Experiment - 8

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Subject Name: Mobile Application Development LAB	

1. <u>Aim</u> : Create an application to represent different kinds of layouts.

2. <u>Objective</u>:

Understanding the different types of layouts.

3. <u>Program:</u>

<u>MainActivity.java</u>

```java
package com.example.myapplication8;

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);    }
}
```

<u>activity_main.xml</u>

```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:tools="http://schemas.android.com/tools"    xmlns:app="http://schemas.android.com/apk/res-auto"
```

```xml
    android:orientation="vertical"    android:layout_width="match_parent"
android:layout_height="match_parent">
    <!-- This is a RelativeLayout -->
    <RelativeLayout        android:layout_width="match_parent"
android:layout_height="wrap_content"
android:padding="16dp">

        <ImageView        android:id="@+id/image_view"
android:layout_width="96dp"
android:layout_height="96dp"        android:src="@drawable/my_image"
android:layout_alignParentStart="true"/>

        <TextView        android:id="@+id/text_view"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginStart="101dp"
android:layout_toEndOf="@id/image_view"        android:text="Hello World!"
android:textSize="24sp" />

    </RelativeLayout>

    <!-- This is a ConstraintLayout -->
    <androidx.constraintlayout.widget.ConstraintLayout        android:layout_width="match_parent"
android:layout_height="wrap_content"        android:padding="16dp">

        <TextView        android:id="@+id/top_text_view"
android:layout_width="wrap_content"
android:layout_height="wrap_content"        android:text="Top Text View"
android:textSize="18sp"
        app:layout_constraintTop_toTopOf="parent"
app:layout_constraintStart_toStartOf="parent"/>

        <Button
android:id="@+id/button"
        app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@id/top_text_view"
android:layout_width="wrap_content"        android:layout_height="wrap_content"
android:text="Button"        tools:layout_editor_absoluteX="215dp"
tools:layout_editor_absoluteY="-8dp" />

        <TextView
        android:id="@+id/bottom_text_view"        app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@id/button"        android:layout_width="wrap_content"
android:layout_height="wrap_content"        android:text="Bottom Text View"
```

```xml
                android:textSize="18sp"              tools:layout_editor_absoluteX="0dp"
tools:layout_editor_absoluteY="32dp" />

    </androidx.constraintlayout.widget.ConstraintLayout>

    <!-- This is a FrameLayout -->
    <FrameLayout          android:layout_width="match_parent"
android:layout_height="match_parent"
android:padding="16dp">

        <ImageView
android:id="@+id/background_image_view"
android:layout_width="match_parent"
android:layout_height="match_parent"
android:src="@drawable/background_image"/>

        <TextView
            android:id="@+id/center_text_view"          android:layout_width="wrap_content"
android:layout_height="wrap_content"          android:text="Center Text View"
android:textSize="24sp"           android:layout_gravity="center"/>

    </FrameLayout>

</LinearLayout>
```

Output: