

## Tip Calculator

Android App Development

10 points

Create a Tip Calculator app that allows the user to enter the bill and tip percent. The tip amount and total are calculated when the user presses the Calculate button.

The UI should look similar to the screenshot on the right where the user has entered a \$35.65 bill with a 15% tip.

Implementation requirements:

- Use a vertical `LinearLayout` to layout the screen widgets.
- The two `EditText` widgets should use `android:inputType="numberDecimal"` so the user may enter a decimal number only.

- Display the tip and total amounts using the `java.text.NumberFormat` class. Example:

```
NumberFormat moneyFormat =  
    NumberFormat.getCurrencyInstance();  
String amount = moneyFormat.format(12.3);
```

- Use `Float.parseFloat()` to parse the floating point numbers entered by the user.
- Use a try-catch to catch a `NumberFormatException` that is thrown by `Float.parseFloat()` when parsing an empty string. Display a toast message when the exception is thrown. Example toast:

```
Toast.makeText(this, "Enter numbers for bill and tip percent.",  
    Toast.LENGTH_SHORT).show();
```

Also clear out the tip amount and total values if the exception is thrown.

- Place all text from the UI in `strings.xml`.

Earn **2 bonus** points for removing the Calculate button and having the tip amount and total calculate automatically as the user types the values. To accomplish this, you'll need to create a class that implements the `android.text.TextWatcher` interface.

Zip your entire project and submit the zip file to Easel.

