

Experiment Number 21 (Exercise 1): Write a program to demonstrate all the system broadcast messages.

Code for activity_main.xml:

```
<?xml version="1.0" encoding="utf-8"?>

<LinearLayout xmlns:tools="http://schemas.android.com/tools"
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    tools:ignore="NamespaceTypo"
    android:background="#FFFACD">
    <TextView
        android:id="@+id/batterylevel"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text=""
        android:textSize="50dp"
        android:layout_marginTop="150dp"
    />
    <ProgressBar
        android:id="@+id/progressbar"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        style="@style/Widget.AppCompat.ProgressBar.Horizontal"
        android:max="100"
        android:minHeight="40dp"
        android:minWidth="200dp"
        android:layout_marginLeft="80dp"
    />
</LinearLayout>
```

code for MainActivity.java file:

```
import androidx.appcompat.app.AppCompatActivity;

import android.content.BroadcastReceiver;
import android.content.Context;

import android.content.Intent;
import android.content.IntentFilter;
import android.os.BatteryManager;
import android.os.Bundle;
import android.widget.ProgressBar;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {
    TextView textView;
    ProgressBar progressBar;
    BroadcastReceiver broadcastReceiver;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        textView = findViewById(R.id.batterylevel);
        progressBar = findViewById(R.id.progressbar);
        batterylevel();
    }
}
```

```

        IntentFilter intentFilter =new IntentFilter(Intent.ACTION_BATTERY_CHANGED);
        registerReceiver(broadcastReceiver,intentFilter);
    }
    private void batterylevel(){
        broadcastReceiver = new BroadcastReceiver() {
            @Override
            public void onReceive(Context context, Intent intent) {
                int level = intent.getIntExtra(BatteryManager.EXTRA_LEVEL,0);
                textView.setText("Battery Level Remaining: "+Integer.toString(level)+"%");
                progressBar.setProgress(level);
            }
        };
    }
}

```

Output:

