

Experiment3.3

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Subject Name: WMS LAB

Subject Code: 20CSP-338

Aim: Create animations and graphical primitives in Android environment

Objective: To draw 2D graphics and Animation in android application.

Software/Hardware Requirements: Android Studio

Tools to be used: Android Studio

Introduction: Android graphics provides low level graphics tools such as canvases, color, filters, points and rectangles which handle drawing to the screen directly.

- Android provides a huge set of 2D-drawing APIs that allow you to create graphics.
- Android has got visually appealing graphics and mind blowing animations.
- The Android framework provides a rich set of powerful APIs for applying animation to UI elements and graphics as well as drawing custom 2D and 3D graphics.

Following are the three animation systems used in Android applications:

1. Property Animation
2. View Animation
3. Drawable Animation

Steps/Method/Coding:

- Open eclipse or android studio and select new android project
- Give project name and select next
- Choose the android version. Choose the lowest android version(Android 2.2) and select next
- Enter the package name. package name must be two word separated by comma and click finish
- Go to package explorer in the left hand side. select our project.
- Go to res folder and select layout. Double click the main.xml file. Don't change anything in layout. Leave as default.

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<RelativeLayout
```

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

`xmlns:tools="http://schemas.android.com/tools"`

`android:layout_width="match_parent"`

`android:layout_height="match_parent"`

`tools:context=".MainActivity">`

`<ImageView`

`android:id="@+id/imageview"`

`android:layout_width="200dp"`

`android:layout_height="200dp"`

`android:layout_centerHorizontal="true"`

`android:layout_marginTop="40dp"`

`android:contentDescription="@string/app_name"`

`android:src="@drawable/gfgimage" />`

`<LinearLayout`

`android:id="@+id/linear1"`

`android:layout_width="match_parent"`

`android:layout_height="wrap_content"`

`android:layout_below="@id/imageview"`

`android:layout_marginTop="30dp"`

`android:orientation="horizontal"`

`android:weightSum="3">`

`<!--To start the blink animation of the image-->`

<Button

```
android:id="@+id/BTNblink"  
style="@style/TextAppearance.AppCompat.Widget.Button"  
android:layout_width="0dp"  
android:layout_height="wrap_content"  
android:layout_margin="10dp"  
android:layout_weight="1"  
android:padding="3dp"  
android:text="@string/blink"  
android:textColor="@color/white" />
```

<!--To start the rotate animation of the image-->

<Button

```
android:id="@+id/BTNrotate"  
style="@style/TextAppearance.AppCompat.Widget.Button"  
android:layout_width="0dp"  
android:layout_height="wrap_content"  
android:layout_margin="10dp"  
android:layout_weight="1"  
android:padding="3dp"  
android:text="@string/clockwise"  
android:textColor="@color/white" />
```

<!--To start the fading animation of the image-->

<Button



```
android:id="@+id/BTNfade"  
  
style="@style/TextAppearance.AppCompat.Widget.Button"  
  
android:layout_width="0dp"  
  
android:layout_height="wrap_content"  
  
android:layout_margin="10dp"  
  
android:layout_weight="1"  
  
android:padding="3dp"  
  
android:text="@string/fade"  
  
android:textColor="@color/white" />
```

```
</LinearLayout>
```

```
<LinearLayout
```

```
    android:id="@+id/linear2"  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:layout_below="@id/linear1"  
    android:layout_marginTop="30dp"  
    android:orientation="horizontal"  
    android:weightSum="3">
```

```
<!--To start the move animation of the image-->
```

```
<Button
```

```
    android:id="@+id/BTNmove"  
    style="@style/TextAppearance.AppCompat.Widget.Button"  
    android:layout_width="0dp"
```

```
android:layout_height="wrap_content"
```

```
android:layout_margin="10dp"
```

```
android:layout_weight="1"
```

```
android:padding="3dp"
```

```
android:text="@string/move"
```

```
android:textColor="@color/white" />
```

```
<!--To start the slide animation of the image-->
```

```
<Button
```

```
    android:id="@+id/BTNslide"
```

```
    style="@style/TextAppearance.AppCompat.Widget.Button"
```

```
    android:layout_width="0dp"
```

```
    android:layout_height="wrap_content"
```

```
    android:layout_margin="10dp"
```

```
    android:layout_weight="1"
```

```
    android:padding="3dp"
```

```
    android:text="@string/slide"
```

```
    android:textColor="@color/white" />
```

```
<!--To start the zoom animation of the image-->
```

```
<Button
```

```
    android:id="@+id/BTNzoom"
```

```
    style="@style/TextAppearance.AppCompat.Widget.Button"
```

```
    android:layout_width="0dp"
```

```
    android:layout_height="wrap_content"
```

```
android:layout_margin="10dp"
```

```
android:layout_weight="1"
```

```
android:padding="3dp"
```

```
android:text="@string/zoom"
```

```
android:textColor="@color/white" />
```

```
</LinearLayout>
```

```
<!--To stop the animation of the image-->
```

```
<Button
```

```
    android:id="@+id/BTNstop"
```

```
    android:layout_width="match_parent"
```

```
    android:layout_height="wrap_content"
```

```
    android:layout_below="@id/linear2"
```

```
    android:layout_marginLeft="30dp"
```

```
    android:layout_marginTop="30dp"
```

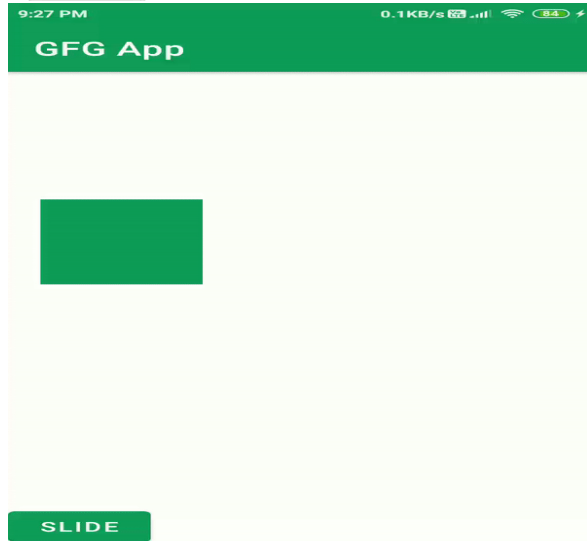
```
    android:layout_marginRight="30dp"
```

```
    android:text="@string/stop_animation" />
```

```
</RelativeLayout>
```

Output screenshot:

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING



Learning Outcomes: Learned Basics of Android, Android Layouts and Widgets and Communication and Media.