1. Create an app that illustrates the following layouts of the android studio. ● Constraint Layout ● Linear Layout ● Relative Layout ● Frame Layout ● Table Layout

<?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:id="@+id/main"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".MainActivity">

<ScrollView

android:layout\_width="0dp"

android:layout\_height="0dp"

app:layout\_constraintTop\_toTopOf="parent"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintEnd\_toEndOf="parent">

<LinearLayout

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:orientation="vertical">

<!-- Constraint Layout -->

<androidx.constraintlayout.widget.ConstraintLayout

android:layout\_width="match\_parent"

android:layout\_height="150dp"

android:background="#FFC107">

<TextView

android:id="@+id/textViewConstraint"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Constraint Layout"

android:textColor="#263238"

android:textSize="18sp"

android:layout\_margin="16dp"

app:layout\_constraintTop\_toTopOf="parent"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintBottom\_toBottomOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>

<!-- Horizontal Linear Layout -->

<LinearLayout

android:layout\_width="match\_parent"

android:layout\_height="150dp"

android:orientation="horizontal"

android:background="#03A9F4"

android:gravity="center">

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Horizontal LinearLayout"

android:textColor="#263238"

android:textSize="18sp"

android:padding="16dp" />

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="with TextViews"

android:textColor="#263238"

android:textSize="18sp"

android:padding="16dp" />

</LinearLayout>

<!-- Vertical Linear Layout -->

<LinearLayout

android:layout\_width="match\_parent"

android:layout\_height="150dp"

android:orientation="vertical"

android:background="#4CAF50"

android:gravity="center">

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Vertical LinearLayout"

android:textColor="#263238"

android:textSize="18sp"

android:padding="16dp" />

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="with TextViews"

android:textColor="#263238"

android:textSize="18sp"

android:padding="16dp" />

</LinearLayout>

<!-- Relative Layout -->

<RelativeLayout

android:layout\_width="match\_parent"

android:layout\_height="150dp"

android:background="#FF7043">

<TextView

android:id="@+id/textViewRelative"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Relative Layout"

android:textColor="#263238"

android:textSize="18sp"

android:layout\_centerInParent="true" />

</RelativeLayout>

<!-- Frame Layout -->

<FrameLayout

android:layout\_width="match\_parent"

android:layout\_height="150dp"

android:background="#9C27B0">

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Frame Layout"

android:textColor="#FFFFFF"

android:textSize="18sp"

android:layout\_gravity="center" />

</FrameLayout>

<!-- Table Layout -->

<TableLayout

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:background="#2196F3"

android:stretchColumns="1">

<TableRow>

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Table Row 1 Column 1"

android:textColor="#FFFFFF"

android:textSize="18sp"

android:padding="16dp" />

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Table Row 1 Column 2"

android:textColor="#FFFFFF"

android:textSize="18sp"

android:padding="16dp" />

</TableRow>

<TableRow>

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Table Row 2 Column 1"

android:textColor="#FFFFFF"

android:textSize="18sp"

android:padding="16dp" />

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Table Row 2 Column 2"

android:textColor="#FFFFFF"

android:textSize="18sp"

android:padding="16dp" />

</TableRow>

</TableLayout>

</LinearLayout>

</ScrollView>

</androidx.constraintlayout.widget.ConstraintLayout>  
  
  
  
JAVA

package com.example.lab\_assingments;

// Replace with your actual package name

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

public class MainActivity extends AppCompatActivity {

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

}

}

