DYP DPU

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Practical Assignment – 1

Class :- T.Y.B.C.A.(Science) Sem-VI

Subject:- Android Programming **Date:- 26/12/2025**

1. **Create a Simple Application which shows the Life Cycle of Activity.**

```
package com.example.activitylifecycle;

import android.os.Bundle;
import android.util.Log;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    private static final String TAG = "ActivityLifecycle";

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Log.d(TAG, "onCreate called");
    }

    @Override
    protected void onStart() {
        super.onStart();
        Log.d(TAG, "onStart called");
    }

    @Override
    protected void onResume() {
        super.onResume();
        Log.d(TAG, "onResume called");
    }

    @Override
```

```
    protected void onPause() {
        super.onPause();
        Log.d(TAG, "onPause called");
    }

    @Override
    protected void onStop() {
        super.onStop();
        Log.d(TAG, "onStop called");
    }

    @Override
    protected void onRestart() {
        super.onRestart();
        Log.d(TAG, "onRestart called");
    }

    @Override
    protected void onDestroy() {
        super.onDestroy();
        Log.d(TAG, "onDestroy called");
    }
}
```

2. **Create a simple application to explain use of Explicit Intent.**

XML

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
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=".MainActivity">

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Open"
```

```
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        android:layout_marginTop="100dp"/>

</androidx.constraintlayout.widget.ConstraintLayout>
```

Java

```
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

   private Button b;

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

          b= findViewById(R.id.button);

          b.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {

          Intent i= new Intent(MainActivity.this, SecondActivity.class);
          startActivity(i);
        }
      });
   }
}
```

3. **Create a simple application to explain use of Implicit Intent.**

XML

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
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=".MainActivity">

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Open"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        android:layout_marginTop="100dp"/>

</androidx.constraintlayout.widget.ConstraintLayout>
```

Java

```
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    private Button b;

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

            b= findViewById(R.id.button);
```

```
            b.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {

 Intent i= new Intent(Intent.ACTION_VIEW, Uri.parse("http://www.google.com"));
            startActivity(i);
        }
      });
    }
  }
```

4. **Create android application to accept name from user and display it on next activity using Intent.**

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
   android:layout_width="match_parent"
   android:layout_height="match_parent"
   android:orientation="vertical"
   android:padding="16dp">

   <EditText
      android:id="@+id/editTextName"
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:hint="Enter your name"
      android:inputType="textPersonName" />

   <Button
      android:id="@+id/buttonSubmit"
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:text="Submit" />
</LinearLayout>
```

MainActivity.java

```
package com.example.namepass;

import android.content.Intent;
```

```
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import android.widget.Button;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    private EditText editTextName;
    private Button buttonSubmit;

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

        editTextName = findViewById(R.id.editTextName);
        buttonSubmit = findViewById(R.id.buttonSubmit);

        buttonSubmit.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String name = editTextName.getText().toString();

                Intent intent = new Intent(MainActivity.this, SecondActivity.class);
                intent.putExtra("USER_NAME", name);
                startActivity(intent);
            }
        });
    }
}
```

Activity_second.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="16dp"
    android:gravity="center">
```

```
    <TextView
        android:id="@+id/textViewName"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello, user!"
        android:textSize="20sp" />
</LinearLayout>
```

SecondActivity.java

```
package com.example.namepass;

import android.os.Bundle;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;

public class SecondActivity extends AppCompatActivity {

    private TextView textViewName;

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

         textViewName = findViewById(R.id.textViewName);

        String name = getIntent().getStringExtra("USER_NAME");

         textViewName.setText("Hello, " + name);

    }
}
```

5. **Create android application to accept name from user and display it using Toast.**

Activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
```

```
    android:padding="16dp"
    android:gravity="center">

    <!-- EditText to enter the name -->
    <EditText
        android:id="@+id/editTextName"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter your name"
        android:inputType="textPersonName" />

    <!-- Button to submit the name -->
    <Button
        android:id="@+id/buttonSubmit"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Submit" />
</LinearLayout>
```

MainActivity.java

```
package com.example.namewithtoast;

import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import android.widget.Button;
import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    private EditText editTextName;
    private Button buttonSubmit;

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

        editTextName = findViewById(R.id.editTextName);
```

```
        buttonSubmit = findViewById(R.id.buttonSubmit);

        buttonSubmit.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String name = editTextName.getText().toString();
Toast.makeText(MainActivity.this, "Hello, " + name, Toast.LENGTH_SHORT).show();
            }        }
        });
    }
}
```

6. **Create a Simple Application Which Send —Hello! message from one activity to another with help of Button (Use Intent).**

XML

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
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=".MainActivity">

    <!-- Button to send message -->
    <Button
        android:id="@+id/sendMessageButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Send Message"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        android:layout_marginTop="100dp"/>

</androidx.constraintlayout.widget.ConstraintLayout>
```

Java

```
package com.example.hellomessage;
```

```
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    private Button sendMessageButton;

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

        sendMessageButton = findViewById(R.id.sendMessageButton);

        sendMessageButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new Intent(MainActivity.this, SecondActivity.class);

                intent.putExtra("message", "Hello!");

                startActivity(intent);
            }
        });
    }
}
```

SecondActivity.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
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=".SecondActivity">

    <!-- TextView to display the received message -->
    <TextView
        android:id="@+id/messageTextView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Message will appear here"
        android:textSize="20sp"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        android:layout_marginTop="100dp"/>

</androidx.constraintlayout.widget.ConstraintLayout>
```

SecondActivity.java

```
package com.example.hellomessage;

import android.content.Intent;
import android.os.Bundle;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;

public class SecondActivity extends AppCompatActivity {

    private TextView messageTextView;

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

        messageTextView = findViewById(R.id.messageTextView);
        String message = getIntent().getStringExtra("message");
        messageTextView.setText(message);
    }
}
```

7. **Create an Android App with Login Screen. On successful login, gives message go to next Activity (Without Using Database).**

Activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="16dp"
    android:gravity="center">

    <!-- EditText for username input -->
    <EditText
        android:id="@+id/editTextUsername"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Username"
        android:inputType="textPersonName" />

    <!-- EditText for password input -->
    <EditText
        android:id="@+id/editTextPassword"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Password"
        android:inputType="textPassword" />

    <!-- Login Button -->
    <Button
        android:id="@+id/buttonLogin"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Login" />
</LinearLayout>
```

MainActivity.java

```
package com.example.loginapp;

import android.content.Intent;
```

```
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    private EditText editTextUsername;
    private EditText editTextPassword;
    private Button buttonLogin;


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

        editTextUsername = findViewById(R.id.editTextUsername);
        editTextPassword = findViewById(R.id.editTextPassword);
        buttonLogin = findViewById(R.id.buttonLogin);

        buttonLogin.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String username = editTextUsername.getText().toString();
                String password = editTextPassword.getText().toString();

                if (username.equals(“admin”) && password.equals(“1234”)) {
Toast.makeText(MainActivity.this, "Login Successful", Toast.LENGTH_SHORT).show();
                    Intent intent = new Intent(MainActivity.this, NextActivity.class);
                    startActivity(intent);
                } else {
        Toast.makeText(MainActivity.this, "Invalid Username or Password",
        Toast.LENGTH_SHORT).show();
                }
            }
        });
    }
```

```
}
```

SecondActivity.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="16dp"
    android:gravity="center">

    <!-- TextView that displays a message -->
    <TextView
        android:id="@+id/textViewMessage"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Welcome to the next activity!"
        android:textSize="18sp" />
</LinearLayout>
```

SecondActivity.java

```
package com.example.loginapp;

import android.os.Bundle;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;

public class NextActivity extends AppCompatActivity {

    private TextView textViewMessage;

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

```
        textViewMessage = findViewById(R.id.textViewMessage);
        textViewMessage.setText("Welcome to second activity!");
    }
}
```

8. **Create First Activity to accept information like Student First Name, Middle Name, Last Name, Date of birth, Address, Email ID and display all information on Second Activity when user click on Submit button.**

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="match_parent">

    <EditText android:id="@+id/etFn" android:hint="First Name"/>
    <EditText android:id="@+id/etMn" android:hint="Middle Name"/>
    <EditText android:id="@+id/etLn" android:hint="Last Name"/>
    <EditText android:id="@+id/etDob" android:hint="Date of Birth"/>
    <EditText android:id="@+id/etAdd" android:hint="Address"/>
    <EditText android:id="@+id/etMail" android:hint="Email ID"/>

    <Button
        android:text="Submit"
        android:onClick="submit"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"/>
</LinearLayout>
```

MainActivity.java

```
package com.example.studentapp;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {
```

```
    EditText fn, mn, ln, dob, add, mail;

    @Override
    protected void onCreate(Bundle b) {
        super.onCreate(b);
        setContentView(R.layout.activity_main);

        fn = findViewById(R.id.etFn);
        mn = findViewById(R.id.etMn);
        ln = findViewById(R.id.etLn);
        dob = findViewById(R.id.etDob);
        add = findViewById(R.id.etAdd);
        mail = findViewById(R.id.etMail);
    }

    public void submit(View v) {
        Intent i = new Intent(this, SecondActivity.class);

        i.putExtra("fn", fn.getText().toString());
        i.putExtra("mn", mn.getText().toString());
        i.putExtra("ln", ln.getText().toString());
        i.putExtra("dob", dob.getText().toString());
        i.putExtra("add", add.getText().toString());
        i.putExtra("mail", mail.getText().toString());

        startActivity(i);
    }
}
```

activity_second.xml

```
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:padding="16dp"
    android:layout_width="match_parent"
    android:layout_height="match_parent">

