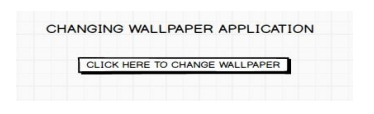
**MOBILE APPLICATION DEVELOPMENT**

**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.**



**Xml code:**

*<?***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"**>  
  
 <**TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="CHANGING WALL PAPER"  
 android:textSize="24sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.37"  
 app:layout\_constraintLeft\_toLeftOf="parent"  
 app:layout\_constraintRight\_toRightOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.066"** />  
  
 <**Button  
 android:id="@+id/btn\_wall"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="CLICK HERE TO CHANGE WALLPAPER"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.535"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.431"** />  
  
</**androidx.constraintlayout.widget.ConstraintLayout**>

**JAVA CODE:**

**package** com.example.walll;  
  
**import** androidx.appcompat.app.AppCompatActivity;  
  
**import** android.app.WallpaperManager;  
**import** android.graphics.BitmapFactory;  
**import** android.os.Bundle;  
**import** android.view.View;  
**import** android.widget.Button;  
  
**import** java.io.IOException;  
**import** java.util.Random;  
**import** java.util.Timer;  
**import** java.util.TimerTask;  
  
**public class** MainActivity **extends** AppCompatActivity **implements** View.OnClickListener {  
 Button **btn**;  
 **boolean running**;  
 **int**[] **ia** = **new int**[]{R.drawable.***img1***, R.drawable.***img2***, R.drawable.***img3***, R.drawable.***img4***, R.drawable.***img5***};  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_main***);  
 **btn** = (Button) findViewById(R.id.***btn\_wall***);  
 **btn**.setOnClickListener(**this**);  
 }  
  
 @Override  
 **public void** onClick(View view) {  
 **if** (!**running**) {  
 **new** Timer().schedule(**new** MyTimer(), 0, 3000);  
 **running** = **true**;  
 }  
 }  
  
 **private class** MyTimer **extends** TimerTask {  
  
 @Override  
 **public void** run() {  
 **try** {  
 WallpaperManager wallpaperManager = WallpaperManager.*getInstance*(getBaseContext());  
 Random random = **new** Random();  
 wallpaperManager.setBitmap(BitmapFactory.*decodeResource*(getResources(),**ia**[random.nextInt(5)]));  
  
 } **catch** (IOException e) {  
 }  
 }  
 }  
}