

## Practical no: 21

### Practical Related Questions

#### 1. Differentiated between Activity Intent and Broadcasting Intent.

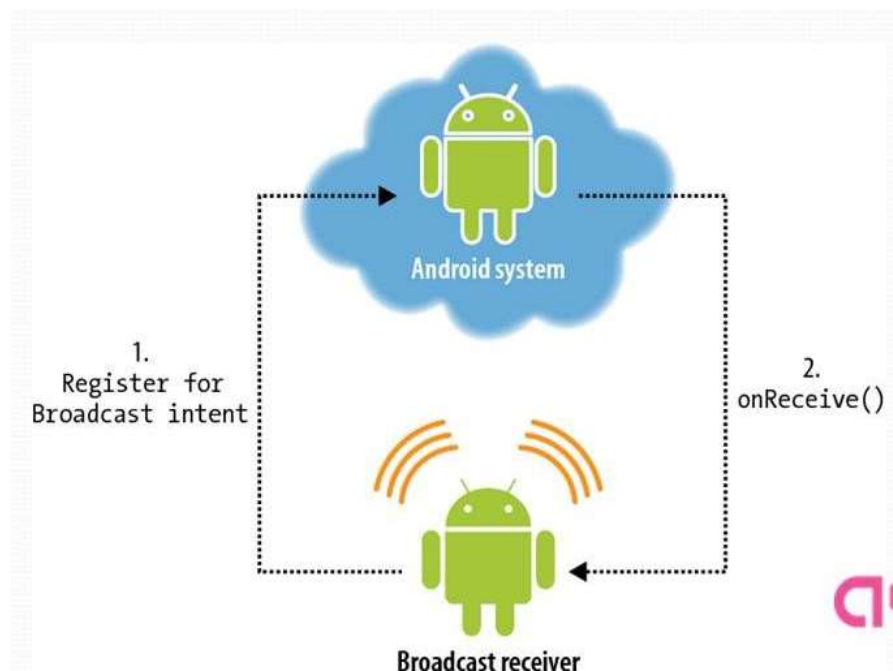
**Broadcasting Intents:** If you want your application itself should generate and send custom intents then you will have to create and send those intents by using the `sendBroadcast()` method inside your activity class. If you use the `sendStickyBroadcast(Intent)` method, the Intent is sticky, meaning the Intent you are sending stays around after the broadcast is complete.

**Activity Intent:** Android Intent is the message that is passed between components such as activities, content providers, broadcast receivers, services etc.

It is generally used with `startActivity()` method to invoke activity, broadcast receivers etc.

The dictionary meaning of intent is intention or purpose. So, it can be described as the intention to do action.

#### 2. Draw Broadcast Receivers Lifecycle.



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### 3. List the System Events related to Broadcast Receivers

1	<b>android.intent.action.BATTERY_CHANGED</b> Sticky broadcast containing the charging state, level, and other information about the battery.
2	<b>android.intent.action.BATTERY_LOW</b> Indicates low battery condition on the device.
3	<b>android.intent.action.BATTERY_OKAY</b> Indicates the battery is now okay after being low.
4	<b>android.intent.action.BOOT_COMPLETED</b> This is broadcast once, after the system has finished booting.
5	<b>android.intent.action.BUG_REPORT</b> Show activity for reporting a bug.
6	<b>android.intent.action.CALL</b> Perform a call to someone specified by the data.
7	<b>android.intent.action.CALL_BUTTON</b> The user pressed the "call" button to go to the dialer or other appropriate UI for placing a call.
8	<b>android.intent.action.DATE_CHANGED</b> The date has changed.
9	<b>android.intent.action.REBOOT</b> Have the device reboot.

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### Exercise MainActivity.java

```
package com.example.broadcastreceg;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Button b = (Button) findViewById(R.id.button);
        b.setOnClickListener(new View.OnClickListener(){
            @Override
            public void onClick(View view){
                Intent i = new Intent();
                i.setAction("com.broadcastreceg.CUSTOM_INTENT");
                sendBroadcast(i);
            }
        });
    }
}
```

### MyReceiver.java

```
package com.example.broadcastreceg;
import android.content.BroadcastReceiver;
import android.content.Context;
import android.content.Intent;
import android.widget.Toast;
public class MyReceiver extends BroadcastReceiver {
    @Override
    public void onReceive(Context context, Intent intent) {
        Toast.makeText(context, " Received", Toast.LENGTH_LONG).show();
    }
}
```

### AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.broadcastreceg">
    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.BroadcastRecEG">
```

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```
<receiver
    android:name=".MyReceiver"
    android:enabled="true"
    android:exported="true">
    <intent-filter>
        <action android:name="com.broadcastreceg.CUSTOM_INTENT">
        </action>
        <action
android:name="android.intent.action.ACTION_POWER_CONNECTED"></action>
        <action
android:name="android.intent.action.ACTION_POWER_DISCONNECTED"></action>
        <action
android:name="android.intent.action.BATTERY_CHANGED"></action>
    </intent-filter>
</receiver>
<activity android:name=".MainActivity">
    <intent-filter>
        <action android:name="android.intent.action.MAIN" />
        <category android:name="android.intent.category.LAUNCHER" />
    </intent-filter>
</activity>
</application>
</manifest>
```

### 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="Broadcast Receiver"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Send Broadcast"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView" />
</androidx.constraintlayout.widget.ConstraintLayout>
```