    <TextView
        android:id="@+id/tvData"
        android:textSize="16sp"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"/>
```

```
</LinearLayout>
```

SecondActivity.java

```
package com.example.studentapp;

import android.os.Bundle;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;

public class SecondActivity extends AppCompatActivity {

    TextView tv;

    @Override
    protected void onCreate(Bundle b) {
        super.onCreate(b);
        setContentView(R.layout.activity_second);

        tv = findViewById(R.id.tvData);

        String s =
                "First Name: " + getIntent().getStringExtra("fn") + "\n" +
                "Middle Name: " + getIntent().getStringExtra("mn") + "\n" +
                "Last Name: " + getIntent().getStringExtra("ln") + "\n" +
                "DOB: " + getIntent().getStringExtra("dob") + "\n" +
                "Address: " + getIntent().getStringExtra("add") + "\n" +
                "Email: " + getIntent().getStringExtra("mail");

        tv.setText(s);
    }
}
```

9. **Create a Simple Application, which reads a positive number from the user and display its factorial value in another activity.**

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="match_parent">

    <EditText
```

```
        android:id="@+id/etNum"
        android:hint="Enter Positive Number"
        android:inputType="number"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"/>

    <Button
        android:text="Find Factorial"
        android:onClick="calc"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"/>
</LinearLayout>
```

MainActivity.java

```
package com.example.factapp;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    EditText n;

    @Override
    protected void onCreate(Bundle b) {
        super.onCreate(b);
        setContentView(R.layout.activity_main);

        n = findViewById(R.id.etNum);
    }

    public void calc(View v) {
        int num = Integer.parseInt(n.getText().toString());

        Intent i = new Intent(this, SecondActivity.class);
        i.putExtra("num", num);
        startActivity(i);
    }
```

```
}
```
activity_second.xml
```
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:padding="16dp"
    android:layout_width="match_parent"
    android:layout_height="match_parent">

    <TextView
        android:id="@+id/tvRes"
        android:textSize="18sp"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"/>
</LinearLayout>
```
SecondActivity.java
```
package com.example.factapp;

import android.os.Bundle;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;

public class SecondActivity extends AppCompatActivity {

    TextView tv;

    @Override
    protected void onCreate(Bundle b) {
        super.onCreate(b);
        setContentView(R.layout.activity_second);

        tv = findViewById(R.id.tvRes);

        int n = getIntent().getIntExtra("num", 0);
        long f = 1;

        for (int i = 1; i <= n; i++) {
            f = f * i;
        }

        tv.setText("Factorial = " + f);
    }
```

}

10. **Create an Android Application that will change color of the College Name on click of Push Button and change the font size, font style of text view using xml.**

activity_main.xml

```
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="vertical"
    android:gravity="center"
    android:layout_width="match_parent"
    android:layout_height="match_parent">

    <TextView
        android:id="@+id/tvClg"
        android:text="ABC College of Engineering"
        android:textSize="24sp"
        android:textStyle="bold|italic"
        android:textColor="@android:color/black"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"/>

    <Button
        android:id="@+id/btn"
        android:text="Change Color"
        android:onClick="chg"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="20dp"/>
</LinearLayout>
```

MainActivity.java

```
package com.example.collegeapp;

import android.graphics.Color;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

TextView tv;
```

```
    @Override
    protected void onCreate(Bundle b) {
        super.onCreate(b);
        setContentView(R.layout.activity_main);

        tv = findViewById(R.id.tvClg);
    }

    public void chg(View v) {
            tv.setTextColor(Color.RED);
        tv.setTextSize(30);
        tv.setTypeface(null, Typeface.BOLD_ITALIC);    }
}
```

11. Create a Simple Application, that performs Arithmetic Operations. (Use constraint layout)

activity_main.xml

```
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    android:layout_width="match_parent"
    android:layout_height="match_parent">

    <EditText
        android:id="@+id/et1"
        android:hint="Number 1"
        android:inputType="number"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        android:layout_margin="16dp"/>

    <EditText
        android:id="@+id/et2"
        android:hint="Number 2"
        android:inputType="number"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
```

```
    app:layout_constraintTop_toBottomOf="@id/et1"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    android:layout_margin="16dp"/>

<Button
    android:text="Add"
    android:onClick="add"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    app:layout_constraintTop_toBottomOf="@id/et2"
    app:layout_constraintStart_toStartOf="parent"/>

<Button
    android:text="Sub"
    android:onClick="sub"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    app:layout_constraintTop_toBottomOf="@id/et2"
    app:layout_constraintEnd_toEndOf="parent"/>

<Button
    android:text="Mul"
    android:onClick="mul"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    app:layout_constraintTop_toBottomOf="@id/btnAdd"
    app:layout_constraintStart_toStartOf="parent"/>

<Button
    android:text="Div"
    android:onClick="div"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    app:layout_constraintTop_toBottomOf="@id/btnSub"
    app:layout_constraintEnd_toEndOf="parent"/>

<TextView
    android:id="@+id/tvRes"
    android:text="Result"
```

```
        android:textSize="18sp"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        app:layout_constraintTop_toBottomOf="@id/et2"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toEndOf="parent"/>

</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```
package com.example.calcapp;

import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    EditText n1, n2;
    TextView tv;

    @Override
    protected void onCreate(Bundle b) {
        super.onCreate(b);
        setContentView(R.layout.activity_main);

        n1 = findViewById(R.id.et1);
        n2 = findViewById(R.id.et2);
        tv = findViewById(R.id.tvRes);
    }

    public void add(View v) {
        int a = Integer.parseInt(n1.getText().toString());
        int b1 = Integer.parseInt(n2.getText().toString());
        tv.setText("Result = " + (a + b1));
    }

    public void sub(View v) {
```

```
        int a = Integer.parseInt(n1.getText().toString());
        int b1 = Integer.parseInt(n2.getText().toString());
        tv.setText("Result = " + (a - b1));
    }

    public void mul(View v) {
        int a = Integer.parseInt(n1.getText().toString());
        int b1 = Integer.parseInt(n2.getText().toString());
        tv.setText("Result = " + (a * b1));
    }

    public void div(View v) {
        int a = Integer.parseInt(n1.getText().toString());
        int b1 = Integer.parseInt(n2.getText().toString());
        tv.setText("Result = " + (a / b1));
    }
}
```

12. **Create an Android Application to accept two numbers and find power and Average. Display the result on the next activity on Button click.**

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="match_parent">

    <EditText
        android:id="@+id/et1"
        android:hint="Enter Number 1"
        android:inputType="number"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"/>

    <EditText
        android:id="@+id/et2"
        android:hint="Enter Number 2"
        android:inputType="number"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"/>
```

```
    <Button
        android:text="Calculate"
        android:onClick="cal"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"/>
</LinearLayout>
```

MainActivity.java

```
package com.example.poweravg;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    EditText n1, n2;

    @Override
    protected void onCreate(Bundle b) {
        super.onCreate(b);
        setContentView(R.layout.activity_main);

        n1 = findViewById(R.id.et1);
        n2 = findViewById(R.id.et2);
    }

    public void cal(View v) {
        int a = Integer.parseInt(n1.getText().toString());
        int b1 = Integer.parseInt(n2.getText().toString());

        Intent i = new Intent(this, SecondActivity.class);
        i.putExtra("a", a);
        i.putExtra("b", b1);
        startActivity(i);
    }
}
```

activity_second.xml

```
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
```

```
    android:padding="16dp"
    android:layout_width="match_parent"
    android:layout_height="match_parent">

    <TextView
        android:id="@+id/tvRes"
        android:textSize="18sp"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"/>
</LinearLayout>
```

SecondActivity.java

```
package com.example.poweravg;

import android.os.Bundle;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;

public class SecondActivity extends AppCompatActivity {

    TextView tv;

    @Override
    protected void onCreate(Bundle b) {
        super.onCreate(b);
        setContentView(R.layout.activity_second);

        tv = findViewById(R.id.tvRes);

        int a = getIntent().getIntExtra("a", 0);
        int b1 = getIntent().getIntExtra("b", 0);

        double p = Math.pow(a, b1);
        double avg = (a + b1) / 2.0;

        tv.setText("Power = " + p + "\nAverage = " + avg);
    }
}
```

13. **Create a Simple Application, which reads a positive number from the user and check whether it is even or odd.(Use Toast)**

14. **Create a Simple Application, which reads a positive number from the user and display its reverse value in another activity.**
15. **Write an Android application to accept two numbers from the user, and display them, but reject input if both numbers are greater than 10 and asks for two new numbers.**
16. **Create an Android App, it reads the Students Details (Name, Surname, Class, Gender, Hobbies, Marks) and display the all information in another activity in table format on click of Submit button.**