Program-4: Develop an application to set an image as wallpaper. On click of a button, the wallpaper image should start to change randomly every 30 seconds.

1) Firstly Create an Application by Name “WallpaperActivity”

2) Go to xml code of design change the layout to “RelativeLayout”

3) Add TextView component & change the following properties:

• Size: 38dp

• Text: Wall Paper Change Application

• Center-Align

4) Add Button component & change the following properties:

• Size: 38dp

• Text: Click Here To Change Wall Paper

5) Save five images (jpg format) in the drawable folder.

In this example one.jpg, two.jpg, three.jpg, four.jpg and five.jpg images are saved in drawable folder.

XML-CODE

*<?*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">  
 <Button  
 android:id="@+id/button1"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_alignParentEnd="true"  
 android:layout\_alignParentRight="true"  
 android:layout\_alignParentBottom="true"  
 android:layout\_marginEnd="167dp"  
 android:layout\_marginRight="167dp"  
 android:layout\_marginBottom="409dp"  
 android:text="CLICK HERE" />  
</RelativeLayout>

JAVA-CODE

package com.example.walpaper;  
  
import androidx.appcompat.app.AppCompatActivity;  
import android.app.WallpaperManager;  
import android.graphics.Bitmap;  
import android.graphics.BitmapFactory;  
import android.graphics.drawable.BitmapDrawable;  
import android.graphics.drawable.Drawable;  
import android.os.Bundle;  
import android.os.Handler;  
import android.view.View;  
import android.widget.Button;  
import android.widget.Toast;  
import java.io.IOException;  
import java.util.Timer;  
import java.util.TimerTask;  
public class MainActivity extends AppCompatActivity {  
 Button wallpaperChange;  
 Timer mytimer;  
 Drawable drawable;  
 WallpaperManager wpm;  
 int prev = 1;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 mytimer = new Timer();  
 wpm = WallpaperManager.*getInstance*(this);  
 wallpaperChange = (Button) findViewById(R.id.*button1*);  
 wallpaperChange.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 setwallpaper();  
 }  
 });  
 }  
  
 private void setwallpaper() {  
 Toast.*makeText*(this, "setting Wallpaper please wait.", Toast.*LENGTH\_LONG*).show();  
 mytimer.schedule(new TimerTask() {  
 @Override  
 public void run() {  
 if (prev == 1) {  
 drawable = getResources().getDrawable(R.drawable.*i1*);  
 prev = 2;  
 } else if (prev == 2) {  
 drawable = getResources().getDrawable(R.drawable.*i2*);  
 prev = 3;  
 } else if (prev == 3) {  
 drawable = getResources().getDrawable(R.drawable.*i3*);  
 prev = 4;  
 } else if (prev == 4) {  
 drawable = getResources().getDrawable(R.drawable.*i4*);  
 prev = 5;  
 } else if (prev == 5) {  
 drawable = getResources().getDrawable(R.drawable.*i5*);  
 prev = 1;  
 }  
 Bitmap wallpaper = ((BitmapDrawable) drawable).getBitmap();  
 try {  
 wpm.setBitmap(wallpaper);  
 } catch (IOException e) {  
 e.printStackTrace();  
 }  
 }  
 }, 0, 30000);  
 }  
}