Experiment – 3.2

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Aim/Overview of the practical:

Implement building blocks for Android Application using different layouts (such as linear, relative and absolute).

Task to be done:

To know the concept of Layouts.

Apparatus/Simulator used:

- Android Studio
- Java
- Emulator

Code:

(Absolute Layout)

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<AbsoluteLayout 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="fill_parent" android:layout_height="fill_parent"
    android:background="#ECC9EE" tools:context=".MainActivity">
    <TextView android:id="@+id/heading"
        android:layout_width="wrap_content"
```

```
      android:layout_height="wrap_content
      " android:layout_x="400px"
      android:layout_y="410px"
      android:textSize="26dp" />
    <TextView android:id="@+id/subHeading"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:layout_x="400px"
      android:layout_y="500px"
      android:textSize="26dp" />
    <TextView android:id="@+id/subject"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content
      " android:layout_x="400px"
      android:layout_y="600px"
      android:textSize="26dp" />
</AbsoluteLayout>
```

(Relative Layout)

```
<?xml version="1.0" encoding="utf-8"?> <RelativeLayout
    android:layout_width="fill_parent"
    android:layout_height="fill_parent" android:layout_margin="12dp"
    xmlns:android="http://schemas.android.com/apk/res/android">
    <Button android:id="@+id/button1"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="Login"
      android:layout_alignParentLeft="true"
      android:layout_alignParentTop="true"/>
```

```xml
    <Button android:id="@+id/button2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Sign Up"
        android:layout_alignParentTop="true"
        android:layout_alignParentRight="true"/
        >
    <Button android:id="@+id/button3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Sign Out"
        android:layout_alignParentLeft="true"
        android:layout_alignParentBottom="true"/
        >
    <Button android:id="@+id/button4"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content
        " android:text="Report"
        android:layout_alignParentRight="true
        "
        android:layout_alignParentBottom="tr
        ue"/>
    <Button android:id="@+id/button5"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Surabhi"
        android:layout_centerVertical="true"
        android:layout_centerHorizontal="true"/
        >
</RelativeLayout>
```

(Linear Layout)

```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent" android:orientation="vertical"
    android:layout_margin="12dp" tools:context=".MainActivity">
    <Button android:id="@+id/textView"
        android:layout_gravity="center_vertical|center_horizontal"
        android:layout_width="wrap_content"
        android:layout_height="50dp"
        android:text="Welcome" />
    <TextView android:id="@+id/textView3"
        android:layout_width="match_parent
        " android:layout_height="61dp"
            android:text="Surabhi" android:textSize="20dp"
        android:textStyle="bold"
        android:gravity="center"/>
    <TextView android:id="@+id/textView4"
        android:layout_width="match_parent
        " android:layout_height="50dp"
        android:text="20BCS2207"
        android:textSize="20dp"
        android:textStyle="bold"
        android:gravity="center"/>
    <TextView android:id="@+id/textView5"
        android:layout_width="match_parent
        " android:layout_height="50dp"
        android:text="Chandigarh University"
        android:textSize="20dp"
        android:textStyle="bold"
        android:gravity="center"/>
</LinearLayout>
```

Java Code:

(Absolute Layout)

```java
package com.surabhitiwari.exp8_absolute;

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

public class MainActivity extends AppCompatActivity {
    TextView heading, subHeading;
    TextView o_heading; @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main); //
        Referencing the TextViews heading = (TextView)
        findViewById(R.id.heading); subHeading =
        (TextView) findViewById(R.id.subHeading);
        o_heading = (TextView) findViewById(R.id.subject);
        // Setting text dynamically
        heading.setText("Harshida");
        subHeading.setText("20BCS2198");
        o_heading.setText("Absolute Layout");
    }
}
```

(Relative Layout) package

```java
com.surabhitiwari.exp8_relative;

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);
    }
}
```

(Linear Layout)

```
package com.surabhitiwari.exp8_linear;

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);
    }
}
```

Screenshots: