Practical No: 01

Application to display different Shapes and colour using graphics

Activity_main.xml:

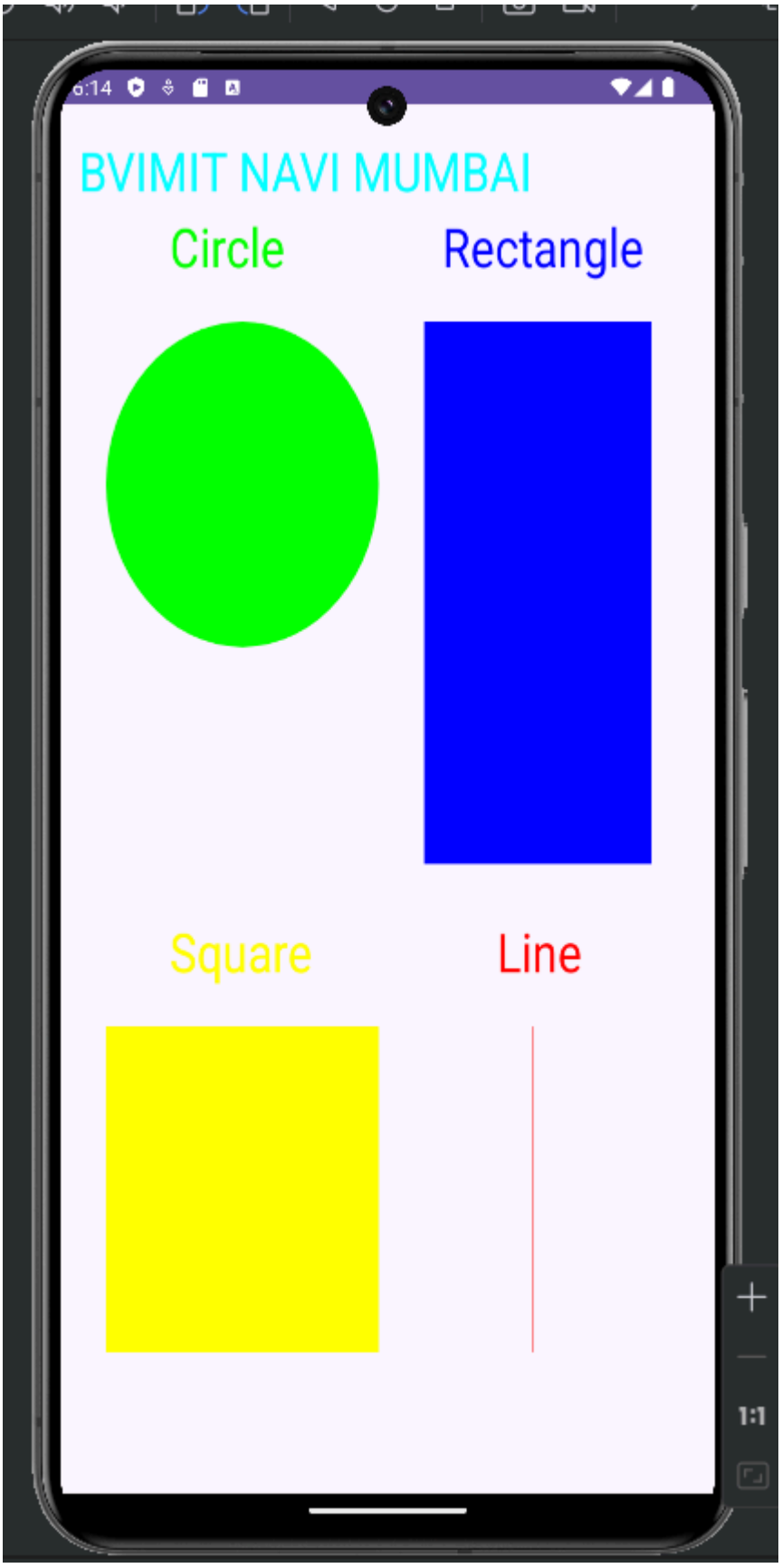
```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <ImageView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:id="@+id/imageView" />
</RelativeLayout>
```

MainActivity.java:

```
package com.example.shapes;
import androidx.appcompat.app.AppCompatActivity;
import android.graphics.Bitmap;
import android.graphics.Canvas;
import android.graphics.Color;
import android.graphics.Paint;
import android.graphics.drawable.BitmapDrawable;
import android.os.Bundle;
import android.view.Menu;
import android.widget.ImageView;
public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        //Creating a Bitmap
        Bitmap bg = Bitmap.createBitmap(720, 1280,
Bitmap.Config.ARGB_8888);
        //Setting the Bitmap as background for the ImageView
        ImageView i = (ImageView) findViewById(R.id.imageView);
```

```
        i.setBackgroundDrawable(new BitmapDrawable(bg));
        //Creating the Canvas Object
        Canvas canvas = new Canvas(bg);
        //Creating the Paint Object and set its color & TextSize
        Paint paint = new Paint();
        paint.setColor(Color.BLUE);
        paint.setTextSize(50);
        //To draw a Rectangle
        canvas.drawText("Rectangle", 420, 150, paint);
        canvas.drawRect(400, 200, 650, 700, paint);
        paint.setColor(Color.GREEN);
        //canvas.rotate(-14);
        //To draw a Circle
        canvas.drawText("Circle", 120, 150, paint);
        canvas.drawCircle(200, 350, 150, paint);
        paint.setColor(Color.YELLOW);
        //To draw a Square
        canvas.drawText("Square", 120, 800, paint);
        canvas.drawRect(50, 850, 350, 1150, paint);
        paint.setColor(Color.RED);
        //To draw a Line
        canvas.drawText("Line", 480, 800, paint);
        canvas.drawLine(520, 850, 520, 1150, paint);
        paint.setColor(Color.CYAN);
        canvas.drawText("BVIMIT NAVI MUMBAI", 20, 80, paint);
        paint.setColor(Color.BLUE);
    }
}
```

Output:



Practical No: 02

Create an android application to implement

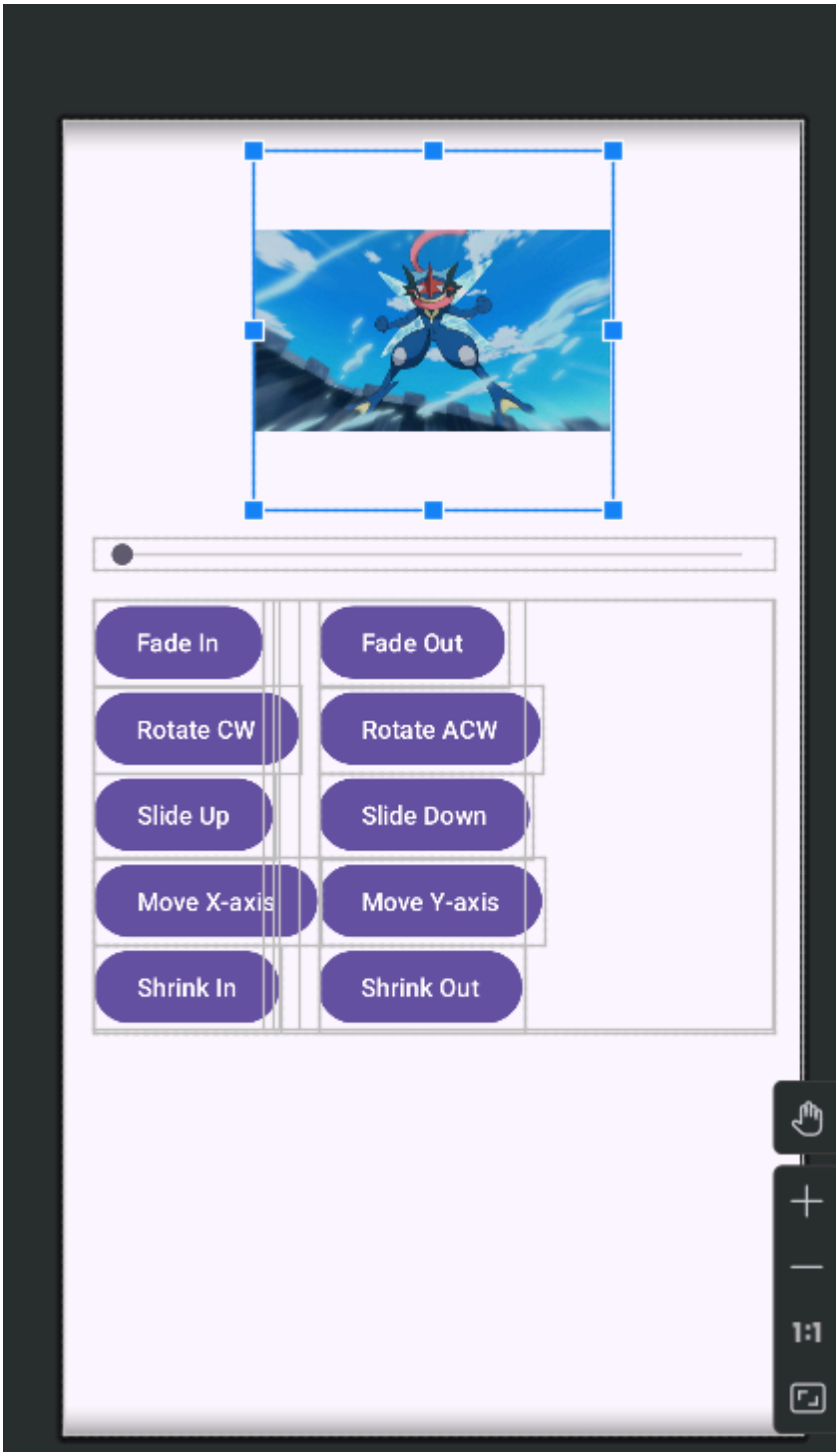
1. **Animation that moves the image from x direction to y direction.**
2. **Scale Animation that expands and shrinks image with respective button click.**
3. **Rotate Animation that rotates images (clockwise and anticlockwise).**
4. **Animation fades (In/Out) image**
5. **Animation slide (Up/Down) image**
6. **To change the brightness of the image using Seek Bar.**

Activity_main.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"
   tools:context=".MainActivity">
   <ImageView
      android:id="@+id/image1"
      android:layout_width="150dp"
      android:layout_height="150dp"
      android:layout_gravity="center"
      android:src="@drawable/pic5"></ImageView>
   <LinearLayout
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:orientation="horizontal">
      <Button
         android:id="@+id/fadein"
         android:layout_width="200dp"
         android:layout_height="wrap_content"
         android:text="Fade In" />
      <Button
         android:id="@+id/fadeout"
```

```
        android:layout_width="200dp"
        android:layout_height="wrap_content"
        android:text="fade Out"/>
</LinearLayout>
<LinearLayout
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:orientation="horizontal">
    <Button
        android:id="@+id/clockwise"
        android:layout_width="200dp"
        android:layout_height="match_parent"
        android:text="Rotation ClockWise" />
    <Button
        android:id="@+id/anticlockwise"
        android:layout_width="200dp"
        android:layout_height="55dp"
        android:text="Rotation Anticlockwise" />
</LinearLayout>
<LinearLayout
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:orientation="horizontal">
    <Button
        android:id="@+id/slideup"
        android:layout_width="200dp"
        android:layout_height="wrap_content"
        android:text="SLIDEUP" />
    <Button
        android:id="@+id/slidedown"
        android:layout_width="200dp"
        android:layout_height="wrap_content"
        android:text="SLIDEDOWN" />
</LinearLayout>
<LinearLayout
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
```

```
        android:orientation="horizontal">
        <Button
            android:id="@+id/horizontal"
            android:layout_width="200dp"
            android:layout_height="wrap_content"
            android:text="X-Axis" />
        <Button
            android:id="@+id/vertical"
            android:layout_width="200dp"
            android:layout_height="wrap_content"
            android:text="Y-Axis" />
    </LinearLayout>
    <LinearLayout
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:orientation="horizontal">
        <Button
            android:id="@+id/shrinkin"
            android:layout_width="200dp"
            android:layout_height="wrap_content"
            android:text="Shrink In" />
        <Button
            android:id="@+id/shrinkout"
            android:layout_width="200dp"
            android:layout_height="wrap_content"
            android:text="Shrink Out" />
    </LinearLayout>
    <SeekBar
        android:id="@+id/seekbar1"
        android:layout_width="match_parent"
        android:layout_height="64dp" />
</LinearLayout>
```



Faidein.xml

```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android">
    <alpha
        android:duration="2000"
        android:fromAlpha="0.1"
        android:toAlpha="1.0"/>
```

```
   <alpha
      android:startOffset="3000"
      android:fromAlpha="1"
      android:toAlpha="0"
      android:duration="1000" >
   </alpha>
</set>
```

Faidout.xml

```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android">
   <alpha
      android:duration="3000"
      android:fromAlpha="1.0"
      android:toAlpha="0.1"/>
</set>
```

Hori.xml

```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android">
   <translate android:fromXDelta="0%"
      android:toXDelta="75%"
      android:duration="3000"/>
</set>
```

Zoom_out.xml

```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android">
   <scale
      android:duration="2500"
      android:fromXScale="1.0"
      android:fromYScale="1.0"
      android:pivotX="50%"
      android:pivotY="50%"
      android:toXScale=".2"
      android:toYScale=".2" />
</set>
```

Ver.xml

```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android">
   <translate android:fromYDelta="0%"
      android:toYDelta="75%"
      android:duration="3000"/>
</set>
```

Zoom_in.xml

```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android">
   <scale
      xmlns:android="http://schemas.android.com/apk/res/android"
      android:duration="1000"
      android:fromXScale="2"
      android:fromYScale="2"
      android:pivotX="50%"
      android:pivotY="50%"
      android:toXScale="4"
      android:toYScale="4" >
   </scale>
</set>
```

Anticlock.xml

```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android">
   <rotate
      android:fromDegrees="360"
      android:toDegrees="0"
      android:pivotX="50%"
      android:pivotY="50%"
      android:duration="3000"/>
</set>
```

Clockwise.xml

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

```
<set xmlns:android="http://schemas.android.com/apk/res/android">
   <rotate
      android:fromDegrees="360"
      android:toDegrees="0"
      android:pivotX="50%"
      android:pivotY="50%"
      android:duration="3000"/>
</set>
```

Slideup.xml

```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android">
   <scale android:fromXScale="1.0"
      android:fromYScale="1.0"
      android:toXScale="1.0"
      android:toYScale="0.0"
      android:duration="3000"/>
</set>
```

Slidedown.xml

```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android">
   <scale android:fromXScale="1.0"
      android:fromYScale="0.0"
      android:toXScale="1.0"
      android:toYScale="1.0"
      android:duration="3000"/>
</set>
```

MainActivity.java:

```
package com.example.animation;
import androidx.appcompat.app.AppCompatActivity;
import android.graphics.Bitmap;
import android.graphics.BitmapFactory;
import android.graphics.Canvas;
import android.graphics.ColorMatrix;
import android.graphics.ColorMatrixColorFilter;
```

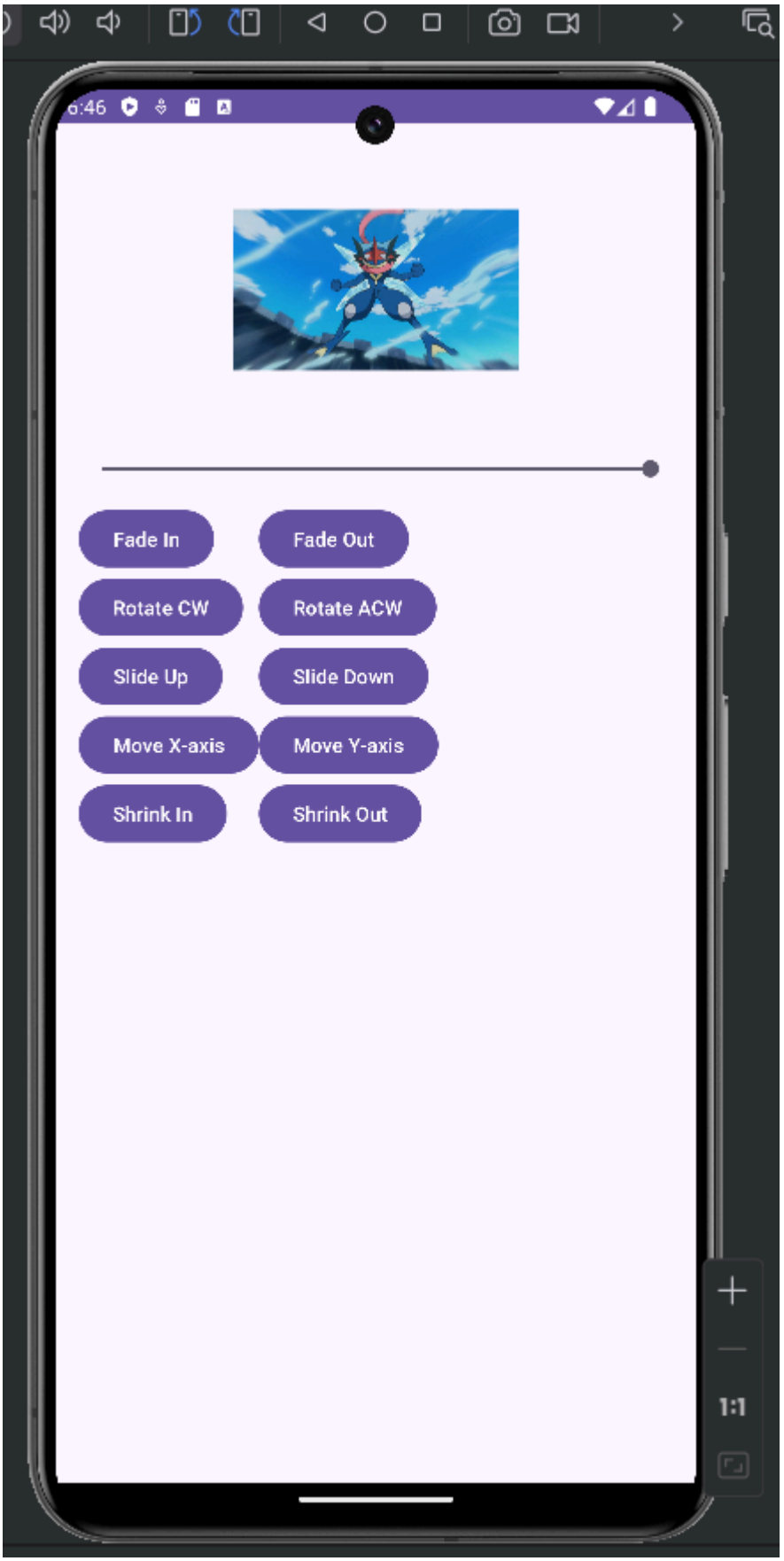
```
import android.graphics.Paint;
import android.os.Bundle;
import android.view.View;
import android.view.animation.Animation;
import android.view.animation.AnimationUtils;
import android.widget.Button;
import android.widget.ImageView;
import android.widget.SeekBar;
import java.io.InputStream;
public class MainActivity extends AppCompatActivity implements
View.OnClickListener, SeekBar.OnSeekBarChangeListener {
   public ImageView im1;
   public Button
fadein,fadeout,clockwise,anticlock,hori,ver,slideup,slidedown,shrinkin,shrinkou
t;
   SeekBar bright;
   @Override
   protected void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_main);
      im1=findViewById(R.id.image1);
      fadein=findViewById(R.id.fadein);
      fadeout=findViewById(R.id.fadeout);
      clockwise=findViewById(R.id.clockwise);
      anticlock=findViewById(R.id.anticlockwise);
      hori=findViewById(R.id.horizontal);
      ver=findViewById(R.id.vertical);
      slideup=findViewById(R.id.slideup);
      slidedown=findViewById(R.id.slidedown);
      bright=findViewById(R.id.seekbar1);
      shrinkin=findViewById(R.id.shrinkin);
      shrinkout=findViewById(R.id.shrinkout);
      fadein.setOnClickListener(this);
      fadeout.setOnClickListener(this);
      clockwise.setOnClickListener(this);
      anticlock.setOnClickListener(this);
      hori.setOnClickListener(this);
```

```
        ver.setOnClickListener(this);
        slideup.setOnClickListener(this);
        slidedown.setOnClickListener(this);
        bright.setOnSeekBarChangeListener(this);
        shrinkin.setOnClickListener(this);
        shrinkout.setOnClickListener(this);
    }
    @Override
    public void onClick(View v) {
        switch (v.getId())
        {
            case R.id.fadein:
                Animation animation1 =
AnimationUtils.loadAnimation(getApplicationContext(), R.anim.fadein);
                im1.startAnimation(animation1);
                break;
            case R.id.fadeout:
                Animation animation2 =
AnimationUtils.loadAnimation(getApplicationContext(), R.anim.fadeout);
                im1.startAnimation(animation2);
                break;
            case R.id.clockwise:
                Animation animation3 =
AnimationUtils.loadAnimation(getApplicationContext(), R.anim.clockwise);
                im1.startAnimation(animation3);
                break;
            case R.id.anticlockwise:
                Animation animation4 =
AnimationUtils.loadAnimation(getApplicationContext(), R.anim.anticlock);
                im1.startAnimation(animation4);
                break;
            case R.id.horizontal:
                Animation animation5 =
AnimationUtils.loadAnimation(getApplicationContext(), R.anim.hori);
                im1.startAnimation(animation5);
                break;
            case R.id.vertical:
```

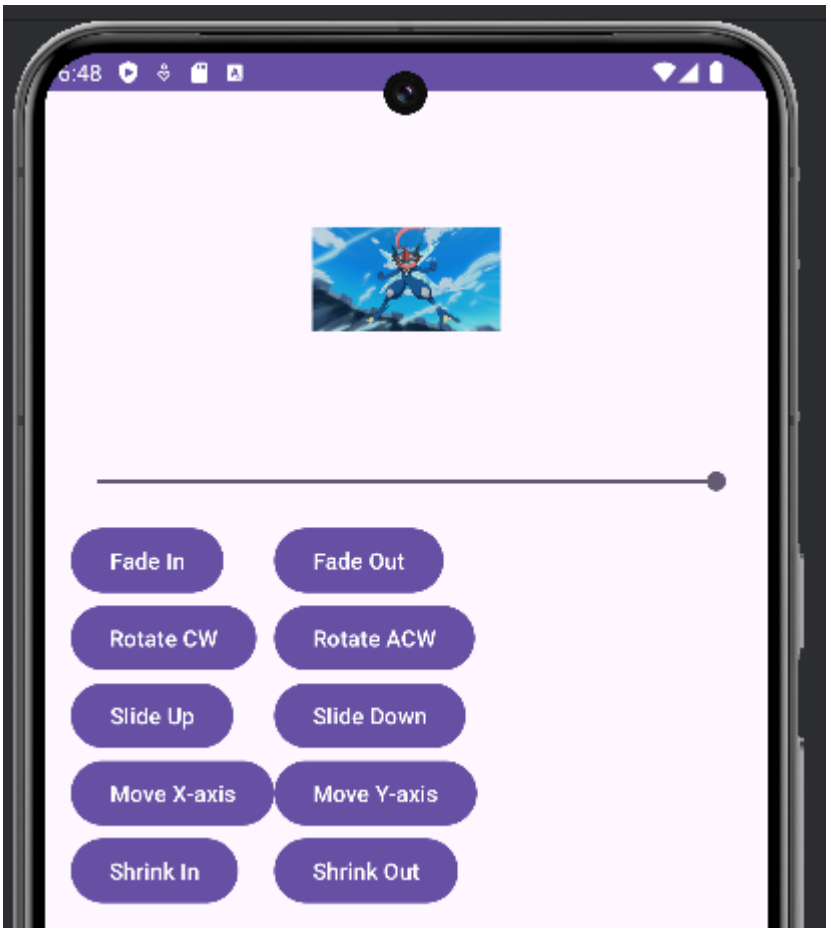
```
            Animation animation6 =
AnimationUtils.loadAnimation(getApplicationContext(), R.anim.ver);
            im1.startAnimation(animation6);
            break;
        case R.id.slideup:
            Animation animation7 =
AnimationUtils.loadAnimation(getApplicationContext(), R.anim.slideup);
            im1.startAnimation(animation7);
            break;
        case R.id.slidedown:
            Animation animation8 =
AnimationUtils.loadAnimation(getApplicationContext(), R.anim.slidedown);
            im1.startAnimation(animation8);
            break;
        case R.id.shrinkin:
            Animation animation9 =
AnimationUtils.loadAnimation(getApplicationContext(), R.anim.zoom_in);
            im1.startAnimation(animation9);
            break;
        case R.id.shrinkout:
            Animation animation10 =
AnimationUtils.loadAnimation(getApplicationContext(), R.anim.zoom_out);
            im1.startAnimation(animation10);
            break;
    }
  }
  @Override
  public void onProgressChanged(SeekBar seekBar, int i, boolean b) {
    InputStream is=this.getResources().openRawResource(R.drawable.pic5);
    Bitmap bitmap= BitmapFactory.decodeStream(is);
    im1.setImageBitmap(increaseBrightness(bitmap,(float) i/100f,1));
  }
  private Bitmap increaseBrightness(Bitmap bmp, float contrast ,float
brightness) {
    ColorMatrix cm=new ColorMatrix(new float[]
        {
            contrast,0,0,0,brightness,
```

```
                0,contrast,0,0,brightness,
                0,0,contrast,0,brightness,
                0,0,0,1,0
            });
        Bitmap
bitmap=Bitmap.createBitmap(bmp.getWidth(),bmp.getHeight(),bmp.getConfig(
));
        Canvas canvas=new Canvas(bitmap);
        Paint paint=new Paint();
        paint.setColorFilter(new ColorMatrixColorFilter(cm));
        canvas.drawBitmap(bmp,0,0,paint);
        return bitmap;
    }
    @Override
    public void onStartTrackingTouch(SeekBar seekBar) {
    }
    @Override
    public void onStopTrackingTouch(SeekBar seekBar) {
    }
}
```

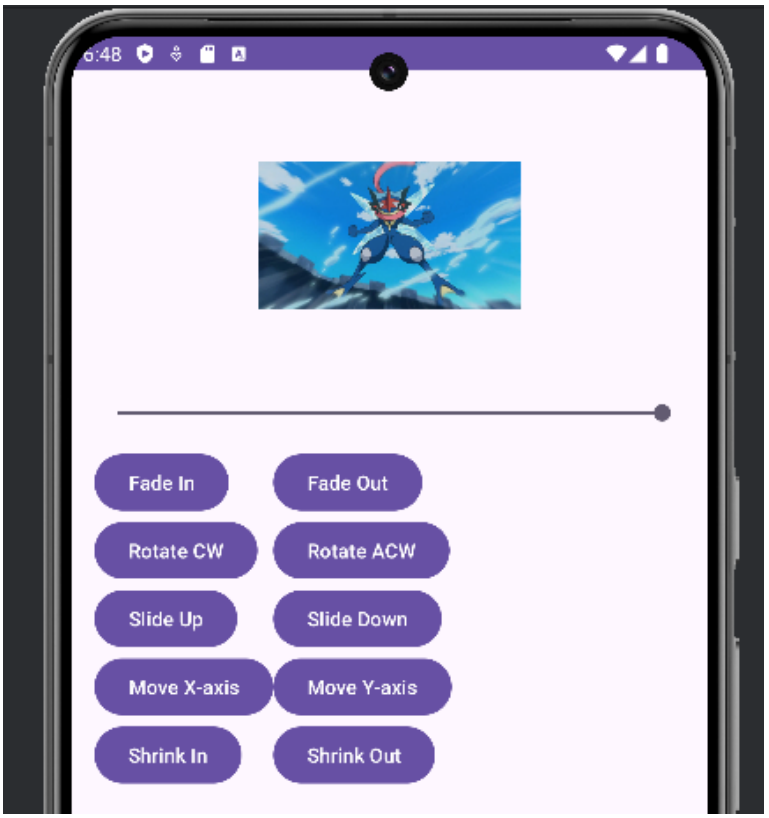
Output:


6:46
Fade In
Fade Out
Rotate CW
Rotate ACW
Slide Up
Slide Down
Move X-axis
Move Y-axis
Shrink In
Shrink Out
1:1

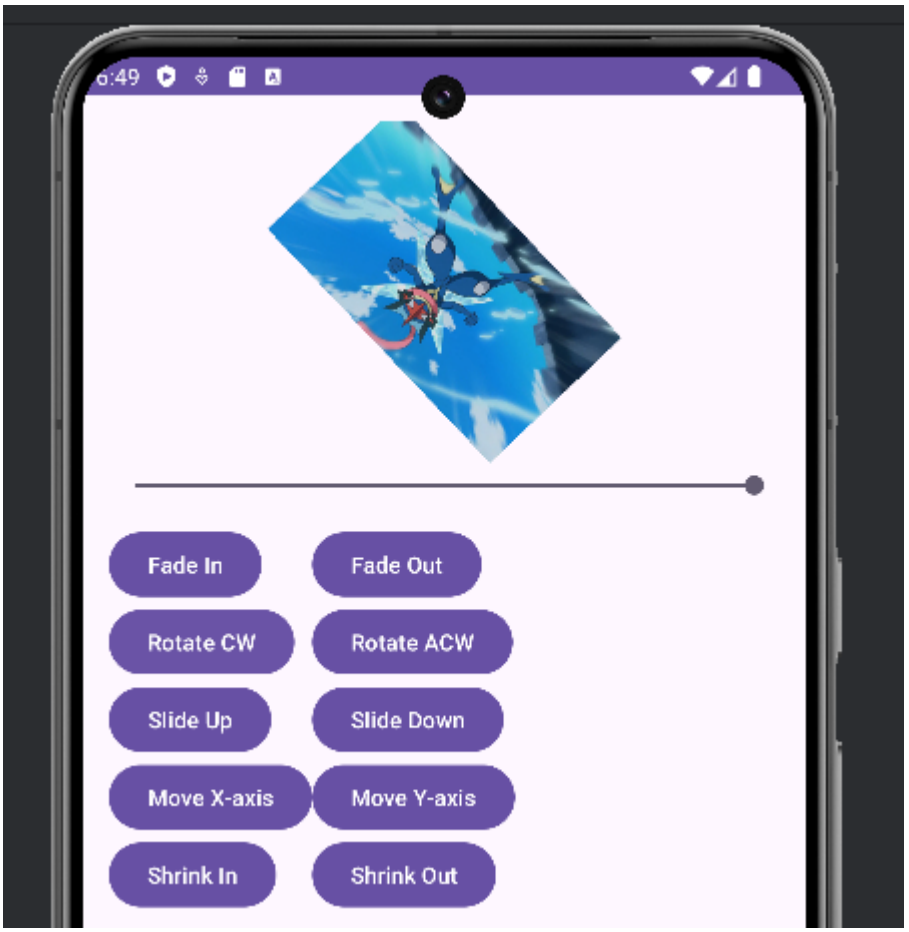
Shrinkin:



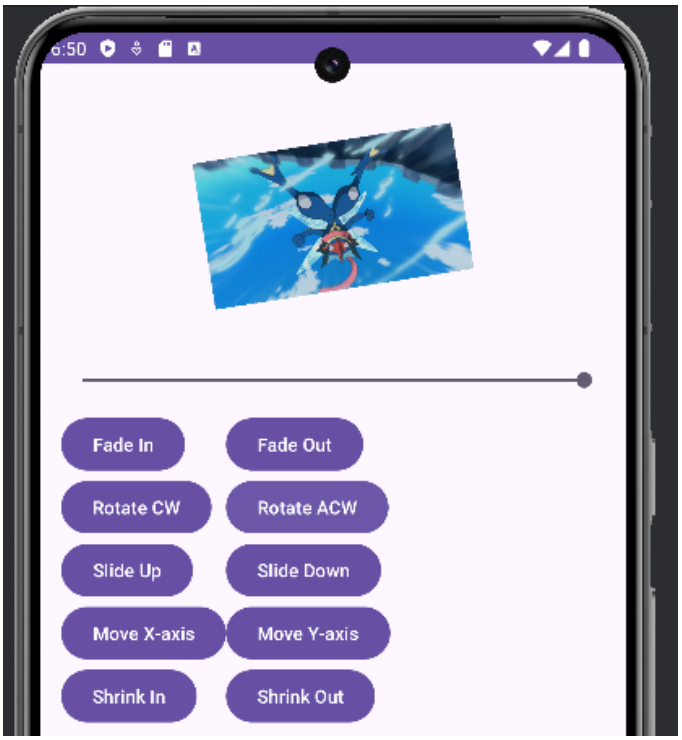
Shrink out:



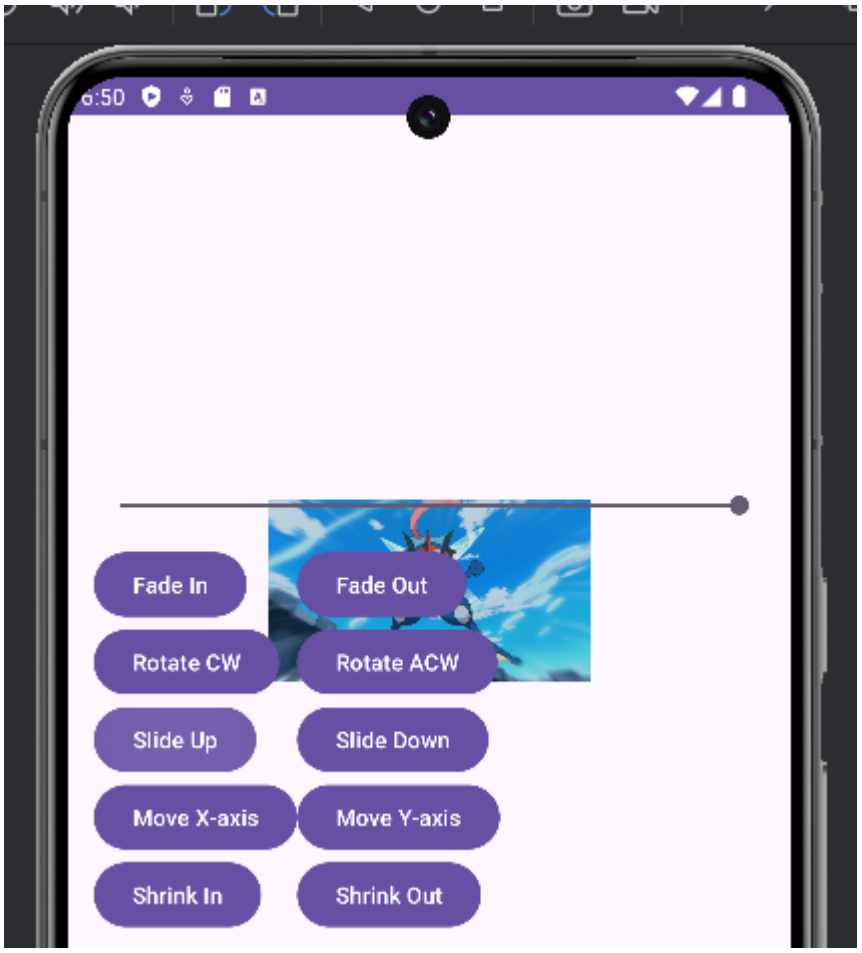
Rotate Clockwise:



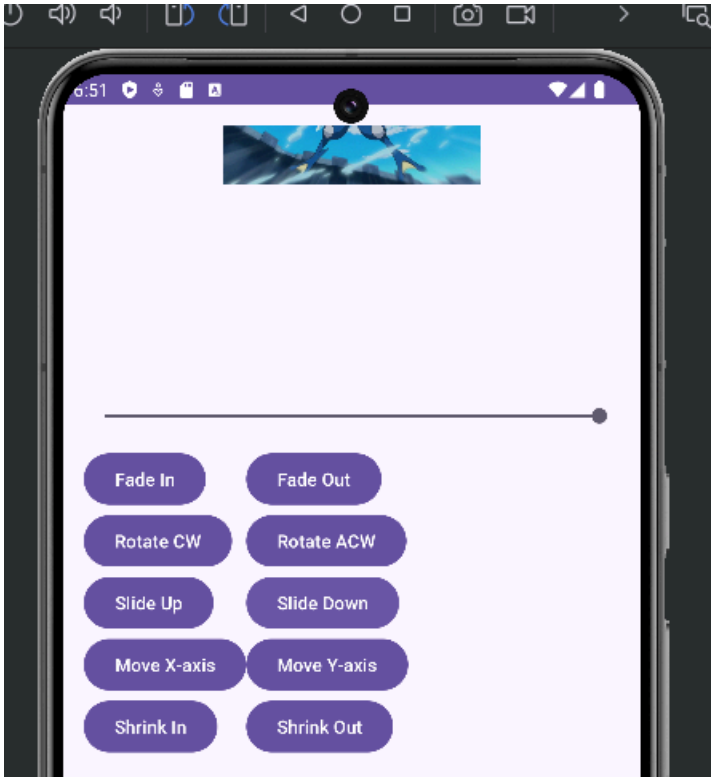
Rotate AntiClockwise:



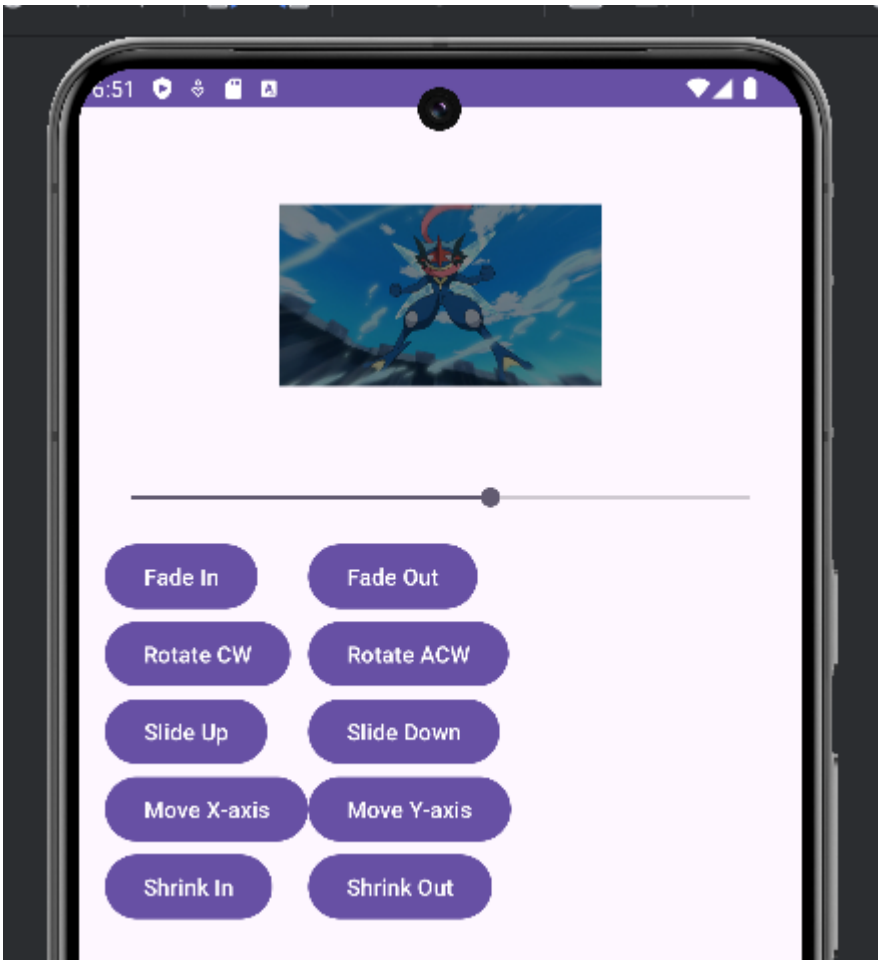
Slide Up:

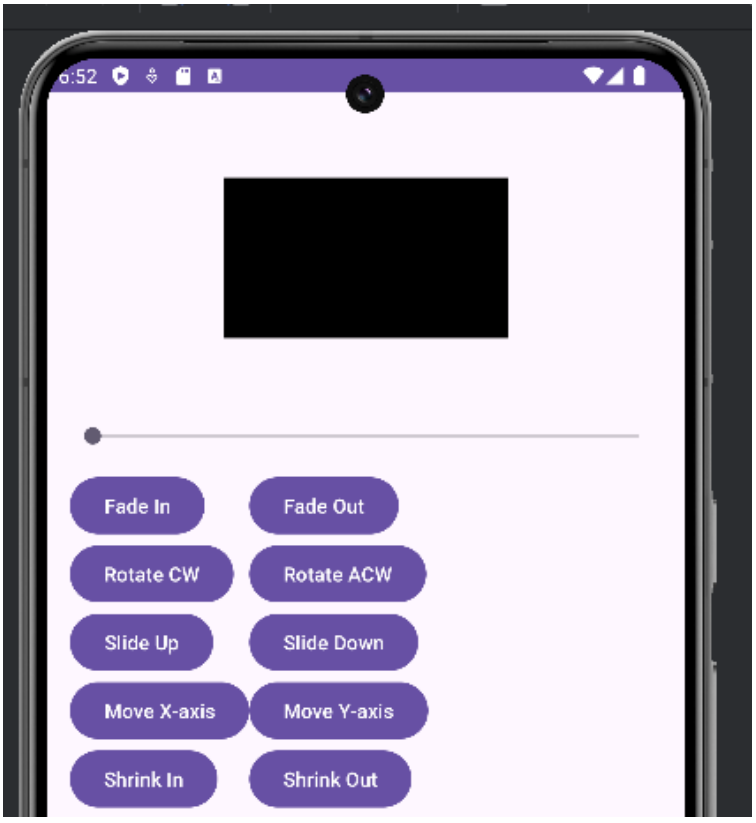


Slide Down:



Brightness:


Fade In
Fade Out
Rotate CW
Rotate ACW
Slide Up
Slide Down
Move X-axis
Move Y-axis
Shrink In
Shrink Out


Fade In
Fade Out
Rotate CW
Rotate ACW
Slide Up
Slide Down
Move X-axis
Move Y-axis
Shrink In
Shrink Out

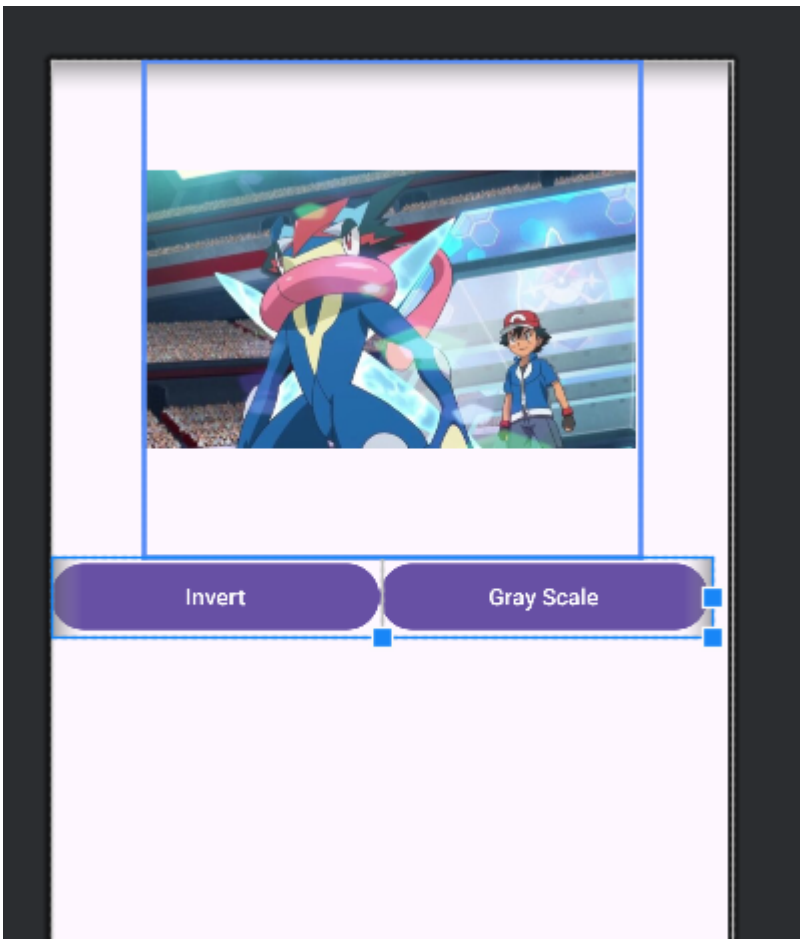
Practical No: 03

Create an android application to invert the image and change the image into grayscale image.

Activity_main.xml:

MainActivity.java:

```
<?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"
    tools:context=".MainActivity">
    <ImageView
        android:id="@+id/image1"
        android:layout_width="300dp"
        android:layout_height="300dp"
        android:layout_gravity="center"
        android:src="@drawable/image">
    </ImageView>
    <LinearLayout
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:orientation="horizontal">
        <Button
            android:id="@+id/invertbtn"
            android:layout_width="200dp"
            android:layout_height="wrap_content"
            android:text="Invert" />
        <Button
            android:id="@+id/grayscalebtn"
            android:layout_width="200dp"
            android:layout_height="wrap_content"
            android:text="Gray Scale" />
    </LinearLayout>
</LinearLayout>
```



MainActivity.java:

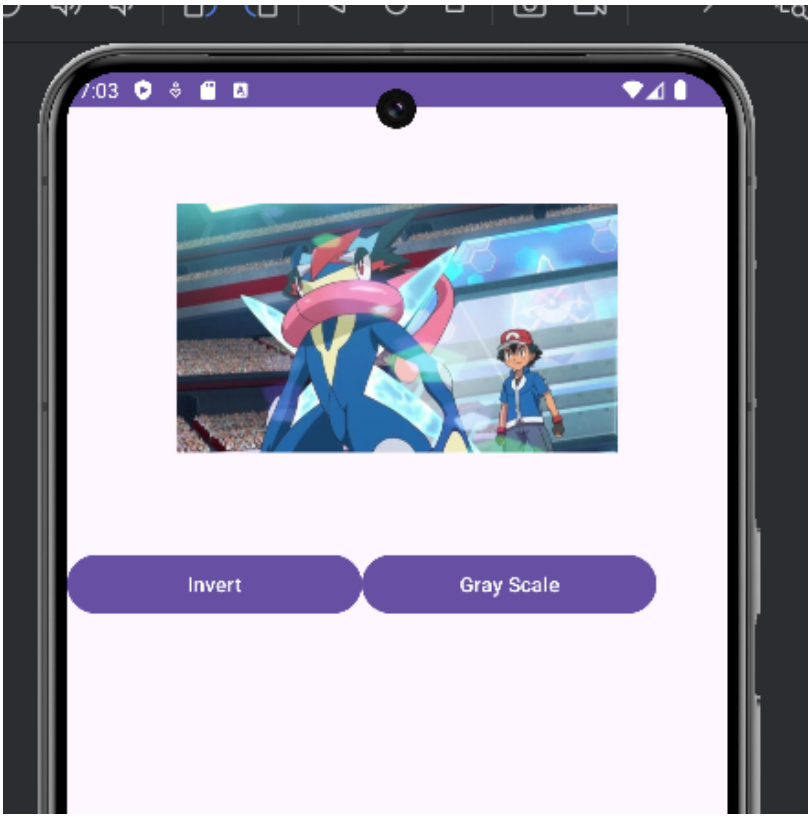
```
package com.example.imagechange;
import androidx.appcompat.app.AppCompatActivity;
import android.graphics.Bitmap;
import android.graphics.Color;
import android.graphics.drawable.BitmapDrawable;
import android.graphics.drawable.Drawable;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.ImageView;
public class MainActivity extends AppCompatActivity {
    ImageView iv ;
    Button invertbtn , grayscalebtn;
    Drawable d1;
    Bitmap bitimg;
    @Override
```

```
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    iv = findViewById(R.id.image1);
    invertbtn = findViewById(R.id.invertbtn);
    grayscalebtn =findViewById(R.id.grayscalebtn);
    //invert image
    invertbtn.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            //get image
            d1=getResources().getDrawable(R.drawable.image);
            bitimg=((BitmapDrawable)d1).getBitmap();
            //calling method
            Bitmap newimg=invertImage(bitimg);
            iv.setImageBitmap(newimg);
        }
    });
    grayscalebtn.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            d1 = getResources().getDrawable(R.drawable.image);
            bitimg = ((BitmapDrawable)d1).getBitmap();
            //calling method
            Bitmap newimg = grayScaleImage(bitimg);
            iv.setImageBitmap(newimg);
        }
    });
}
public static Bitmap invertImage(Bitmap org)
{
    //create new bitmap with same attributes like H,W
    Bitmap final_img =
          Bitmap.createBitmap(org.getWidth(),org.getHeight(),org.getConfig());
    int R,G,B,A;
    int pixelcolor;
    //image size
```

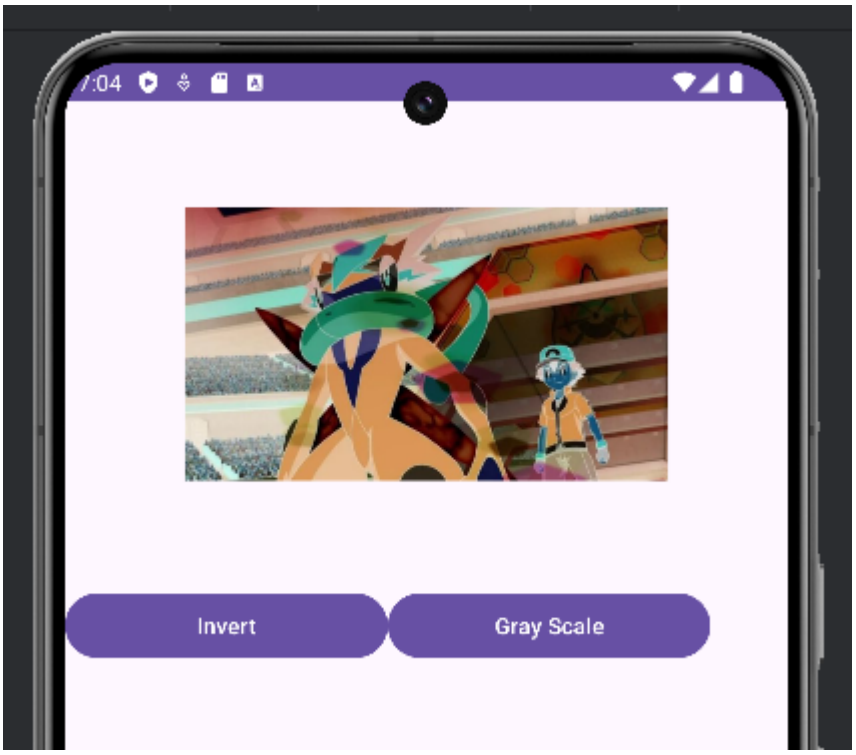
```
        int h = org.getHeight();
        int w= org.getWidth();
        //scan through every pixel
        for(int y=0 ; y<h; y++)
        {
           for(int x=0; x<w; x++)
           {
              //get one pixel
              pixelcolor = org.getPixel(x,y);
              //saving the alpha channel
              A = Color.alpha(pixelcolor);
              //inverting byte for each R,G,B channel
              R = 255 - Color.red(pixelcolor);
              G = 255 - Color.green(pixelcolor);
              B = 255 - Color.blue(pixelcolor);
              //set newly inverted pixel to final output img
              final_img.setPixel(x,y,Color.argb(A,R,G,B));
           }
        }
        //return final bitmap
        return final_img;
     }
     //
     public static Bitmap grayScaleImage(Bitmap org)
     {
        Bitmap final_img =
Bitmap.createBitmap(org.getWidth(),org.getHeight(),org.getConfig());
        //pixel information
        int R,G,B,A;
        int pixelcolor;
        ///get image size
        int h = org.getHeight();
        int w= org.getWidth();
        //scan thriugh every singal pixel
        for(int y=0 ; y<h; y++)
        {
           for(int x=0; x<w; x++)
```

```
            {
                //get onr pixel
                pixelcolor = org.getPixel(x,y);
                //retrieve color of all channels
                A = Color.alpha(pixelcolor);
                R = Color.red(pixelcolor);
                G = Color.green(pixelcolor);
                B = Color.blue(pixelcolor);
                //take conversion up to one single value
                R = (R+G+B)/3;
                G = R;
                B = R;
                //set new pixel color to o/p bitmap
                final_img.setPixel(x,y,Color.argb(A,R,G,B));
            }
        }
        return final_img;
    }
}
```

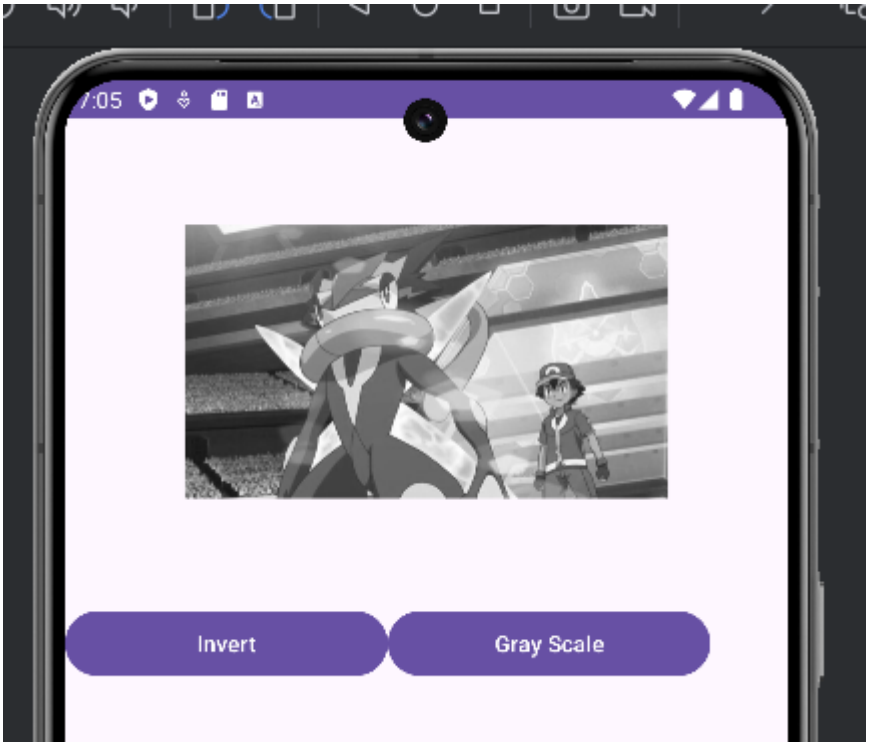
Output:



Invert:



GrayScale:

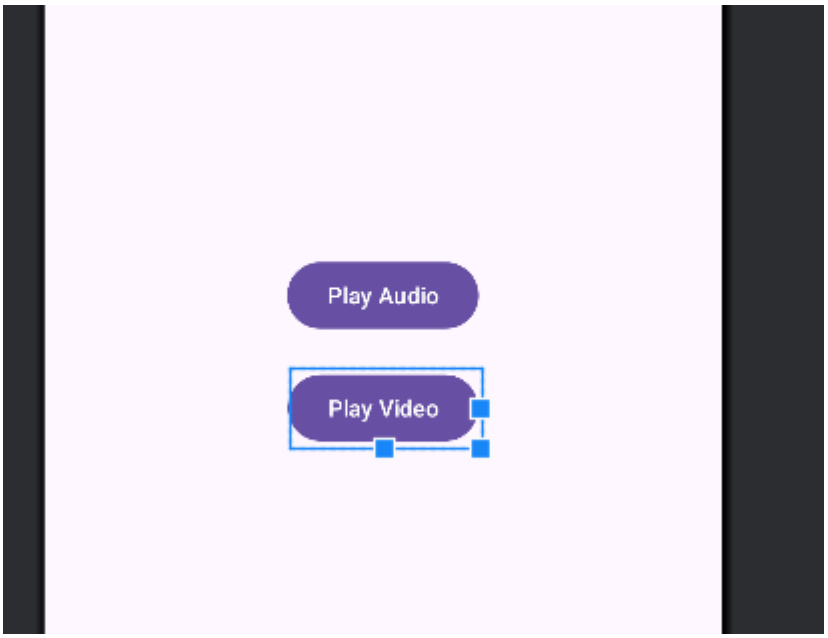


Practical No: 04

Create an android application to play audio and video.

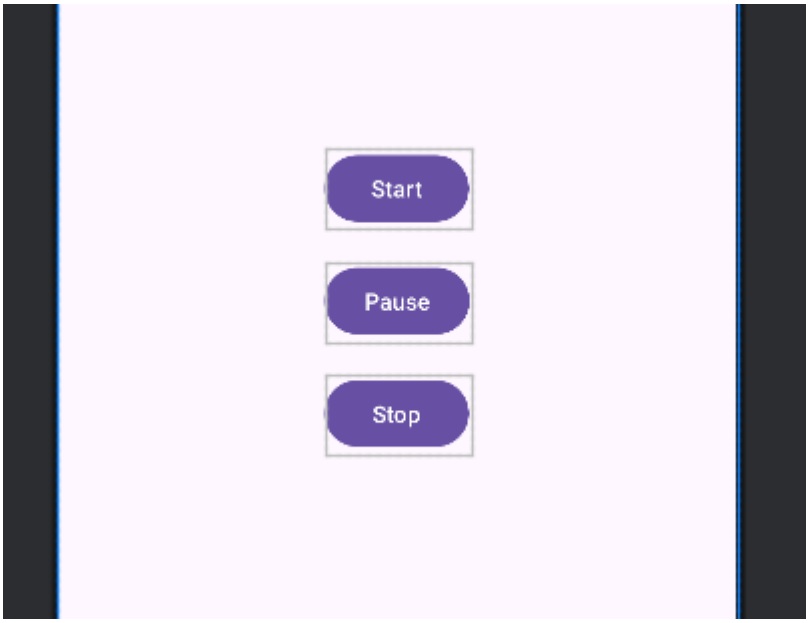
Activity_main.xml:

```
<?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:gravity="center">
    <Button
        android:id="@+id/button_audio"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Play Audio" />
    <Button
        android:id="@+id/button_video"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Play Video"
        android:layout_marginTop="20dp"/>
</LinearLayout>
```



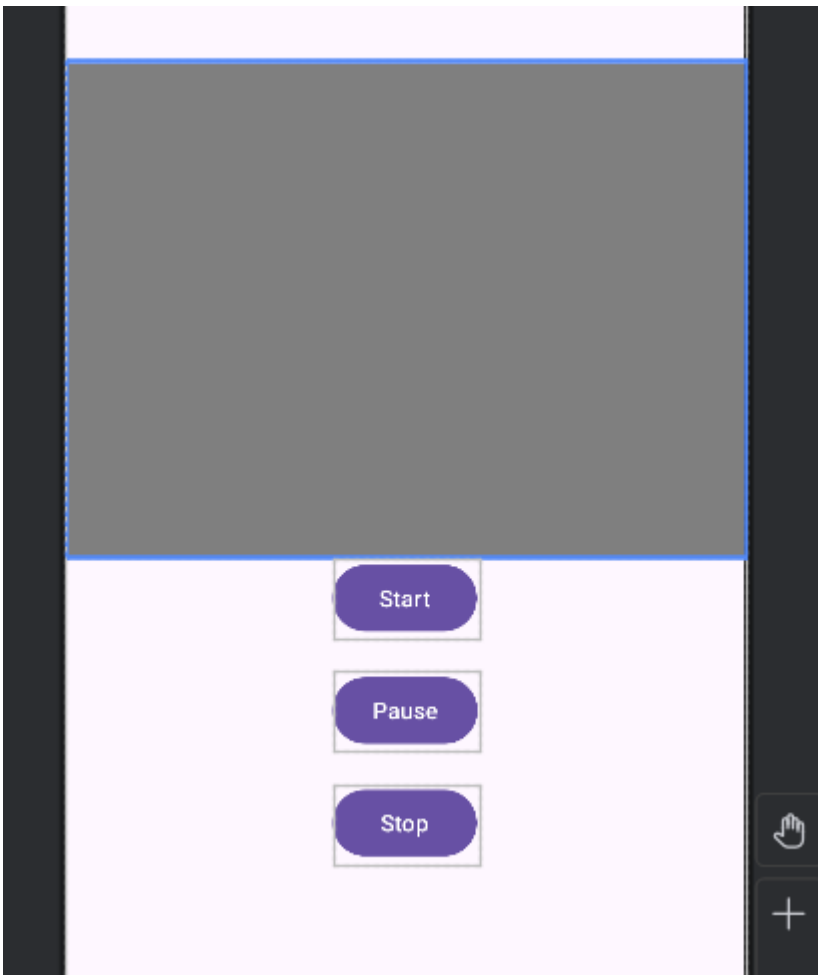
Activity_audio.xml:

```
<?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:gravity="center">
    <Button
        android:id="@+id/button_start"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Start" />
    <Button
        android:id="@+id/button_pause"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Pause"
        android:layout_marginTop="20dp"/>
    <Button
        android:id="@+id/button_stop"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Stop"
        android:layout_marginTop="20dp"/>
</LinearLayout>
```



Activity_video.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:gravity="center">
    <VideoView
        android:id="@+id/video_view"
        android:layout_width="match_parent"
        android:layout_height="300dp"
        android:layout_gravity="center"/>
    <Button
        android:id="@+id/button_start_video"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Start" />

    <Button
        android:id="@+id/button_pause_video"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Pause"
        android:layout_marginTop="20dp"/>
    <Button
        android:id="@+id/button_stop_video"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Stop"
        android:layout_marginTop="20dp"/>
</LinearLayout>
```



MainActivity.java:

```
package com.example.audioandvideo;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import androidx.appcompat.app.AppCompatActivity;
import android.widget.Button;
public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Button playAudioButton = findViewById(R.id.button_audio);
        Button playVideoButton = findViewById(R.id.button_video);
        // Navigate to AudioActivity
        playAudioButton.setOnClickListener(new View.OnClickListener() {
```

```
        @Override
        public void onClick(View v) {
            Intent intent = new Intent(MainActivity.this, AudioActivity.class);
            startActivity(intent);
        }
    });
    // Navigate to VideoActivity
    playVideoButton.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            Intent intent = new Intent(MainActivity.this, VideoActivity.class);
            startActivity(intent);
        }
    });
  }
}
```

AudioActivity.java:

```
package com.example.audioandvideo;
import android.media.MediaPlayer;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;
public class AudioActivity extends AppCompatActivity {
  MediaPlayer mediaPlayer;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_audio);

    Button startButton = findViewById(R.id.button_start);
    Button pauseButton = findViewById(R.id.button_pause);
    Button stopButton = findViewById(R.id.button_stop);
    mediaPlayer = MediaPlayer.create(this, R.raw.audio); // sample_audio is in
the res/raw folder
```

```
        // Start audio
        startButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                if (!mediaPlayer.isPlaying()) {
                    mediaPlayer.start();
                    Toast.makeText(AudioActivity.this, "Audio Started",
Toast.LENGTH_SHORT).show();
                }
            }
        });
        // Pause audio
        pauseButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                if (mediaPlayer.isPlaying()) {
                    mediaPlayer.pause();
                    Toast.makeText(AudioActivity.this, "Audio Paused",
Toast.LENGTH_SHORT).show();
                }
            }
        });
        // Stop audio
        stopButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                if (mediaPlayer.isPlaying()) {
                    mediaPlayer.stop();
                    mediaPlayer = MediaPlayer.create(AudioActivity.this,
R.raw.audio); // Reset MediaPlayer
                    Toast.makeText(AudioActivity.this, "Audio Stopped",
Toast.LENGTH_SHORT).show();
                }
            }
        });
    }
    @Override
```

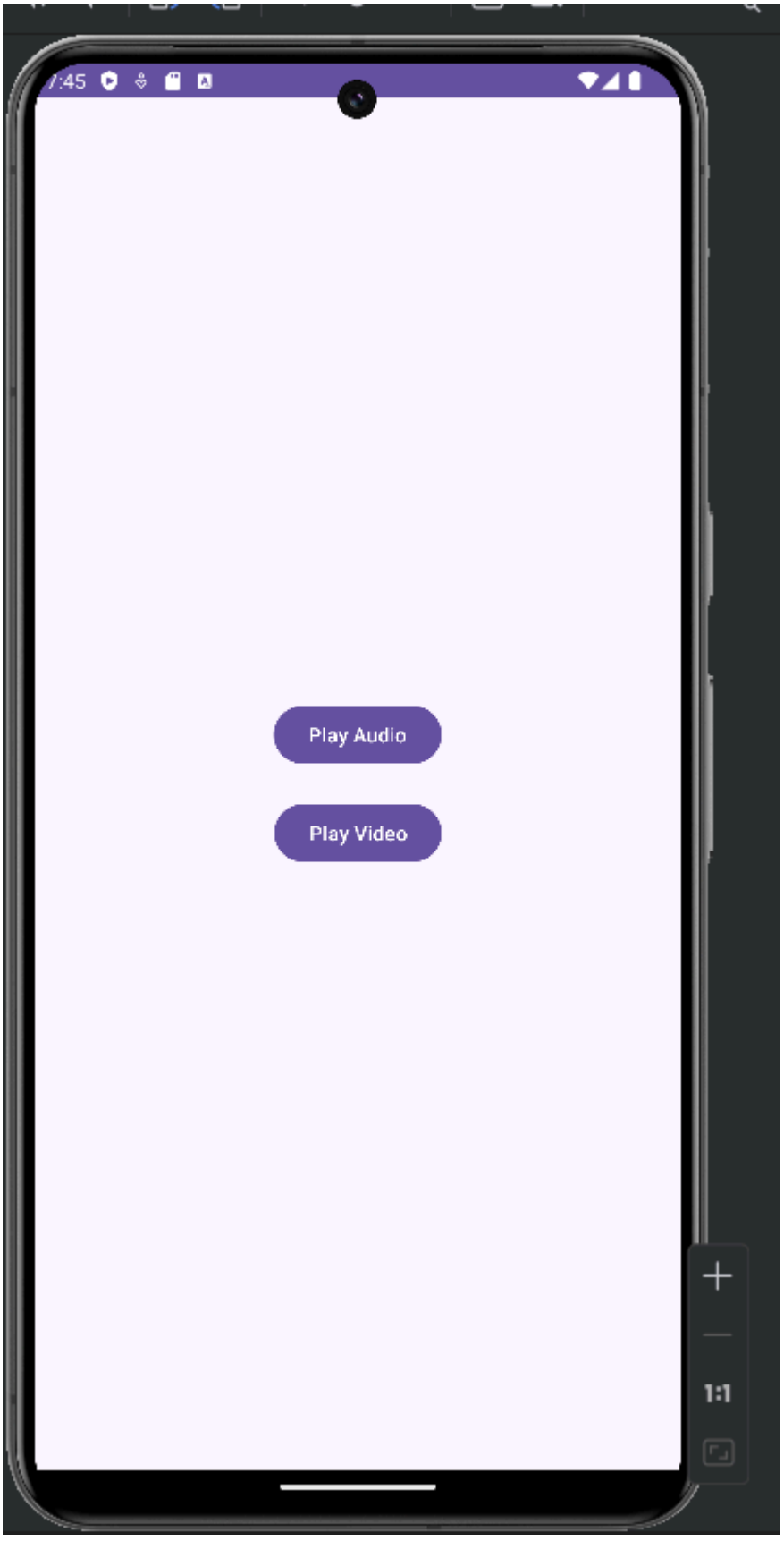
```
    protected void onDestroy() {
        if (mediaPlayer != null) {
            mediaPlayer.release();
            mediaPlayer = null;
        }
        super.onDestroy();
    }
}
```

VideoActivity.java:

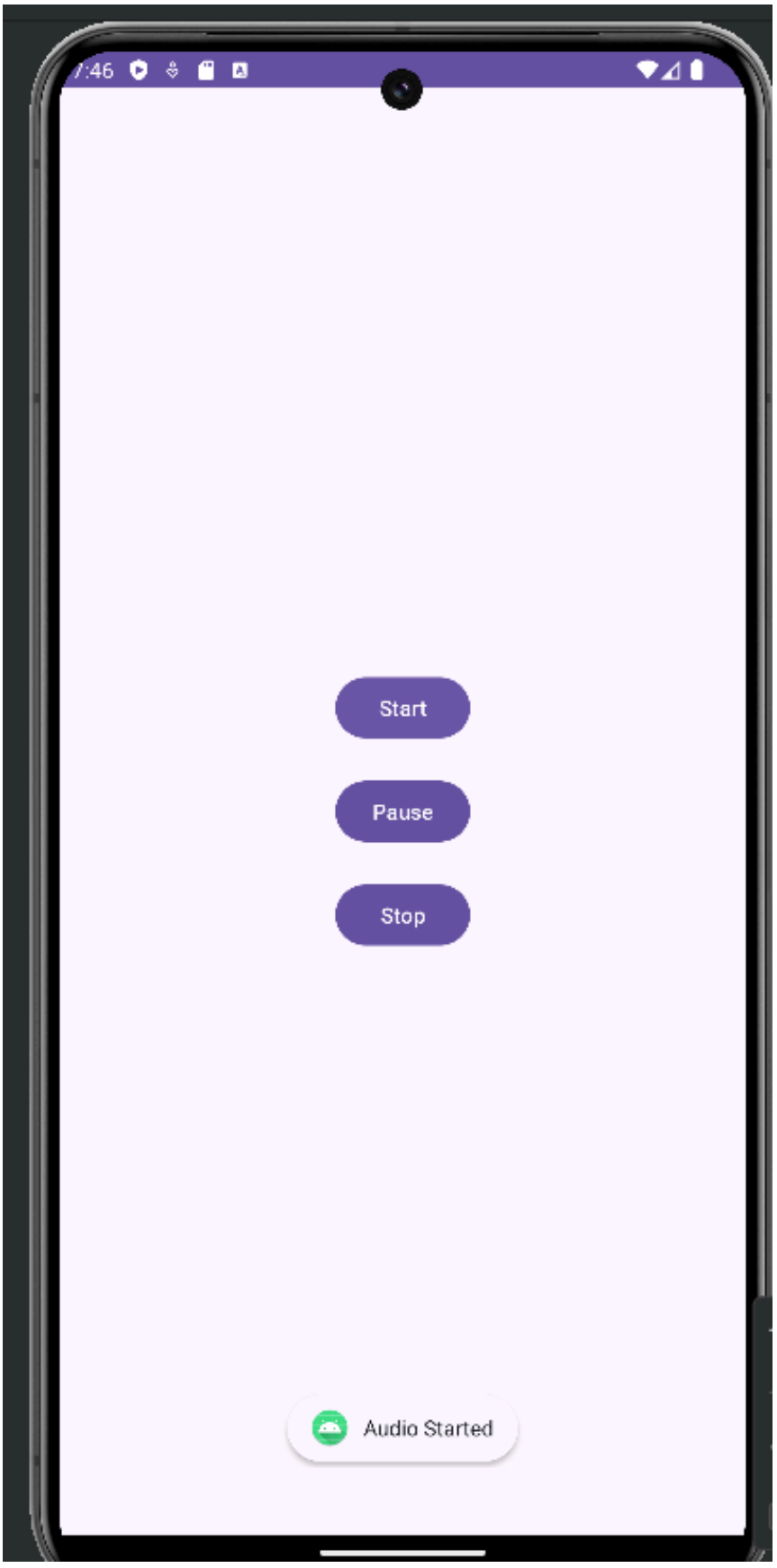
```
package com.example.audioandvideo;
import android.annotation.SuppressLint;
import android.media.MediaPlayer;
import android.net.Uri;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.Toast;
import android.widget.VideoView;
import androidx.appcompat.app.AppCompatActivity;
public class VideoActivity extends AppCompatActivity {
    VideoView videoView;
    Button startButton, pauseButton, stopButton;
    @SuppressLint("MissingInflatedId")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_video);
        videoView = findViewById(R.id.video_view);
        startButton = findViewById(R.id.button_start_video);
        pauseButton = findViewById(R.id.button_pause_video);
        stopButton = findViewById(R.id.button_stop_video);

        Uri videoUri = Uri.parse("android.resource://" + getPackageName() + "/" +
R.raw.video);
        videoView.setVideoURI(videoUri);
        // Start video
```

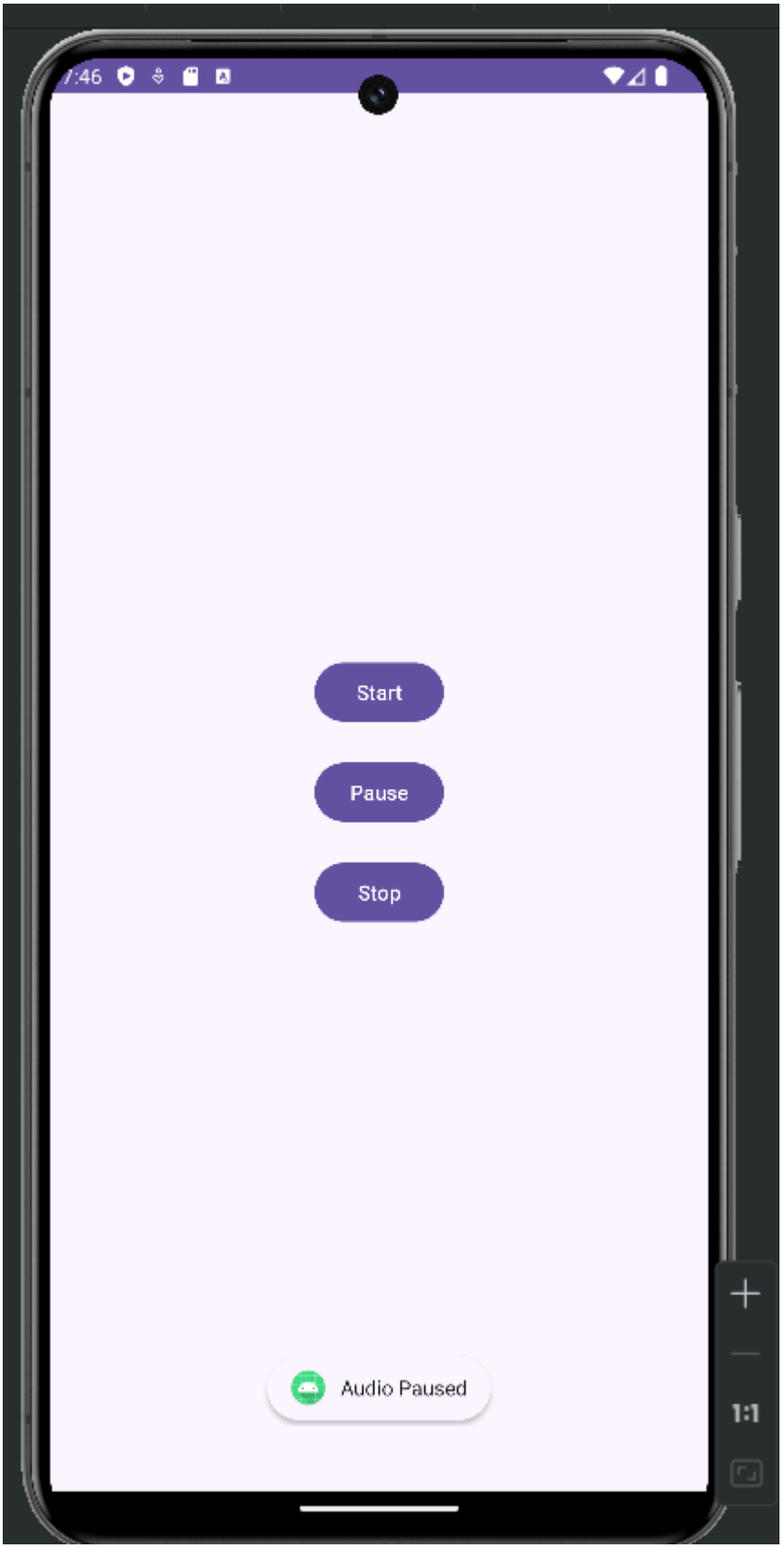
```
        startButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                videoView.start();
                Toast.makeText(VideoActivity.this, "Video Started",
Toast.LENGTH_SHORT).show();
            }
        });
        // Pause video
        pauseButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                videoView.pause();
                Toast.makeText(VideoActivity.this, "Video Paused",
Toast.LENGTH_SHORT).show();
            }
        });
        // Stop video
        stopButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                videoView.stopPlayback();
                videoView.resume(); // Reset video to the beginning
                Toast.makeText(VideoActivity.this, "Video Stopped",
Toast.LENGTH_SHORT).show();
            }
        });
    }
}
```

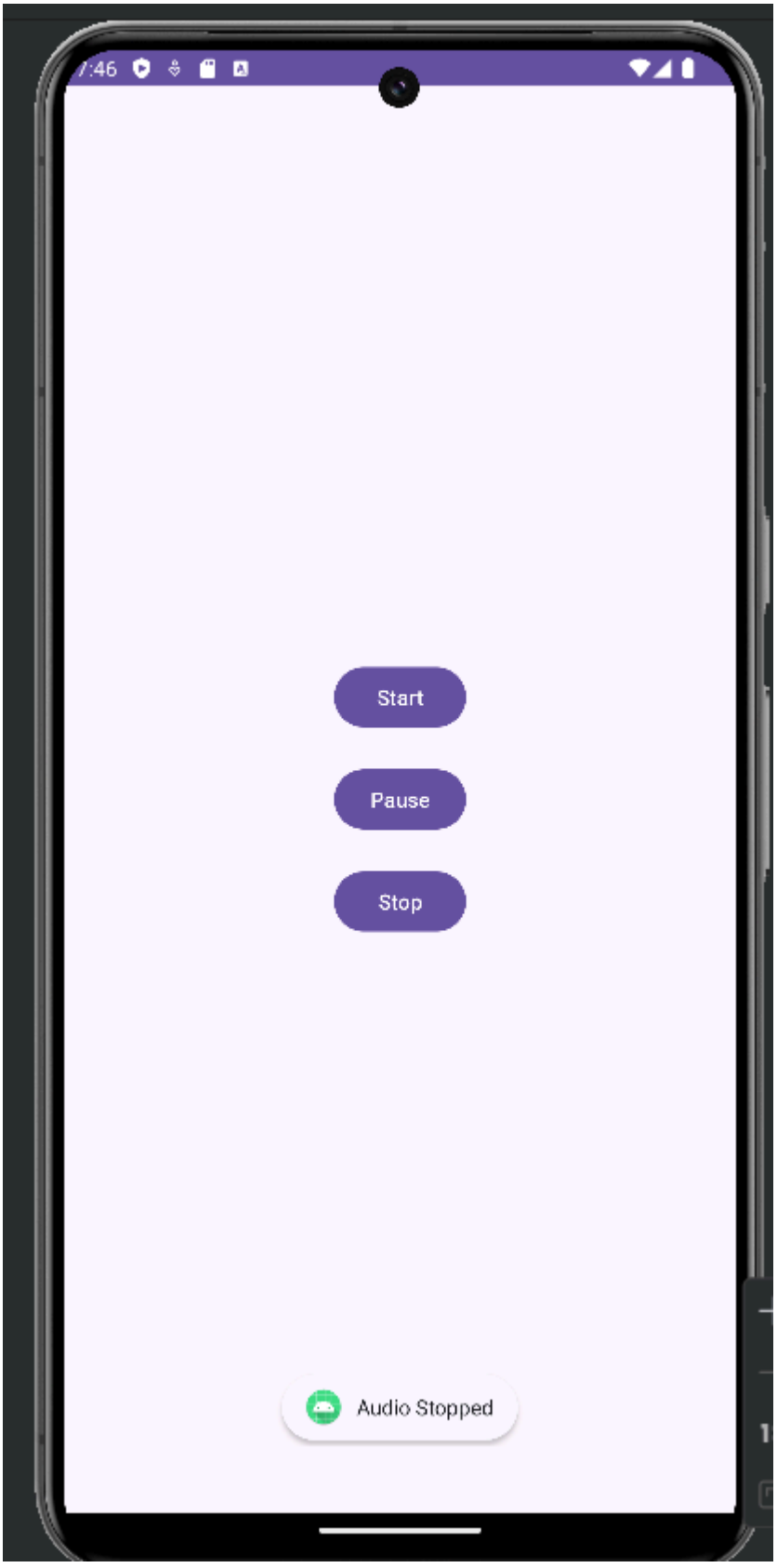
Output:



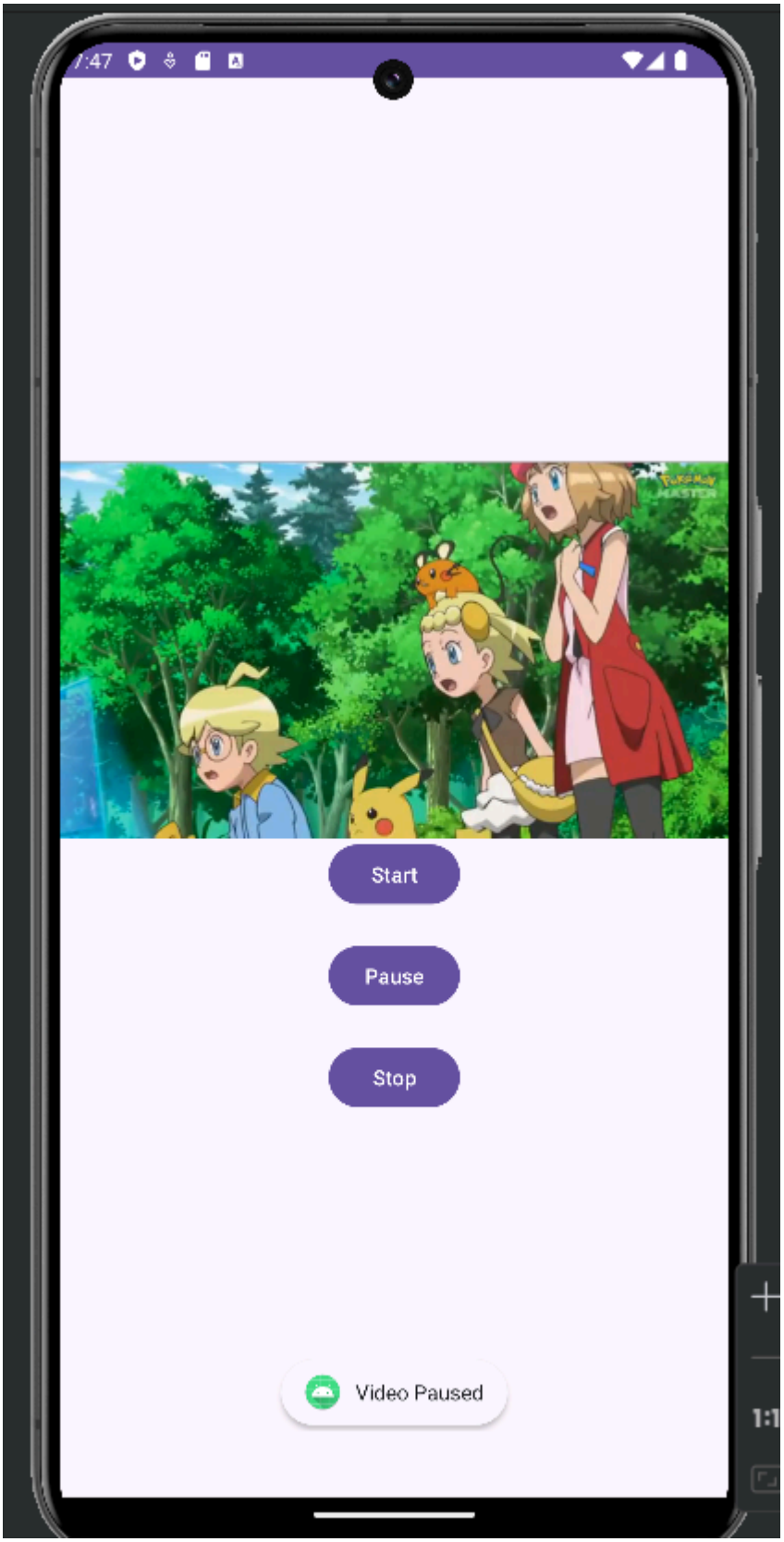
For Audio:

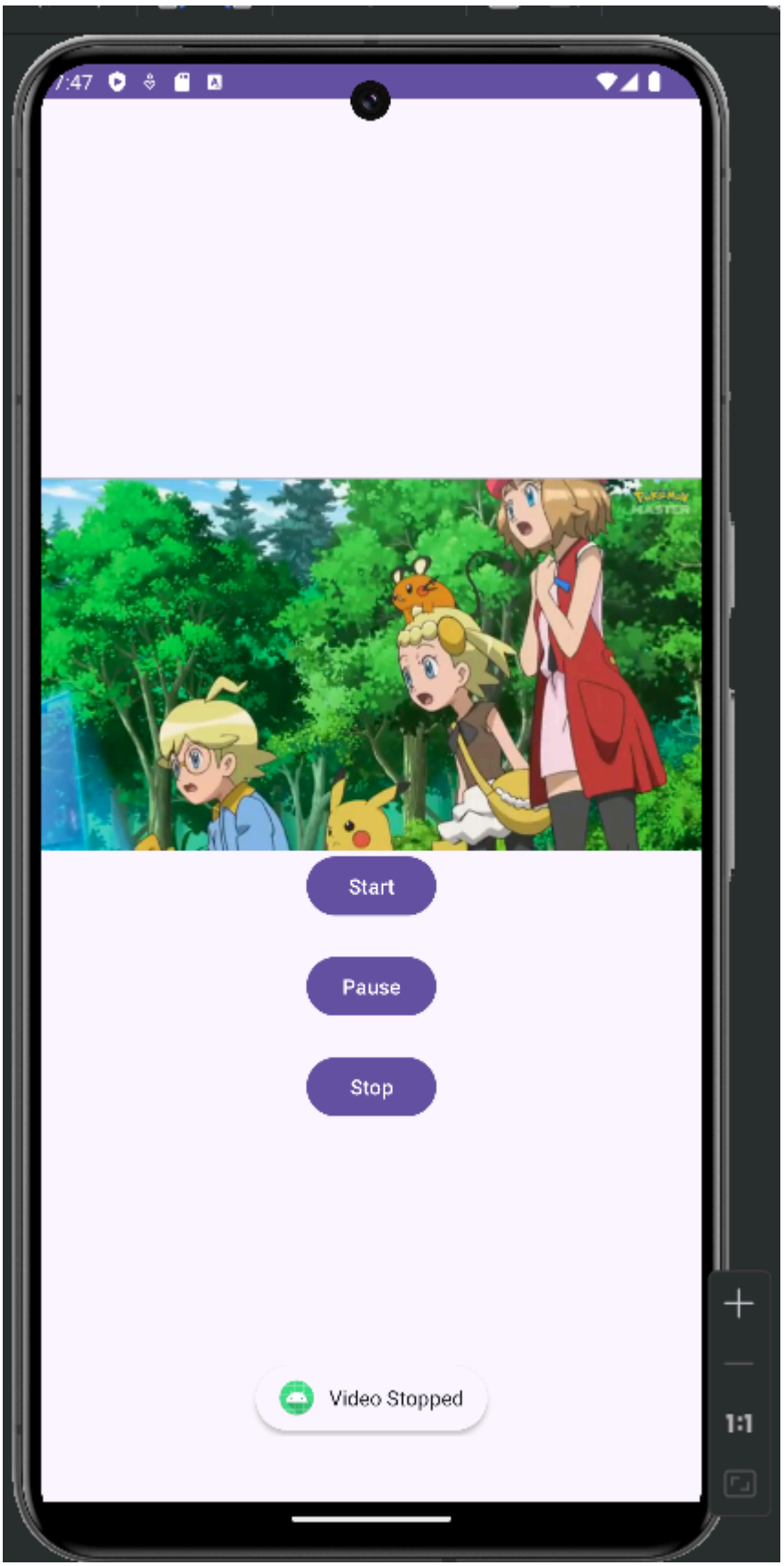



7:46
Start
Pause
Stop
Audio Paused
1:1


7:46
Start
Pause
Stop
Audio Stopped

For Video:


:47
Start
Pause
Stop
Video Paused


7:47
Start
Pause
Stop
Video Stopped
1:1