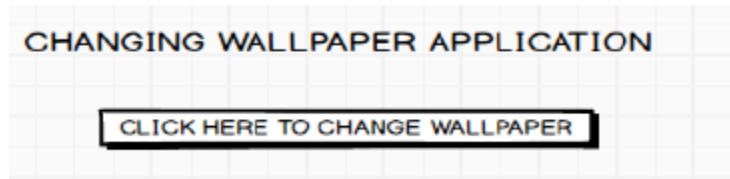


## Program 4:

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.



### 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">

    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Changing Wallpaper Application"
        android:textAlignment="center"
        android:textSize="24sp"
        android:textStyle="bold"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.124" />

    <Button
        android:id="@+id/button"
        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="0.494"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.263" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

### MainActivity.Java

```
package com.example.lab4;
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[] img=new int[] {R.drawable.img1,R.drawable.img2,R.drawable.img3};
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        btn=(Button) findViewById(R.id.button);
        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
wm=WallpaperManager.getInstance(getApplicationContext());
                Random rdm = new Random();

wm.setBitmap(BitmapFactory.decodeResource(getResources(),img[rdm.nextInt(3)])
);
            } catch(IOException E){}

        }
    }
}

```

Output:

