Source Code
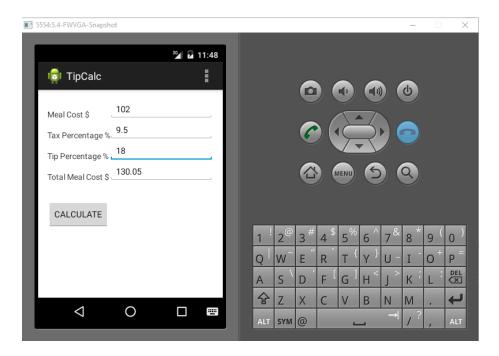
The complete source code for this assignment is available on github @
https://github.com/bradyhouse/ITM455.

Screenshot

ManifestAndroid.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.iit.itm455.hw1.tipCalc"
    android:versionCode="1"
    android:versionName="1.0" >

    <uses-sdk
        android:minSdkVersion="8"
        android:targetSdkVersion="23" />

    <application
        android:allowBackup="true"
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name"
        android:theme="@style/AppTheme" >
        <activity
            android:name=".MainActivity"
            android:label="@string/app_name" >
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

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

</manifest>
```

strings.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<resources xmlns:android="http://schemas.android.com/apk/res/android">
    <string name="app_name">TipCalc</string>
    <string name="action_settings">Action Settings</string>
    <string name="label_meal_cost">Meal Cost $</string>
    <string name="label_tax_percentage">Tax Percentage %</string>
    <string name="label_tip_percentage">Tip Percentage %</string>
    <string name="label_total_meal_cost">Total Meal Cost $</string>
</resources>
```

MainActivity.Class

```
package com.iit.itm455.hw1.tipCalc;

import android.app.Activity;
import android.view.View.OnClickListener;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;

public class MainActivity extends Activity implements OnClickListener {

        private double mealCost;
        private double totalCost;
        private double taxPercentage = 0.0;
        private double tipPercentage = 0.0;

        public void calculateTotalCost() {
                if (this.getMealCost() > 0 && this.getTaxPercentage() >= 0
                                && this.getTipPercentage() >= 0) {
                        double tax = (this.getTaxPercentage() / 100) * this.getMealCost();
                        double tip = (this.getTipPercentage() / 100) * this.getMealCost();
                        double totalCost = tax + tip + this.getMealCost();
                        EditText editTotalCost = (EditText) findViewById(R.id.editTotalMealCost);
                        editTotalCost.setText(String.format("%.2f", totalCost));
                }
        }

        @Override
        protected void onCreate(Bundle savedInstanceState) {
                super.onCreate(savedInstanceState);
                setContentView(R.layout.activity_main);
                Button buttonCalc = (Button) findViewById(R.id.buttonCalculate);
                buttonCalc.setOnClickListener(this);
        }

        @Override
        public boolean onCreateOptionsMenu(Menu menu) {
                getMenuInflater().inflate(R.menu.main, menu);
                return true;
        }

        @Override
        public boolean onOptionsItemSelected(MenuItem item) {
                int id = item.getItemId();
                if (id == R.id.action_settings) {
                        return true;
                }
                return super.onOptionsItemSelected(item);
        }

        public double getTotalCost() {
                return totalCost;
        }

        public void setTotalCost(double totalCost) {
                this.totalCost = totalCost;
        }

        public double getTaxPercentage() {
                return taxPercentage;
        }

        public void setTaxPercentage(double taxPercentage) {
                this.taxPercentage = taxPercentage;
        }

        public double getTipPercentage() {
                return tipPercentage;
        }

        public void setTipPercentage(double tipPercentage) {
                this.tipPercentage = tipPercentage;
        }

        public double getMealCost() {
                return mealCost;
        }

        public void setMealCost(double mealCost) {
                this.mealCost = mealCost;
        }

        @Override
        public void onClick(View v) {
                EditText editCost = (EditText) findViewById(R.id.editMealCost);
                EditText editTip = (EditText) findViewById(R.id.editTipPercentage);
                EditText editTax = (EditText) findViewById(R.id.editTaxPercentage);

                double tip = editTip.getText().length() > 0 ? Double
                                .parseDouble(editTip.getText().toString()) : 0.0;
                double tax = editTax.getText().length() > 0 ? Double
                                .parseDouble(editTax.getText().toString()) : 0.0;

                if (editCost.getText().length() > 0) {
                        this.setMealCost(Double.parseDouble(editCost.getText().toString()));
                        this.setTipPercentage(tip);
                        this.setTaxPercentage(tax);
                        this.calculateTotalCost();
                }
        }
}
```

activity_main.xml

```xml
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="fill_parent"
    android:layout_height="match_parent"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    tools:context="com.iit.itm455.hw1.tipCalc.MainActivity" >
    <TextView
        android:id="@+id/labelMealCost"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignBottom="@+id/editMealCost"
        android:text="@string/label_meal_cost" >
    </TextView>
    <EditText
        android:id="@+id/editMealCost"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentRight="true"
        android:layout_toRightOf="@+id/buttonCalculate"
        android:editable="true"
        android:enabled="true"
        android:inputType="numberDecimal"
        android:textSize="15sp" >
    </EditText>
    <TextView
        android:id="@+id/labelTaxPercentage"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignBottom="@+id/editTaxPercentage"
        android:text="@string/label_tax_percentage" >
    </TextView>
    <EditText
        android:id="@+id/editTaxPercentage"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/editMealCost"
        android:layout_alignParentRight="true"
        android:layout_below="@+id/editMealCost"
        android:editable="true"
        android:enabled="true"
        android:inputType="numberDecimal"
        android:text="0"
        android:textSize="15sp" >
    </EditText>
         <TextView
        android:id="@+id/labelTipPercentage"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignBottom="@+id/editTipPercentage"
        android:text="@string/label_tip_percentage" >
    </TextView>
    <EditText
        android:id="@+id/editTipPercentage"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/editTaxPercentage"
        android:layout_alignParentRight="true"
        android:layout_below="@+id/editTaxPercentage"
        android:editable="true"
        android:enabled="true"
        android:inputType="numberDecimal"
        android:text="0"
        android:textSize="15sp" >
    </EditText>
    <TextView
        android:id="@+id/labelTotalMealCost"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignBottom="@+id/editTotalMealCost"
        android:text="@string/label_total_meal_cost" >
    </TextView>
    <EditText
        android:id="@+id/editTotalMealCost"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentRight="true"
        android:layout_below="@+id/editTipPercentage"
        android:layout_toRightOf="@+id/buttonCalculate"
        android:editable="false"
        android:inputType="numberDecimal"
        android:textSize="15sp" >
    </EditText>
    <Button
        android:id="@+id/buttonCalculate"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/labelTotalMealCost"
        android:layout_below="@+id/labelTotalMealCost"
        android:layout_marginTop="32dp"
        android:text="CALCULATE"
        android:textSize="15sp" />
</RelativeLayout>
```