Tip Calculator:

This application was submitted for the requirement of assignment 1 of CSCI 5708 course at Dalhousie University.

Overview:

The application is contained in 3 files, styles.xml, activity_main.xml and MainActivity.kt.

Styles.xml file contains all the style formatting for the buttons in the application. TextView of buttons inherit their style from styles.xml file.

Activity_main.xml file contains the layout of the application. The application is enclosed in a constraint layout which enables it to reshape into any screen shape or size. The main constraint layout has 2 child layouts. The upper half is structured in grid layout which shows the user their tip and other information, whereas lower half is organized in a vertical linear layout. The vertical layout is further subdivided into five horizontal linear layouts.

MainActivity.kt contains all the brain of the app and handles all the calculation and error handling required for the app.

Bugs:

The application is not designed or implemented to work in landscape mode and is best functioning in portrait mode only.

If the user enters incorrect which might lead the application to crash, the application clears all the value from text boxes and the user must re-enter all the values again. This is implemented to stop runtime failure.

Fixed Bugs:

The user can't enter more than one decimal points. The decimal point is only added if the expression does not contain a decimal point otherwise it returns without updating the expression.

References:

[1] Code Android, *How to create calculator using Android Studio - Kotlin*. 2018.

[2] filter4u, *How to Create Tip Calculator Application in Android Studio.* 2020.

[3] Nielsen, J. (1994b). Enhancing the explanatory power of usability heuristics. Proc. ACM CHI'94 Conf. (Boston, MA, April 24-28), 152-158.

[4] materialdesignicons.com, *backspace Google.* .