ECSE 324 - Lab 3 Report

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**Part 1: Calculator**

**Code Overview**

My calculator starts with a brief setup where 0’s are written to all 6 HEX displays and the result variable is instantiated to 0. Then, it polls the button for a button press. Once a button is pressed, control flow will be diverted to the subroutine corresponding to the button. This subroutine disables all the other buttons and polls for a release. Once the release is detected, it conducts the rest of its operations which include computing the result and updating the HEX displays accordingly. As a side note, the result of my calculator is permanently stored within A4. Therefore, my subroutines do not use A4 as a regular argument register since I do not want to overwrite it unknowingly.

**Performance Analysis**

The main concern when it comes to performance for the calculator is the necessary conversion form hexadecimal to decimal or BCD (binary-coded decimal).