        Button add = findViewById(R.id.add), del = findViewById(R.id.del), search = findViewById(R.id.search);
        add.setOnClickListener(v -> { list.add(et.getText().toString()); adapter.notifyDataSetChanged(); });
        del.setOnClickListener(v -> { list.remove(et.getText().toString()); adapter.notifyDataSetChanged(); });
        search.setOnClickListener(v -> {
            String q = et.getText().toString();
            for(String s2 : list) if(s2.equals(q)){ et.setText("Found: "+q); break; }
        });
    }
}

// res/layout/activity_main.xml
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android" android:orientation="vertical" android:
<EditText android:id="@+id/et" android:layout_width="match_parent" android:layout_height="wrap_content" android:
<Button android:id="@+id/add" android:layout_width="match_parent" android:layout_height="wrap_content" android:
<Button android:id="@+id/del" android:layout_width="match_parent" android:layout_height="wrap_content" android:
<Button android:id="@+id/search" android:layout_width="match_parent" android:layout_height="wrap_content" android:
<ListView android:id="@+id/lv" android:layout_width="match_parent" android:layout_height="wrap_content"/>
</LinearLayout>
```

## Slip 13

Question: See slip description above — code and XML provided below.

```
// MainActivity.java (Login validation)
package com.example.slip13;
import android.os.Bundle; import android.widget.Button; import android.widget.EditText; import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {
    @Override protected void onCreate(Bundle s){
        super.onCreate(s); setContentView(R.layout.activity_main);
        EditText user = findViewById(R.id.user), pass = findViewById(R.id.pass);
        Button btn = findViewById(R.id.login);
        btn.setOnClickListener(v -> {
            if(user.getText().toString().isEmpty()) { user.setError("Required"); return; }
            if(pass.getText().toString().isEmpty()) { pass.setError("Required"); return; }
            Toast.makeText(this, "Validated", Toast.LENGTH_SHORT).show();
        });
    }
}

// res/layout/activity_main.xml
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android" android:orientation="vertical" android:layout_width="match_parent" android:layout_height="wrap_content" and
<EditText android:id="@+id/user" android:layout_width="match_parent" android:layout_height="wrap_content" and
<EditText android:id="@+id/pass" android:layout_width="match_parent" android:layout_height="wrap_content" and
<Button android:id="@+id/login" android:layout_width="match_parent" android:layout_height="wrap_content" andr
</LinearLayout>
```

## Slip 14

Question: See slip description above — code and XML provided below.

```
// FirstActivity.java (send greet)
package com.example.slip14;
import android.content.Intent; import android.os.Bundle; import android.widget.Button; import android.widget.EditText;
import androidx.appcompat.app.AppCompatActivity;

public class FirstActivity extends AppCompatActivity {
    @Override protected void onCreate(Bundle s){
        super.onCreate(s); setContentView(R.layout.activity_first);
        EditText et = findViewById(R.id.et);
        Button b = findViewById(R.id.send);
        b.setOnClickListener(v -> startActivity(new Intent(this, SecondActivity.class).putExtra("greet", et.getText().toString())));
    }
}

// SecondActivity.java
package com.example.slip14;
import android.os.Bundle; import android.widget.TextView; import androidx.appcompat.app.AppCompatActivity;
public class SecondActivity extends AppCompatActivity {
    @Override protected void onCreate(Bundle s){ super.onCreate(s); setContentView(R.layout.activity_second); ((TextView) findViewById(R.id.tv)).setText("Hello " + getIntent().getStringExtra("greet"));
    }
}

// res/layout/activity_first.xml
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android" android:orientation="vertical" android:layout_width="match_parent" android:layout_height="wrap_content">
    <EditText android:id="@+id/et" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1" />
    <Button android:id="@+id/send" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1" />
</LinearLayout>

// res/layout/activity_second.xml
<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android" android:layout_width="match_parent" android:layout_height="wrap_content">
    <TextView android:id="@+id/tv" android:layout_width="wrap_content" android:layout_height="wrap_content" android:layout_centerInParent="true" />
</FrameLayout>
```

## Slip 15

Question: See slip description above — code and XML provided below.

```
// MainActivity.java (Font changes)
package com.example.slip15;
import android.graphics.Typeface; import android.os.Bundle; import android.util.TypedValue;
import android.widget.Button; import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {
    @Override protected void onCreate(Bundle s){
        super.onCreate(s); setContentView(R.layout.activity_main);
        TextView tv = findViewById(R.id.tv);
        Button bSize = findViewById(R.id.size), bColor = findViewById(R.id.color), bFont = findViewById(R.id.font);
        bSize.setOnClickListener(v -> tv.setTextSize(TypedValue.COMPLEX_UNIT_SP, 28));
        bColor.setOnClickListener(v -> tv.setTextColor(0xFFFF0000));
        bFont.setOnClickListener(v -> tv.setTypeface(Typeface.SERIF));
    }
}

// res/layout/activity_main.xml
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android" android:orientation="vertical" android:
    <TextView android:id="@+id/tv" android:layout_width="match_parent" android:layout_height="wrap_content" android:
    <Button android:id="@+id/size" android:layout_width="match_parent" android:layout_height="wrap_content" android:
    <Button android:id="@+id/color" android:layout_width="match_parent" android:layout_height="wrap_content" android:
    <Button android:id="@+id/font" android:layout_width="match_parent" android:layout_height="wrap_content" android:
</LinearLayout>
```

## Slip 16

Question: See slip description above — code and XML provided below.

```
// MainActivity.java (Registration)
package com.example.slip16;
import android.os.Bundle; import android.util.Patterns; import android.widget.Button; import android.widget.EditText;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {
    @Override protected void onCreate(Bundle s){
        super.onCreate(s); setContentView(R.layout.activity_main);
        EditText name = findViewById(R.id.name), email = findViewById(R.id.email), phone = findViewById(R.id.phone);
        Button submit = findViewById(R.id.submit);
        submit.setOnClickListener(v -> {
            if(name.getText().toString().isEmpty()){ name.setError("Required"); return; }
            if(!Patterns.EMAIL_ADDRESS.matcher(email.getText().toString()).matches()){ email.setError("Invalid"); return; }
            if(phone.getText().toString().length() < 10){ phone.setError("Invalid"); return; }
            Toast.makeText(this,"Registered",Toast.LENGTH_SHORT).show();
        });
    }
}

// res/layout/activity_main.xml
<ScrollView xmlns:android="http://schemas.android.com/apk/res/android" android:layout_width="match_parent" android:layout_height="match_parent">
<LinearLayout android:orientation="vertical" android:padding="16dp" android:layout_width="match_parent" android:layout_height="wrap_content">
    <EditText android:id="@+id/name" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1"/>
    <EditText android:id="@+id/email" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1"/>
    <EditText android:id="@+id/phone" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1"/>
    <Button android:id="@+id/submit" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1"/>
</LinearLayout>
</ScrollView>
```

## Slip 17

Question: See slip description above — code and XML provided below.

```
// MainActivity.java (Multiplication table with TableLayout)
package com.example.slip17;
import android.os.Bundle; import android.widget.Button; import android.widget.EditText; import android.widget.TableLayout;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {
    @Override protected void onCreate(Bundle s){
        super.onCreate(s); setContentView(R.layout.activity_main);
        EditText et = findViewById(R.id.et); Button gen = findViewById(R.id.gen); TableLayout tbl = findViewById(R.id.tbl);
        gen.setOnClickListener(v -> {
            tbl.removeAllViews();
            int n = Integer.parseInt(et.getText().toString());
            for(int j=1;j<=10;j++){
                TableRow tr = new TableRow(this);
                TextView t1 = new TextView(this); t1.setText(n + " x " + j);
                TextView t2 = new TextView(this); t2.setText(" = " + (n*j));
                tr.addView(t1); tr.addView(t2);
                tbl.addView(tr);
            }
        });
    }
}

// res/layout/activity_main.xml
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android" android:orientation="vertical" android:layout_width="match_parent" android:layout_height="wrap_content">
    <EditText android:id="@+id/et" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1" />
    <Button android:id="@+id/gen" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1" />
    <ScrollView android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1" />
        <TableLayout android:id="@+id/tbl" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1" />
    </ScrollView>
</LinearLayout>
```

## Slip 18

Question: See slip description above — code and XML provided below.

```
// DBHelper.java (Student with AUTOINCREMENT id)
package com.example.slip18;
import android.content.ContentValues; import android.content.Context; import android.database.Cursor; import android.database.sqlite.SQLiteDatabase;
public class DBHelper extends SQLiteOpenHelper {
    public DBHelper(Context c){ super(c,"S.db",null,1); }
    @Override public void onCreate(SQLiteDatabase db){ db.execSQL("CREATE TABLE IF NOT EXISTS Student(id INTEGER PRIMARY KEY AUTOINCREMENT, name TEXT, address TEXT, phone TEXT);");
    @Override public void onUpgrade(SQLiteDatabase db,int o,int n){ db.execSQL("DROP TABLE IF EXISTS Student");
    public boolean insert(String name,String addr,String ph){ ContentValues cv=new ContentValues(); cv.put("name",name);
    public Cursor getAll(){ return getReadableDatabase().rawQuery("SELECT * FROM Student", null);
    }

