

**Practical No : 07b**

**Aim : Create an android application, which automatically notify the user when "Internet Service" is turned on or off using broadcast receiver.**

**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/click"
        android:layout_width="319dp"
        android:layout_height="95dp"
        android:text="Click here to check Internet Service"
        android:onClick="check"
        android:textAlignment="center"
        android:textSize="34sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.187" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

**Right click project and create new java class, name it as NetworkUtil**

**NetworkUtil.java**

```
package com.example.p7internet;

import android.content.Context;
import android.net.ConnectivityManager;
import android.net.NetworkInfo;

class NetworkUtil {

    public static String getConnectivityStatusString(Context context)
    {
        String status = null;
        ConnectivityManager cm = (ConnectivityManager)
            context.getSystemService(Context.CONNECTIVITY_SERVICE);
        NetworkInfo activeNetwork = cm.getActiveNetworkInfo();
        if (activeNetwork != null) {
            if (activeNetwork.getType() == ConnectivityManager.TYPE_WIFI) {
                status = "Wifi enabled";
                return status;
            } else if (activeNetwork.getType() ==
ConnectivityManager.TYPE_MOBILE) {
                status = "Mobile data enabled";
            }
        }
    }
}
```

```

        return status;
    }
    } else {
        status = "No internet is available";
        return status;
    }
    return status;
}
}

```

**Right click project and create new java class, name it as MyReceiver**

### MyReceiver.java

```

package com.example.p7internet;

import android.content.BroadcastReceiver;
import android.content.Context;
import android.content.Intent;
import android.widget.Toast;

import com.example.p7internet.NetworkUtil;

public class MyReceiver extends BroadcastReceiver {

    @Override
    public void onReceive(Context context, Intent intent) {
        String status = NetworkUtil.getConnectivityStatusString(context);
        if(status.isEmpty()) {
            status="No Internet Connection";
        }
        Toast.makeText(context, status, Toast.LENGTH_LONG).show();
    }
}

```

### Add Permission in AndroidManifest.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.ACCESS_NETWORK_STATE" />

    <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:supportRtl="true"
        android:theme="@style/Theme.P7Internet"
        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>

```

```
<meta-data
    android:name="android.app.lib_name"
    android:value="" />
</activity>

<receiver android:name = ".MyReceiver"
    tools:ignore="IntentFilterExportedReceiver"
    android:exported="true">
    <intent-filter>
        <action android:name = "android.net.conn.CONNECTIVITY_CHANGE" />
        <action android:name = "android.net.wifi.WIFI_STATE_CHANGED" />
    </intent-filter>
</receiver>

</application>

</manifest>
```

### MainActivity.java

```
package com.example.p7internet;

import androidx.appcompat.app.AppCompatActivity;

import android.content.BroadcastReceiver;
import android.content.IntentFilter;
import android.net.ConnectivityManager;
import android.os.Bundle;
import android.view.View;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {
    private BroadcastReceiver MyReceiver = null;

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

    public void broadcastIntent()
    {
        registerReceiver(MyReceiver, new
IntentFilter(ConnectivityManager.CONNECTIVITY_ACTION));
    }

    public void check(View v) {
        broadcastIntent();
    }

    @Override
    protected void onPause() {
        super.onPause();
        unregisterReceiver(MyReceiver);
    }
}
```

Output:

