**Calculator** - This app does what a basic calculator does and a few more things.

**Link to live demo:** TBI

Source code: <https://github.com/vernonlouie/calculator>

**Features:** [feature examples](https://docs.google.com/spreadsheets/d/1HRpRqdyQrax5vgwrVatcOxSxly6GHXXfZuzc0lb9Tfg/pubhtml)

a) basic operations (addition, subtraction, division, multiplication)

b) comprehensive operations (successive, decimals, multiple decimals, multiple operation, changing operation, operation repeat, operation rollover, successive multi operation, division by zero)

c) advanced operations 1 (premature operation, partial operand, missing operation, missing operand)

d) advanced operations 2 (order of operations, parentheses, negative numbers)

**Planned Additions**

1) correct known bugs

a) negative with open parenthesis. e.g. -(8+4)=

b) division by positive decimal number between 0 and 1. e.g. 52/0.344=

2) memory function - place answer into memory and recall when needed

3) programming this later as a state machine

**What I Learned**

- Code that is repeated should be moved into a function and called as a function. This minimizes code length and makes for easier reading.

- I have a much better understanding of the sequencing of if - else if conditional statements.

- How to access properties of an object.

- How to manipulate an array and array operations.

- How to increment a "for loop" nontraditionally.

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- Programming calculators is not easy, especially when accounting for user errors.

**Screenshots**