// MainActivity.java (insert & show)
package com.example.slip18;
import android.database.Cursor; import android.os.Bundle; import android.widget.ArrayAdapter; import android.widget.ListView;
import androidx.appcompat.app.AppCompatActivity; import java.util.ArrayList;

public class MainActivity extends AppCompatActivity {
    DBHelper db; EditText n,a,p; Button ins,show; ListView lv;
    @Override protected void onCreate(Bundle s){
        super.onCreate(s); setContentView(R.layout.activity_main);
        db=new DBHelper(this); n=findViewById(R.id.n); a=findViewById(R.id.a); p=findViewById(R.id.p);
        ins=findViewById(R.id.ins); show=findViewById(R.id.show); lv=findViewById(R.id.lv);
        ins.setOnClickListener(v -> db.insert(n.getText().toString(), a.getText().toString(), p.getText().toString()));
        show.setOnClickListener(v -> {
            Cursor c=db.getAll(); ArrayList<String> arr=new ArrayList<>();
            while(c.moveToNext()) arr.add(c.getInt(0)+" - "+c.getString(1)+" - "+c.getString(2)+" - "+c.getString(3));
            lv.setAdapter(new ArrayAdapter<>(this, android.R.layout.simple_list_item_1, arr));
        });
    }
}

// res/layout/activity_main.xml
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android" android:orientation="vertical" android:layout_width="match_parent" android:layout_height="wrap_content">
    <EditText android:id="@+id/n" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1"/>
    <EditText android:id="@+id/a" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1"/>
    <EditText android:id="@+id/p" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1"/>
    <Button android:id="@+id/ins" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1"/>
    <Button android:id="@+id/show" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1"/>
    <ListView android:id="@+id/lv" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1"/>
</LinearLayout>
```

## Slip 19

Question: See slip description above — code and XML provided below.

```
// MainActivity.java (ListView with click Toast)
package com.example.slip19;
import android.os.Bundle; import android.widget.ArrayAdapter; import android.widget.ListView; import android.widget.AdapterView;
import androidx.appcompat.app.AppCompatActivity;
import java.util.ArrayList;

public class MainActivity extends AppCompatActivity {
    @Override protected void onCreate(Bundle s){
        super.onCreate(s); setContentView(R.layout.activity_main);
        ListView lv = findViewById(R.id.lv);
        ArrayList<String> a = new ArrayList<>(); a.add("One"); a.add("Two"); a.add("Three");
        lv.setAdapter(new ArrayAdapter<>(this, android.R.layout.simple_list_item_1, a));
        lv.setOnItemClickListener((parent, view, pos, id) -> Toast.makeText(this, "Clicked: " + a.get(pos), Toast.LENGTH_SHORT).show());
    }
}

// res/layout/activity_main.xml
<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android" android:layout_width="match_parent" android:layout_height="match_parent">
    <ListView android:id="@+id/lv" android:layout_width="match_parent" android:layout_height="match_parent"/>
</FrameLayout>
```

## Slip 20

Question: See slip description above — code and XML provided below.

```
// MainActivity.java (Send SMS)
// Manifest: <uses-permission android:name="android.permission.SEND_SMS" />
package com.example.slip20;
import android.os.Bundle; import android.telephony.SmsManager; import android.widget.Button; import android.widget.EditText;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {
    @Override protected void onCreate(Bundle s){
        super.onCreate(s); setContentView(R.layout.activity_main);
        EditText num = findViewById(R.id.num), msg = findViewById(R.id.msg);
        Button send = findViewById(R.id.send);
        send.setOnClickListener(v -> {
            SmsManager.getDefault().sendTextMessage(num.getText().toString(), null, msg.getText().toString(), null, null);
        });
    }
}

// res/layout/activity_main.xml
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android" android:orientation="vertical" android:layout_width="match_parent" android:layout_height="wrap_content">
    <EditText android:id="@+id/num" android:layout_width="match_parent" android:layout_height="wrap_content" android:inputType="number"/>
    <EditText android:id="@+id/msg" android:layout_width="match_parent" android:layout_height="wrap_content" android:inputType="text"/>
    <Button android:id="@+id/send" android:layout_width="match_parent" android:layout_height="wrap_content" android:text="Send"/>
</LinearLayout>
```

## Slip 21

Question: See slip description above — code and XML provided below.

