



Tip Calculator Android

ATLAS Mobile Makers

Open Android Studio

Create a new Project

Application Name: Tip Calculator

Company Domain: put your name for now

Change the project location to where you want your project to be

Next

Check Phone and Tablet

Minimum SDK: API 16: Android 4.1 (Jelly Bean) - this is subject to change

Next

Choose Empty Activity, not Blank Activity.. surprisingly the blank activity gives you extra stuff you don't need

Next, Finish

If the notification, Unregistered VCS root detected pops up, hit ignore. It's referring to version control, like Git. You can add that later.

Android Studio Map

Check out the Android Studio map to see the main areas you will be working with

<https://github.com/ATLASMobileMakers/AppResources/blob/master/androidmap.pdf>

Adding the Objects

Over on the left-hand side of Android Studio, make sure you have Project and Android selected

Under app → res → layout, double click on activity_main.xml

This is the layout file for the main view you are working with

On the bottom of Android Studio you will find a 'Design' tab and 'Text' tab

The design tab is a preview of the view, and the text tab is the code behind the layout

In the design tab, find the Plain Text object then click and drag onto the view, double click it and type Tip Calculator

You might already have a "Hello World!" text view on the view, you can delete this

Add 3 more labels: Double click them and name them Bill Amount, Percent Tip, and Tip adding them on top of each other

Under Text Fields, add 2 number text fields putting one next to Bill Amount and the other next to Percent Tip

Add another label and put it next to Tip. Double click it and delete the text, it needs to be empty so we can add text later

Add a button to the bottom and double click it to change the text to calculate

Go into the Text tab

Find the empty textview code

Change the id to `android:id="@+id/tip"`

Find the button code

Add `android:onClick="calculateTip"`

Let's Create an Action

On the left-hand side of Android Studio, navigate to app → java → yourname.helloworld → MainActivity

The MainActivity file is the java file behind the view. It essentially holds the actions that occur on the view

Double click on the MainActivity file

Make sure you are inside of the public class MainActivity extends AppCompatActivity{ }

Add the following code



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```
public void calculateTip(View view){

    //Find the elements from the GUI that we want to interact with
    EditText billAmount = (EditText) findViewById(R.id.billField);
    EditText percentTip = (EditText) findViewById(R.id.percentField);
    TextView calculatedTip = (TextView) findViewById(R.id.tipResult);

    //Get values from the EditText input fields
    String billText = billAmount.getText().toString();
    String tipPercentText = percentTip.getText().toString();

    //Parse the values from the EditTexts from strings into doubles
    double bill = Double.parseDouble(billText);
    double tipPercent = Double.parseDouble(tipPercentText);

    //Calculate the tip amount
    double calc = bill*(tipPercent/100);

    //Format the calculated tip amount to have 2 decimal places and cast it
    String formattedCalc = String.format("%.2f", calc);

    //Set the text for the tipResult textView to be the calculated tip amount
    calculatedTip.setText(formattedCalc);
}
```

Run the app.