6th IT (2019-2020) **WCMC (IT349)**

Practical 6

AIM: Create an application which turns ON or OFF Torch/Flashlight of Camera.

Source Code:

Java File/s:

MainActivity.java

```
package com.example.flashlight;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Context;
import android.content.pm.PackageManager;
import android.graphics.Camera;
import android.hardware.camera2.CameraAccessException;
import android.hardware.camera2.CameraManager;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.Chronometer;
import android.widget.CompoundButton;
import android.widget.ToggleButton;
import java.security.Policy;
public class MainActivity extends AppCompatActivity {
    ToggleButton t1,t2;
    CameraManager cm;
    String cameraId;
    int counter = 0;
    Chronometer c1;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity main);
        boolean
                               isFlashAvailabe
getApplicationContext().getPackageManager().hasSystemFeature(P
ackageManager.FEATURE CAMERA FLASH);
        t1 = findViewById(R.id.t1);
        t2 = findViewById(R.id.t2);
        c1 = findViewById(R.id.c1);
        counter = 0;
        if (!isFlashAvailabe) {
```

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```
showFlashError();
        }
        cm
                                                 (CameraManager)
getSystemService(Context.CAMERA SERVICE);
        try{
            cameraId = cm.getCameraIdList()[0];
        }catch (CameraAccessException e) {
            e.printStackTrace();
        }
        t2.setOnCheckedChangeListener(new
CompoundButton.OnCheckedChangeListener() {
            @Override
                                onCheckedChanged (CompoundButton
            public
                       void
compoundButton, boolean b) {
                c1.start();
                chronometer(b);
            }
        });
        t1.setOnCheckedChangeListener(new
CompoundButton.OnCheckedChangeListener() {
            @Override
            public
                       void
                                onCheckedChanged (CompoundButton
compoundButton, boolean b) {
                switchFlashLight(b);
            }
        });
    }
   void chronometer(boolean status) {
        if (status) {
            switchFlashLight(false);
            c1.setOnChronometerTickListener(new
Chronometer.OnChronometerTickListener() {
                @Override
                public void onChronometerTick(Chronometer
chronometer) {
                    counter++;
                    if (counter % 5 == 0) {
                        switchFlashLight(false);
```

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```
} else {
                         switchFlashLight(true);
                     }
                 }
            });
        }
        else {
            switchFlashLight(false);
            c1.stop();
        }
    }
    void switchFlashLight(boolean status) {
        try{
            cm.setTorchMode(cameraId, status);
        }catch (CameraAccessException e) {
            e.printStackTrace();
    }
    void showFlashError() {
        System.out.println("No Flash Available ...");
    }
}
```

Layout File/s: activity main.xml

```
<?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">
    <ToggleButton
        android:layout width="match parent"
        android:layout height="wrap content"
        android:layout centerInParent="true"
        android:id="@+id/t1"
        android:textOff="On"
        android:textOn="Off"
        />
    <ToggleButton
        android:layout width="match parent"
        android:layout height="wrap content"
        android:id="@+id/t2"
```

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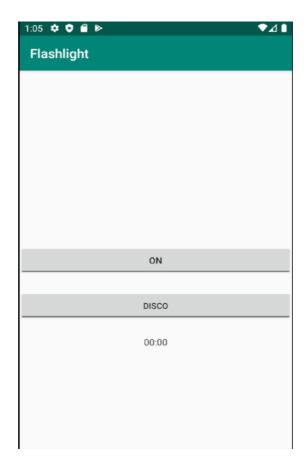
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```
android:textSize="13sp"
android:textOn="Disco"
android:textOff="Disco"
android:layout_below="@id/t1"
android:layout_marginTop="24dp"/>

android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_below="@id/t2"
android:id="@+id/c1"
android:gravity="center"
android:layout_marginTop="24dp"/>

<
```

Output:



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