**[ 2CEIT5PE5: MOBILE APPLICATION DEVELOPMENT]**

Practical: 8



**AIM- What is Frame by Frame Animation? What is Twin Animation? How can you achieve edge-to-edge content display in your app? Create Android Application to demonstrate Frame by frame animation and splash screen to demonstrate twin animation according to below instructions.**

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# Department of Computer Engineering/Information Technology

**Practical-8**

**AIM:- What is Frame by Frame Animation? What is Twin Animation? How can you achieve edge-to-edge content display in your app? Create Android Application to demonstrate Frame by frame animation and splash screen to demonstrate twin animation according to below instructions.**

# Activity\_main.xml:-

# <?xml version="1.0" encoding="utf-8"?> <androidx.constraintlayout.widget.ConstraintLayout 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"> <LinearLayout android:layout\_width="match\_parent" android:layout\_height="match\_parent" android:orientation="vertical" app:layout\_constraintStart\_toStartOf="parent" app:layout\_constraintEnd\_toEndOf="parent" app:layout\_constraintTop\_toTopOf="parent" app:layout\_constraintBottom\_toBottomOf="parent"> <androidx.core.widget.NestedScrollView android:layout\_width="match\_parent" android:layout\_height="match\_parent"> <com.google.android.material.card.MaterialCardView android:layout\_width="match\_parent" android:layout\_height="wrap\_content" android:layout\_marginTop="15dp" android:layout\_marginBottom="15dp" android:layout\_marginStart="10dp" android:layout\_marginEnd="10dp" app:cardCornerRadius="7dp" app:cardElevation="7dp"> <LinearLayout android:layout\_width="match\_parent" android:layout\_height="match\_parent" android:orientation="vertical"> <ImageView android:id="@+id/alarmImages" android:layout\_width="match\_parent" android:layout\_height="742px" /> <TextView android:layout\_width="match\_parent" android:layout\_height="wrap\_content" android:text="Create Alarm Time" android:textSize="17sp" android:textStyle="bold" android:layout\_marginTop="10dp" android:layout\_marginStart="10dp"/> <TextView android:layout\_width="match\_parent" android:layout\_height="wrap\_content" android:text="@string/alarm\_desc" android:layout\_marginTop="10dp" android:paddingEnd="10dp" android:layout\_marginStart="10dp"/> <TextView android:layout\_width="match\_parent" android:layout\_height="wrap\_content" android:text="@string/check\_curTime" android:layout\_marginTop="10dp" android:paddingEnd="10dp" android:layout\_marginStart="10dp"/> <ImageView android:id="@+id/heartImages" android:layout\_width="27dp" android:layout\_height="27dp" android:layout\_marginTop="2dp" android:layout\_marginEnd="25dp" android:layout\_gravity="right" /> <LinearLayout android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:orientation="horizontal" android:layout\_marginStart="10dp" android:layout\_marginTop="15dp" android:layout\_marginBottom="10dp"> <com.google.android.material.button.MaterialButton android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" app:cornerRadius="20sp" android:text="Create Alarm" android:textSize="10sp" app:icon="@drawable/ic\_baseline\_alarm\_add\_24" app:iconSize="20sp" android:backgroundTint="@color/teal\_200"/> <com.google.android.material.button.MaterialButton android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:layout\_marginStart="7dp" app:cornerRadius="20sp" android:text="Create Alarm" android:textSize="10sp" app:icon="@drawable/ic\_baseline\_alarm\_off\_24" app:iconSize="20sp" android:textColor="@color/teal\_200" android:backgroundTint="@color/white" app:iconTint="@color/teal\_200"/> </LinearLayout> </LinearLayout> </com.google.android.material.card.MaterialCardView> </androidx.core.widget.NestedScrollView> </LinearLayout> </androidx.constraintlayout.widget.ConstraintLayout>

# activity\_Splash.xml:-

# <?xml version="1.0" encoding="utf-8"?> <FrameLayout 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=".SplashActiviy" android:background="@drawable/gradientrectangle"> <ImageView android:id="@+id/image" android:layout\_width="wrap\_content" android:layout\_height="120dp" android:layout\_gravity="center"/> </FrameLayout>

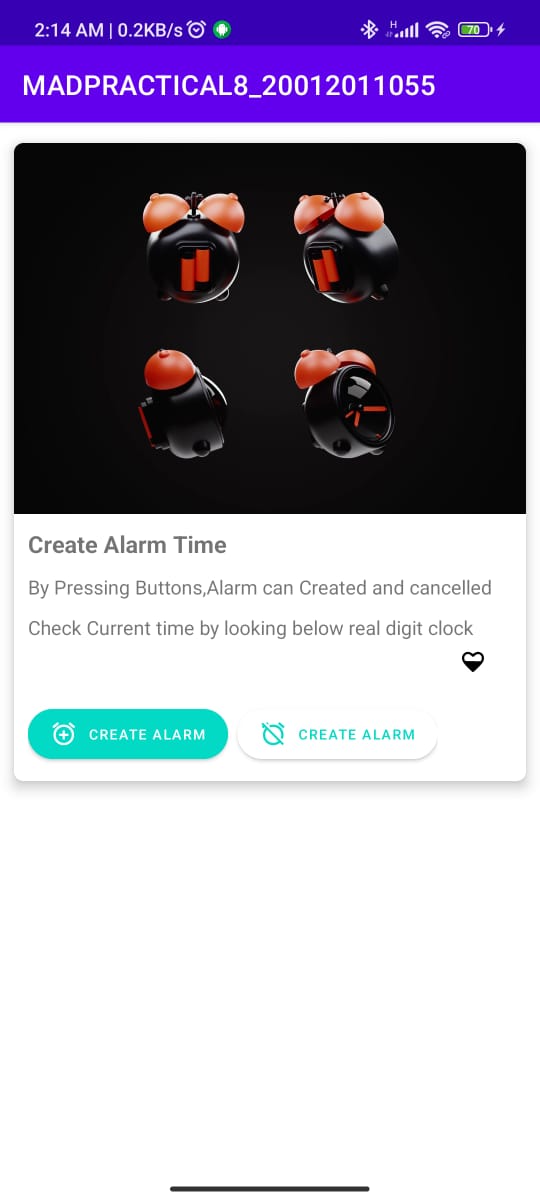
**MainActivity.kt:-**

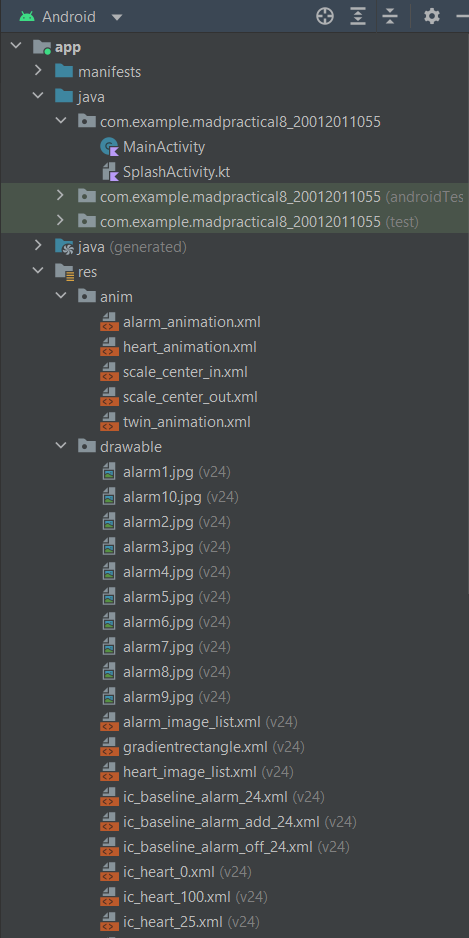
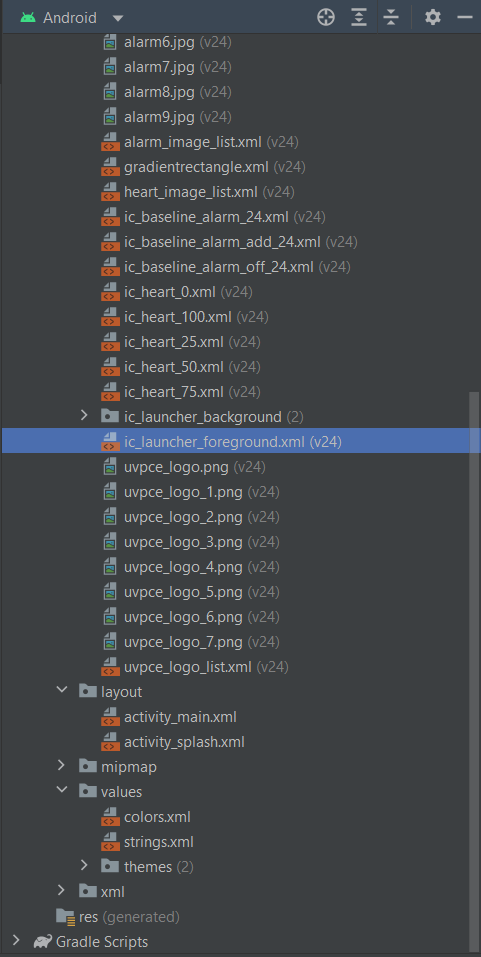
package com.example.madpractical8\_20012011055  
  
import android.graphics.drawable.AnimationDrawable  
import androidx.appcompat.app.AppCompatActivity  
import android.os.Bundle  
import android.view.animation.Animation  
import android.view.animation.AnimationUtils  
import android.widget.ImageView  
  
class MainActivity : AppCompatActivity(), Animation.AnimationListener {  
 lateinit var alarmimgs : ImageView  
 lateinit var alarmimg\_frameByFrameAnimation : AnimationDrawable  
 lateinit var alarmimgAnimation : Animation  
 lateinit var heartimgs : ImageView  
 lateinit var heart\_frameByFrameAnimation : AnimationDrawable  
 lateinit var heartAnimation : Animation  
 override fun onCreate(savedInstanceState: Bundle?) {  
 super.onCreate(savedInstanceState)  
 setContentView(R.layout.activity\_main)  
 alarmimgs = findViewById(R.id.alarmImages)  
 alarmimgs.setBackgroundResource(R.drawable.alarm\_image\_list)  
 heartimgs = findViewById(R.id.heartImages)  
 heartimgs.setBackgroundResource(R.drawable.heart\_image\_list)  
 alarmimg\_frameByFrameAnimation = alarmimgs.background as AnimationDrawable  
 heart\_frameByFrameAnimation = heartimgs.background as AnimationDrawable  
 alarmimgAnimation = AnimationUtils.loadAnimation(this, R.anim.alarm\_animation)  
 alarmimgAnimation.setAnimationListener(this)  
 heartAnimation = AnimationUtils.loadAnimation(this, R.anim.heart\_animation)  
 alarmimgAnimation.setAnimationListener(this)  
 }  
 override fun onWindowFocusChanged(hasFocus: Boolean) {  
 super.onWindowFocusChanged(hasFocus)  
 if(hasFocus){  
 alarmimg\_frameByFrameAnimation.start()  
 alarmimgs.startAnimation(alarmimgAnimation)  
 heart\_frameByFrameAnimation.start()  
 heartimgs.startAnimation(heartAnimation)  
 }  
 }  
 override fun onAnimationStart(p0: Animation?) {  
 }  
 override fun onAnimationEnd(p0: Animation?) {  
 }  
 override fun onAnimationRepeat(p0: Animation?) {  
 }  
}

# SplashActivity.kt:-

package com.example.madpractical8\_20012011055  
  
import android.content.Intent  
import android.graphics.drawable.AnimationDrawable  
import androidx.appcompat.app.AppCompatActivity  
import android.os.Bundle  
import android.view.animation.Animation  
import android.view.animation.AnimationUtils  
import android.widget.ImageView  
  
class SplashActiviy : AppCompatActivity(),Animation.AnimationListener {  
 lateinit var guni\_image : ImageView  
 lateinit var logo\_frambyframanimetion : AnimationDrawable  
 lateinit var twinanimetion : Animation  
 override fun onCreate(savedInstanceState: Bundle?) {  
 super.onCreate(savedInstanceState)  
 setContentView(R.layout.*activity\_splash*)  
 guni\_image = findViewById(R.id.*image*)  
 guni\_image.setBackgroundResource(R.drawable.*uvpce\_logo\_list*)  
 logo\_frambyframanimetion = guni\_image.*background* as AnimationDrawable  
 twinanimetion = AnimationUtils.loadAnimation(this,R.anim.*twin\_animation*)  
 twinanimetion.setAnimationListener(this)  
 }  
 override fun onWindowFocusChanged(hasFocus: Boolean) {  
 super.onWindowFocusChanged(hasFocus)  
 if (hasFocus){  
 logo\_frambyframanimetion.start()  
 guni\_image.startAnimation(twinanimetion)  
 }  
 }  
 override fun onAnimationStart(p0: Animation?) {  
 }  
 override fun onAnimationEnd(p0: Animation?) {  
 Intent(this,MainActivity::class.*java*).*also* **{** startActivity(**it**)  
 overridePendingTransition(R.anim.*scale\_center\_in*,R.anim.*scale\_center\_out*)  
 finish()  
 }  
}  
 override fun onAnimationRepeat(p0: Animation?) {  
 }  
}

**Output:-**

# AndroidManifests.xml

<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 package="com.example.madpractical8\_20012011055">  
  
 <application  
 android:allowBackup="true"  
 android:dataExtractionRules="@xml/data\_extraction\_rules"  
 android:fullBackupContent="@xml/backup\_rules"  
 android:icon="@mipmap/ic\_launcher"  
 android:label="@string/app\_name"  
 android:roundIcon="@mipmap/ic\_launcher\_round"  
 android:supportsRtl="true"  
 android:theme="@style/Theme.MADPRACTICAL8\_20012011055"  
 tools:targetApi="31">  
 <activity  
 android:name="com.example.madpractical8\_20012011055.MainActivity"  
 android:exported="false" />  
 <activity  
 android:name=".SplashActiviy"  
 android:exported="true">  
 <intent-filter>  
 <action android:name="android.intent.action.MAIN" />  
  
 <category android:name="android.intent.category.LAUNCHER" />  
 </intent-filter>  
 </activity>  
 </application>  
  
</manifest>