
Experiment 7

Aim: Develop a Torch Light android application using Broadcast Receiver.

Code:

Activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:textAlignment="center">

    <EditText
        android:id="@+id/txtMsg"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginLeft="100dp"
        android:layout_marginTop="180dp"
        android:ems="10" />

    <Button
        android:id="@+id/btnShow"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginLeft="130dp"
        android:onClick="onClickShowBroadcast"
        android:text="Show Broadcast" />

    <TextView
        android:id="@+id/textView2"
        android:layout_width="match_parent"
        android:layout_height="66dp"
        android:layout_marginTop="30dp"
        android:background="#40C4FF"
        android:text="AirPlane Mode On and off"
        android:textAlignment="center"
        android:textSize="34sp" />
</LinearLayout>
```

MainActivity.java:

```
package com.example.practical_7;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.content.IntentFilter;
import android.os.Bundle;

public class MainActivity extends AppCompatActivity {

    AirplaneModeChangeReceiver airplaneModeChangeReceiver = new
    AirplaneModeChangeReceiver();

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }

    @Override
    protected void onStart() {
        super.onStart();
        IntentFilter filter = new
IntentFilter(Intent.ACTION_AIRPLANE_MODE_CHANGED);
        registerReceiver(airplaneModeChangeReceiver, filter);
    }

    @Override
    protected void onStop() {
        super.onStop();
        unregisterReceiver(airplaneModeChangeReceiver);
    }

    public void onClickShowBroadcast(View view){
        EditText st = (EditText)findViewById(R.id.txtMsg);
        Intent intent = new Intent();
        intent.putExtra("msg", (CharSequence)st.getText().toString());
        intent.setAction("com.tutlane.CUSTOM_INTENT");
        sendBroadcast(intent);
    }
}
```

AirplaneModeChangeReceiver.java

```
package com.example.practical_7;
import android.content.BroadcastReceiver;
import android.content.Context;
import android.content.Intent;
import android.provider.Settings;
import android.widget.Toast;

public class AirplaneModeChangeReceiver extends BroadcastReceiver {

    @Override
    public void onReceive(Context context, Intent intent) {

        if (isAirplaneModeOn(context.getApplicationContext())) {
            Toast.makeText(context, "AirPlane mode is on",
Toast.LENGTH_SHORT).show();
        } else {
            Toast.makeText(context, "AirPlane mode is off",
Toast.LENGTH_SHORT).show();
        }
    }

    private static boolean isAirplaneModeOn(Context context) {
        return Settings.System.getInt(context.getContentResolver(),
Settings.Global.AIRPLANE_MODE_ON, 0) != 0;
    }
}
```

MyBroadcastReceiver.java

```
package com.example.practical_7;
import android.content.BroadcastReceiver;
import android.content.Context;
import android.content.Intent;
import android.widget.Toast;

/**
 * Created by Tutlane on 01-08-2017.
 */

public class MyBroadcastReceiver extends BroadcastReceiver {
    @Override
    public void onReceive(Context context, Intent intent){
        CharSequence iData = intent.getCharSequenceExtra("msg");
        Toast.makeText(context,"Tutlane Received Message:
"+iData,Toast.LENGTH_LONG).show();
    }
}
```

}

AndriodManifest.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">
    <uses-permission
android:name="android.permission.YOUR_PERMISSION" />
    <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.Practical_7"
        tools:targetApi="31">
        <activity
            android:name=".MainActivity"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category
android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>

        <receiver android:name="MyBroadcastReceiver">
            <intent-filter>
                <action android:name="com.tutlane.CUSTOM_INTENT">
            </action>
            </intent-filter>
        </receiver>

    </application>
</manifest>
```

Screenshots:

