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**Assignment:03**

1. **Animation**

**ActivityMain.java**

package com.example.animation;

import android.os.Bundle;

import android.animation.AnimatorSet;

import android.animation.ObjectAnimator;

import android.annotation.SuppressLint;

import android.app.Activity;

import android.view.Menu;

import android.view.View;

import android.view.animation.Animation;

import android.widget.ImageView;

import android.support.v4.app.\*;

@SuppressLint("NewApi") public class MainActivity extends Activity {

private ImageView imageView;

private ImageView imageView1;

private ImageView imageView4;

private ImageView googleImage;

private ImageView thread;

long animationDuration=1000;//miliseconds

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

imageView=(ImageView)findViewById(R.id.imageView1);

imageView1=(ImageView)findViewById(R.id.imageView2);

imageView4=(ImageView)findViewById(R.id.imageView3);

googleImage=(ImageView)findViewById(R.id.imageView4);

thread=(ImageView)findViewById(R.id.imageView5);

}

@Override

public boolean onCreateOptionsMenu(Menu menu) {

// Inflate the menu; this adds items to the action bar if it is present.

getMenuInflater().inflate(R.menu.main, menu);

return true;

}

public void handleAnimation(View view){

ObjectAnimator animatorX=ObjectAnimator.ofFloat(imageView,"x",220f);

animatorX.setDuration(animationDuration);

ObjectAnimator animatorY=ObjectAnimator.ofFloat(imageView, "y", 300f);

animatorY.setDuration(animationDuration);

ObjectAnimator alphaAnimation=ObjectAnimator.ofFloat(imageView4,View.ALPHA,1.0f,0.0f);

alphaAnimation.setDuration(animationDuration);

ObjectAnimator rotateAnimation=ObjectAnimator.ofFloat(imageView,"rotation",0f,360f);

rotateAnimation.setDuration(animationDuration);

AnimatorSet animatorSet=new AnimatorSet();

animatorSet.playTogether(animatorX,animatorY);

animatorSet.start();

}

public void handleAnimation2(View view){

ObjectAnimator animatorX1=ObjectAnimator.ofFloat(imageView,"x",220f);

animatorX1.setDuration(animationDuration);

ObjectAnimator animatorY1=ObjectAnimator.ofFloat(imageView, "y", 300f);

animatorY1.setDuration(animationDuration);

ObjectAnimator animatorX=ObjectAnimator.ofFloat(imageView1,"x",220f);

animatorX.setDuration(animationDuration);

ObjectAnimator animatorY=ObjectAnimator.ofFloat(imageView1, "y", 300f);

animatorY.setDuration(animationDuration);

ObjectAnimator alphaAnimation=ObjectAnimator.ofFloat(googleImage,View.ALPHA,1.0f,0.0f);

alphaAnimation.setDuration(animationDuration);

ObjectAnimator rotateAnimation=ObjectAnimator.ofFloat(imageView4,"rotation",0f,360f);

rotateAnimation.setDuration(animationDuration);

ObjectAnimator animatorY2=ObjectAnimator.ofFloat(thread, "y",200f);

AnimatorSet animatorSet=new AnimatorSet();

animatorSet.playTogether(animatorX,rotateAnimation);

animatorSet.playTogether(animatorX,alphaAnimation);

animatorSet.playTogether(animatorX1,animatorY1);

animatorSet.playTogether(animatorY2);

animatorSet.start();

}

}

**Activity\_\_main.xml**

<RelativeLayoutxmlns: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"*

android:paddingBottom=*"@dimen/activity\_vertical\_margin"*

android:paddingLeft=*"@dimen/activity\_horizontal\_margin"*

android:paddingRight=*"@dimen/activity\_horizontal\_margin"*

android:paddingTop=*"@dimen/activity\_vertical\_margin"*

tools:context=*".MainActivity"*>

<ImageView

android:id=*"@+id/imageView1"*

android:layout\_width=*"wrap\_content"*

android:layout\_height=*"wrap\_content"*

android:layout\_alignParentLeft=*"true"*

android:layout\_alignParentTop=*"true"*

android:src=*"@drawable/image3"*/>

<ImageView

android:id=*"@+id/imageView4"*

android:layout\_width=*"wrap\_content"*

android:layout\_height=*"wrap\_content"*

android:layout\_alignRight=*"@+id/button1"*

android:layout\_alignTop=*"@+id/imageView1"*

android:src=*"@drawable/google"*/>

<ImageView

android:id=*"@+id/imageView3"*

android:layout\_width=*"wrap\_content"*

android:layout\_height=*"wrap\_content"*

android:layout\_alignParentLeft=*"true"*

android:layout\_below=*"@+id/imageView4"*

android:src=*"@drawable/image2"*/>

<ImageView

android:id=*"@+id/imageView2"*

android:layout\_width=*"wrap\_content"*

android:layout\_height=*"wrap\_content"*

android:layout\_alignLeft=*"@+id/button1"*

android:layout\_below=*"@+id/button1"*

android:layout\_marginTop=*"32dp"*

android:src=*"@drawable/ic\_launcher"*/>

<Button

android:id=*"@+id/button1"*

android:layout\_width=*"wrap\_content"*

android:layout\_height=*"wrap\_content"*

android:layout\_alignParentLeft=*"true"*

android:layout\_below=*"@+id/imageView3"*

android:layout\_marginTop=*"70dp"*

android:onClick=*"handleAnimation2"*

android:text=*"Animate Images"*/>

<ImageView

android:id=*"@+id/imageView5"*

android:layout\_width=*"wrap\_content"*

android:layout\_height=*"wrap\_content"*

android:layout\_alignParentRight=*"true"*

android:layout\_alignTop=*"@+id/imageView4"*

android:src=*"@drawable/thread"*/>

</RelativeLayout>

**2. Map**

**ActivityMain.java**

package com.example.map;

import android.os.Bundle;

import android.app.Activity;

import android.content.Intent;

import android.view.Menu;

import android.view.View;

import android.widget.Button;

public class MainActivity extends Activity {

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

Button b1 = (Button) findViewById(R.id.button1);

b1.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View arg0) {

Intent intent = new Intent(MainActivity.this,SecondActivity.class);

startActivity(intent);

}

});

}

@Override

public boolean onCreateOptionsMenu(Menu menu) {

// Inflate the menu; this adds items to the action bar if it is present.

getMenuInflater().inflate(R.menu.main, menu);

return true;

}

}

**SecondActivity.java**

package com.example.map;

import android.app.Activity;

import android.os.Bundle;

import android.webkit.WebView;

import android.webkit.WebViewClient;

public class SecondActivity extends Activity{

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.web\_activity);

WebView webView = (WebView) findViewById(R.id.webview1);

webView.setWebViewClient(new WebViewClient());

webView.getSettings().setJavaScriptEnabled(true);

webView.loadUrl("http://www.google.com/maps");

}

}

**Activity\_main.xml**

<RelativeLayoutxmlns: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"*

android:paddingBottom=*"@dimen/activity\_vertical\_margin"*

android:paddingLeft=*"@dimen/activity\_horizontal\_margin"*

android:paddingRight=*"@dimen/activity\_horizontal\_margin"*

android:paddingTop=*"@dimen/activity\_vertical\_margin"*

tools:context=*".MainActivity"*>

<Button

android:id=*"@+id/button1"*

android:layout\_width=*"wrap\_content"*

android:layout\_height=*"wrap\_content"*

android:layout\_centerHorizontal=*"true"*

android:layout\_centerVertical=*"true"*

android:text=*"Show location"*/>

</RelativeLayout>

**WebActivity.xml**

<?xmlversion=*"1.0"*encoding=*"utf-8"*?>

<WebViewxmlns:android=*"http://schemas.android.com/apk/res/android"*

android:layout\_width=*"match\_parent"*

android:layout\_height=*"match\_parent"*

android:id=*"@+id/webview1"*>

</WebView>

**3. Music Player**

**ActivityMain.java**

package com.example.musicplayer;

import android.media.MediaPlayer;

import android.os.Bundle;

import android.app.Activity;

import android.view.Menu;

import android.view.View;

import android.widget.Button;

public class MainActivity extends Activity implements View.OnClickListener{

Button play,pause,stop;

MediaPlayer mediaPlayer;

int pauseCurrentPosition;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

play=(Button)findViewById(R.id.button2);

stop=(Button)findViewById(R.id.button1);

pause=(Button)findViewById(R.id.button3);

play.setOnClickListener(this);

pause.setOnClickListener(this);

stop.setOnClickListener(this);

}

@Override

public void onClick(View view) {

switch(view.getId()){

case R.id.button2:

if(mediaPlayer==null){

mediaPlayer=MediaPlayer.create(getApplicationContext(), R.raw.boond);

mediaPlayer.start();}

else if(!mediaPlayer.isPlaying()){

mediaPlayer.seekTo(pauseCurrentPosition);

mediaPlayer.start();

}

break;

case R.id.button1:

if(mediaPlayer!=null){

mediaPlayer.pause();

pauseCurrentPosition=mediaPlayer.getCurrentPosition();}

break;

case R.id.button3:

if(mediaPlayer!=null){

mediaPlayer.stop();

mediaPlayer=null;}

break;

}

}

}

**Activitymain.xml**

<RelativeLayoutxmlns: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"*

android:background=*"@drawable/media"*

android:gravity=*"top"*

android:paddingBottom=*"@dimen/activity\_vertical\_margin"*

android:paddingLeft=*"@dimen/activity\_horizontal\_margin"*

android:paddingRight=*"@dimen/activity\_horizontal\_margin"*

android:paddingTop=*"@dimen/activity\_vertical\_margin"*

tools:context=*".MainActivity"*>

<Button

android:id=*"@+id/button2"*

android:layout\_width=*"wrap\_content"*

android:layout\_height=*"wrap\_content"*

android:layout\_above=*"@+id/button1"*

android:layout\_centerHorizontal=*"true"*

android:layout\_marginBottom=*"43dp"*

android:text=*"Play"*/>

<Button

android:id=*"@+id/button3"*

android:layout\_width=*"wrap\_content"*

android:layout\_height=*"wrap\_content"*

android:layout\_alignParentBottom=*"true"*

android:layout\_alignParentLeft=*"true"*

android:layout\_marginBottom=*"76dp"*

android:text=*"Stop"*/>

<Button

android:id=*"@+id/button1"*

android:layout\_width=*"wrap\_content"*

android:layout\_height=*"wrap\_content"*

android:layout\_alignBaseline=*"@+id/button3"*

android:layout\_alignBottom=*"@+id/button3"*

android:layout\_alignParentRight=*"true"*

android:layout\_marginRight=*"21dp"*

android:text=*"Pause"*/>

</RelativeLayout>

**4. Sensors**

**ActivityMain.java**

**package** com.example.sensors;

**import** android.graphics.Color;

**import** android.hardware.Sensor;

**import** android.hardware.SensorEvent;

**import** android.hardware.SensorEventListener;

**import** android.hardware.SensorManager;

**import** android.os.Bundle;

**import** android.app.Activity;

**import** android.view.Menu;

**import** android.widget.Toast;

**publicclass** MainActivity **extends** Activity {

**private** SensorManager sensorManager;

**private** Sensor proximitySensor;

**private** SensorEventListener proximitySensorListener;

@Override

**protectedvoid** onCreate(Bundle savedInstanceState) {

**super**.onCreate(savedInstanceState);

setContentView(R.layout.*activity\_main*);

sensorManager=(SensorManager)getSystemService(*SENSOR\_SERVICE*);

proximitySensor=sensorManager.getDefaultSensor(Sensor.*TYPE\_PROXIMITY*);

**if**(proximitySensor==**null**){

Toast.*makeText*(**this**, "Proximity sensor is not available !", Toast.*LENGTH\_LONG*);

finish();

}

proximitySensorListener=**new** SensorEventListener(){

@Override

**publicvoid** onAccuracyChanged(Sensor arg0, **int** arg1) {

// **TODO** Auto-generated method stub

}

@Override

**publicvoid** onSensorChanged(SensorEvent sensorEvent) {

**if**(sensorEvent.values[0]<proximitySensor.getMaximumRange()){

getWindow().getDecorView().setBackgroundColor(Color.*RED*);

}

**else**

{

getWindow().getDecorView().setBackgroundColor(Color.*GREEN*);

}

}

};

sensorManager.registerListener(proximitySensorListener,proximitySensor,2\*1000\*1000);

}

@Override

**protectedvoid** onPause()

{

**super**.onPause();

sensorManager.unregisterListener(proximitySensorListener);

}

@Override

**publicboolean** onCreateOptionsMenu(Menu menu) {

// Inflate the menu; this adds items to the action bar if it is present.

getMenuInflater().inflate(R.menu.*main*, menu);

**returntrue**;

}

}

**ActivityMain.xml**

<RelativeLayoutxmlns: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"*

android:paddingBottom=*"@dimen/activity\_vertical\_margin"*

android:paddingLeft=*"@dimen/activity\_horizontal\_margin"*

android:paddingRight=*"@dimen/activity\_horizontal\_margin"*

android:paddingTop=*"@dimen/activity\_vertical\_margin"*

tools:context=*".MainActivity"*>

<TextView

android:layout\_width=*"wrap\_content"*

android:layout\_height=*"wrap\_content"*

android:text=*"proximitysensors"*/>

</RelativeLayout>

**5. Shapes**

**ActivityMain.java**

package com.example.shapes;

import java.util.ArrayList;

import java.util.List;

import android.os.Bundle;

import android.app.Activity;

import android.content.Intent;

import android.view.Menu;

import android.view.View;

import android.widget.Adapter;

import android.widget.AdapterView;

import android.widget.AdapterView.OnItemSelectedListener;

import android.widget.ArrayAdapter;

import android.widget.Button;

import android.widget.Spinner;

import android.widget.TextView;

import android.widget.Toast;

public class MainActivity extends Activity implements OnItemSelectedListener {

String color=null;

String shapes;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

Spinner spinner = (Spinner) findViewById(R.id.spinner1);

Spinner spinner2 = (Spinner) findViewById(R.id.spinner2);

spinner.setOnItemSelectedListener(this);

spinner2.setOnItemSelectedListener(this);

List<String> colors = new ArrayList<String>();

colors.add("Red");

colors.add("Green");

colors.add("Blue");

List<String> shape = new ArrayList<String>();

shape.add("Rectangle");

shape.add("Circle");

// Creating adapter for spinner

ArrayAdapter<String> dataAdapter = new ArrayAdapter<String>(this, android.R.layout.simple\_spinner\_item, colors);

ArrayAdapter<String> dataAdapter2 = new ArrayAdapter<String>(this, android.R.layout.simple\_spinner\_item, shape);

dataAdapter.setDropDownViewResource(android.R.layout.simple\_spinner\_dropdown\_item);

dataAdapter2.setDropDownViewResource(android.R.layout.simple\_spinner\_dropdown\_item);

// attaching data adapter to spinner

spinner.setAdapter(dataAdapter);

spinner2.setAdapter(dataAdapter2);

Button b1 = (Button) findViewById(R.id.button1);

b1.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View arg0) {

Intent intent = new Intent(MainActivity.this,SecondActivity.class);

intent.putExtra("color", color);

intent.putExtra("shape", shapes);

startActivity(intent);

}

});

}

@Override

public void onItemSelected(AdapterView<?> parent, View view, int position,long id) {

TextView t1 = (TextView) findViewById(R.id.textView3);

TextView t2 = (TextView) findViewById(R.id.textView4);

if(parent.getId() == R.id.spinner1){

color = parent.getItemAtPosition(position).toString();

t1.setText(color);

}else if(parent.getId() == R.id.spinner2)

{

shapes = parent.getItemAtPosition(position).toString();

t2.setText(shapes);

}

}

@Override

public void onNothingSelected(AdapterView<?> arg0) {

// TODO Auto-generated method stub

}

}

**SecondActivity.java**

package com.example.shapes;

import java.util.Dictionary;

import java.util.Hashtable;

import android.os.Bundle;

import android.view.View;

import android.widget.TextView;

import android.widget.Toast;

import android.app.Activity;

import android.content.Context;

import android.graphics.Canvas;

import android.graphics.Color;

import android.graphics.Paint;

public class SecondActivity extends Activity

{

DemoView demoview;

@Override

protected void onCreate(Bundle savedInstanceState)

{

super.onCreate(savedInstanceState);

//setContentView(R.layout.shape\_activity);

demoview = new DemoView(this);

setContentView(demoview);

}

private class DemoView extends View

{

public DemoView(Context context)

{

super(context);

}

@Override

protected void onDraw(Canvas canvas)

{

super.onDraw(canvas);

// custom drawing code here

Paint paint = new Paint();

paint.setStyle(Paint.Style.FILL);

// make the entire canvas white

paint.setColor(Color.WHITE);

canvas.drawPaint(paint);

String color = getIntent().getStringExtra("color");

String shapes = getIntent().getStringExtra("shape");

// draw blue circle with anti aliasing turned off

if(shapes.equalsIgnoreCase("Rectangle")){

if(color.equalsIgnoreCase("Red")){

paint.setAntiAlias(false);

paint.setColor(Color.RED);

canvas.drawRect(150, 10, 600, 160, paint);

}else if(color.equalsIgnoreCase("Blue")){

paint.setAntiAlias(false);

paint.setColor(Color.BLUE);

canvas.drawRect(150, 10, 600, 160, paint);

}else if(color.equalsIgnoreCase("Green")){

paint.setAntiAlias(false);

paint.setColor(Color.GREEN);

canvas.drawRect(150, 10, 600, 160, paint);

}

}

else if(shapes.equalsIgnoreCase("Circle")){

if(color.equalsIgnoreCase("Red")){

paint.setAntiAlias(false);

paint.setColor(Color.RED);

canvas.drawCircle(200, 180, 120, paint);

}else if(color.equalsIgnoreCase("Blue")){

paint.setAntiAlias(false);

paint.setColor(Color.BLUE);

canvas.drawCircle(200, 180, 120, paint);

}else if(color.equalsIgnoreCase("Green")){

paint.setAntiAlias(false);

paint.setColor(Color.GREEN);

canvas.drawCircle(200, 180, 120, paint);

}

}

}

}

}

**Activitymain.xml**

<LinearLayoutxmlns:android=*"http://schemas.android.com/apk/res/android"*

android:layout\_width=*"fill\_parent"*

android:layout\_height=*"wrap\_content"*

android:orientation=*"vertical"*>

<TextView

android:id=*"@+id/textView1"*

android:layout\_width=*"wrap\_content"*

android:layout\_height=*"wrap\_content"*

android:text=*"Choose Color"*

android:textAppearance=*"?android:attr/textAppearanceMedium"*/>

<Spinner

android:id=*"@+id/spinner1"*

android:layout\_width=*"match\_parent"*

android:layout\_height=*"wrap\_content"*

/>

<TextView

android:id=*"@+id/textView2"*

android:layout\_width=*"wrap\_content"*

android:layout\_height=*"wrap\_content"*

android:text=*"Shape"*

android:textAppearance=*"?android:attr/textAppearanceMedium"*/>

<Spinner

android:id=*"@+id/spinner2"*

android:layout\_width=*"match\_parent"*

android:layout\_height=*"wrap\_content"*

/>

<Button

android:id=*"@+id/button1"*

android:layout\_width=*"match\_parent"*

android:layout\_height=*"62dp"*

android:text=*"Show"*/>

<TextView

android:id=*"@+id/textView3"*

android:layout\_width=*"wrap\_content"*

android:layout\_height=*"wrap\_content"*

android:text=*"TextView"*/>

<TextView

android:id=*"@+id/textView4"*

android:layout\_width=*"wrap\_content"*

android:layout\_height=*"wrap\_content"*

android:text=*"TextView"*/>

</LinearLayout>

**ShapeActivity.xml**

<?xmlversion=*"1.0"*encoding=*"utf-8"*?>

<LinearLayoutxmlns:android=*"http://schemas.android.com/apk/res/android"*

android:layout\_width=*"match\_parent"*

android:layout\_height=*"match\_parent"*

android:orientation=*"vertical"*>

</LinearLayout>