

Functional

- GUI should clearly indicate when the Simulator is in Editing Mode and Execution Mode
- GUI should instruct the user on how to format input
- GUI should prompt user when input is required while in Execution Mode
- GUI should indicate where an error occurred, and what type of error
- GUI should display a memory dump upon program termination to allow the user to verify that their program ran correctly
- System should detect incorrect inputs and allow the user to attempt another input without terminating the program
- System should handle overflow without errors
- System should be able to do more than basic arithmetic (roots, exponents, etc)
- Additional command to return to Editing Mode
- GUI should warn the user when doing arithmetic that results in non-integer answers
- Ask the user if they want to restart the program or terminate it after displaying memory dump

Non-Functional

- Built in test cases that the user can test their code against
- GUI should indicate to the user how much memory is remaining
- Save/Load programs to/from text documents
- Keep a log of all program entries for future reference