```
// MainActivity.java (Fixed credentials)
package com.example.slip21;
import android.os.Bundle; import android.widget.Button; import android.widget.EditText; import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {
    @Override protected void onCreate(Bundle s){
        super.onCreate(s); setContentView(R.layout.activity_main);
        EditText u = findViewById(R.id.u), p = findViewById(R.id.p);
        Button b = findViewById(R.id.b);
        b.setOnClickListener(v -> {
            if("mca".equals(u.getText().toString()) && "android".equals(p.getText().toString()))
                Toast.makeText(this,"Login Success",Toast.LENGTH_SHORT).show();
            else Toast.makeText(this,"Invalid",Toast.LENGTH_SHORT).show();
        });
    }
}

// res/layout/activity_main.xml
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android" android:orientation="vertical" android:layout_width="match_parent" android:layout_height="wrap_content">
    <EditText android:id="@+id/u" android:layout_width="match_parent" android:layout_height="wrap_content" android:hint="User Name"/>
    <EditText android:id="@+id/p" android:layout_width="match_parent" android:layout_height="wrap_content" android:hint="Password"/>
    <Button android:id="@+id/b" android:layout_width="match_parent" android:layout_height="wrap_content" android:text="Login"/>
</LinearLayout>
```

## Slip 22

Question: See slip description above — code and XML provided below.

```
// MainActivity.java (Simple numeric calculator demo)
package com.example.slip22;
import android.os.Bundle; import android.widget.Button; import android.widget.EditText;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {
    EditText et; double val1 = 0; String op = "";
    @Override protected void onCreate(Bundle s){
        super.onCreate(s); setContentView(R.layout.activity_main);
        et = findViewById(R.id.et);
        findViewById(R.id.btn1).setOnClickListener(v -> et.append("1"));
        findViewById(R.id.btn2).setOnClickListener(v -> et.append("2"));
        findViewById(R.id.add).setOnClickListener(v -> { val1 = Double.parseDouble(et.getText().toString()); op="+" });
        findViewById(R.id.eq).setOnClickListener(v -> {
            double val2 = Double.parseDouble(et.getText().toString());
            double res = 0;
            if(op.equals("+")) res = val1 + val2;
            et.setText(String.valueOf(res));
        });
    }
}

// res/layout/activity_main.xml
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android" android:orientation="vertical" android:
    <EditText android:id="@+id/et" android:layout_width="match_parent" android:layout_height="wrap_content" android:
    <LinearLayout android:layout_width="match_parent" android:layout_height="wrap_content">
        <Button android:id="@+id	btn1" android:layout_width="wrap_content" android:layout_height="wrap_content" android:
        <Button android:id="@+id	btn2" android:layout_width="wrap_content" android:layout_height="wrap_content" android:
        <Button android:id="@+id	add" android:layout_width="wrap_content" android:layout_height="wrap_content" android:
        <Button android:id="@+id/eq" android:layout_width="wrap_content" android:layout_height="wrap_content" android:
    </LinearLayout>
</LinearLayout>
```

## Slip 23

Question: See slip description above — code and XML provided below.

```
// MainActivity.java (Factorial -> AlertDialog)
package com.example.slip23;
import android.app.AlertDialog; import android.os.Bundle; import android.widget.Button; import android.widget.EditText;
import androidx.appcompat.app.AppCompatActivity;
import java.math.BigInteger;

public class MainActivity extends AppCompatActivity {
    @Override protected void onCreate(Bundle s){
        super.onCreate(s); setContentView(R.layout.activity_main);
        EditText et = findViewById(R.id.et);
        Button b = findViewById(R.id.b);
        b.setOnClickListener(v -> {
            int n = Integer.parseInt(et.getText().toString());
            BigInteger fact = BigInteger.ONE;
            for(int j=2;j<=n;j++) fact = fact.multiply(BigInteger.valueOf(j));
            new AlertDialog.Builder(this).setTitle("Factorial").setMessage(fact.toString()).setPositiveButton("OK",nu
        });
    }
}

// res/layout/activity_main.xml
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android" android:orientation="vertical" android:
    <EditText android:id="@+id/et" android:layout_width="match_parent" android:layout_height="wrap_content" android:
    <Button android:id="@+id/b" android:layout_width="match_parent" android:layout_height="wrap_content" android:
</LinearLayout>
```

## Slip 24

Question: See slip description above — code and XML provided below.

```
// DBHelper.java (Student roll,name,class,contact)
package com.example.slip24;
import android.content.ContentValues; import android.content.Context; import android.database.Cursor; import android.database.sqlite.SQLiteDatabase;
public class DBHelper extends SQLiteOpenHelper {
    public DBHelper(Context c){ super(c,"Stu2.db",null,1); }
    @Override public void onCreate(SQLiteDatabase db){ db.execSQL("CREATE TABLE IF NOT EXISTS Student(roll INTEGER PRIMARY KEY, name TEXT, class TEXT, contact TEXT);");
    @Override public void onUpgrade(SQLiteDatabase db,int o,int n){ db.execSQL("DROP TABLE IF EXISTS Student");}
    public boolean insert(int roll,String name,String cls,String contact){ ContentValues cv=new ContentValues();
        cv.put("roll",roll);
        cv.put("name",name);
        cv.put("class",cls);
        cv.put("contact",contact);
        return db.insert("Student",null,cv);
    }
    public Cursor getAll(){ return db.rawQuery("SELECT * FROM Student", null); }
}

// MainActivity.java (insert & show)
package com.example.slip24;
import android.database.Cursor; import android.os.Bundle; import android.widget.ArrayAdapter; import android.widget.EditText; import android.widget.ListView; import androidx.appcompat.app.AppCompatActivity; import java.util.ArrayList;
public class MainActivity extends AppCompatActivity {
    DBHelper db; EditText r,n,c,p; Button ins, show; ListView lv;
    @Override protected void onCreate(Bundle s){
        super.onCreate(s); setContentView(R.layout.activity_main);
        db=new DBHelper(this); r=findViewById(R.id.r); n=findViewById(R.id.n); c=findViewById(R.id.c); p=findViewById(R.id.p);
        ins=findViewById(R.id.ins); show=findViewById(R.id.show); lv=findViewById(R.id.lv);
        ins.setOnClickListener(v -> db.insert(Integer.parseInt(r.getText().toString()), n.getText().toString(), c.getText().toString(), p.getText()));
        show.setOnClickListener(v -> {
            Cursor cu=db.getAll(); ArrayList<String> a=new ArrayList<>();
            while(cu.moveToNext()) a.add(cu.getInt(0)+" - "+cu.getString(1)+" - "+cu.getString(2)+" - "+cu.getString(3));
            lv.setAdapter(new ArrayAdapter<>(this, android.R.layout.simple_list_item_1, a));
        });
    }
}

// res/layout/activity_main.xml
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android" android:orientation="vertical" android:layout_width="match_parent" android:layout_height="wrap_content">
    <EditText android:id="@+id/r" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1"/>
    <EditText android:id="@+id/n" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1"/>
    <EditText android:id="@+id/c" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1"/>
    <EditText android:id="@+id/p" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1"/>
    <Button android:id="@+id/ins" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1"/>
    <Button android:id="@+id/show" android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_weight="1"/>
    <ListView android:id="@+id/lv" android:layout_width="match_parent" android:layout_height="wrap_content"/>
</LinearLayout>
```

## Slip 25

Question: See slip description above — code and XML provided below.

```
// MainActivity.java (Factorial -> ResultActivity)
package com.example.slip25;
import android.content.Intent; import android.os.Bundle; import android.widget.Button; import android.widget.Ed
import androidx.appcompat.app.AppCompatActivity;
import java.math.BigInteger;

public class MainActivity extends AppCompatActivity {
    @Override protected void onCreate(Bundle s){
        super.onCreate(s); setContentView(R.layout.activity_main);
        EditText et = findViewById(R.id.et);
        Button b = findViewById(R.id.b);
        b.setOnClickListener(v -> {
            int n = Integer.parseInt(et.getText().toString());
            BigInteger f = BigInteger.ONE;
            for(int j=2;j<=n;j++) f = f.multiply(BigInteger.valueOf(j));
            startActivity(new Intent(this, ResultActivity.class).putExtra("fact", f.toString()));
        });
    }
}

// ResultActivity.java
package com.example.slip25;
import android.os.Bundle; import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;

public class ResultActivity extends AppCompatActivity {
    @Override protected void onCreate(Bundle s){
        super.onCreate(s); setContentView(R.layout.activity_result);
        ((TextView)findViewByI
    }
}

// res/layout/activity_main.xml
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android" android:orientation="vertical" android:
    <EditText android:id="@+id/et" android:layout_width="match_parent" android:layout_height="wrap_content" android:
    <Button android:id="@+id/b" android:layout_width="match_parent" android:layout_height="wrap_content" android:
</LinearLayout>

// res/layout/activity_result.xml
<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android" android:layout_width="match_parent" andro
    <TextView android:id="@+id/tv" android:layout_width="wrap_content" android:layout_height="wrap_content" andro
</FrameLayout>
```