Functional Requirements

1. The system shall support a 100-word memory for BasicML words.
2. The system shall read a word from the keyboard into a specific location in memory if the first two digits of the BasicML word equals 10.
3. The system shall write a word from a specific location in memory to the screen if the first two digits of the BasicML word equals 11.
4. The system shall load a word from a specific location in memory into the accumulator if the first two digits of the BasicML word equals 20.
5. The system shall store a word from the accumulator in a specific location in memory if the first two digits of the BasicML equals 21.
6. The system shall add a word from a specific location in memory to the word in the accumulator, leaving the result in the accumulator if the first two digits of the BasicML word equals 30.
7. The system shall subtract a word from a specific location in memory from the word in the accumulator, leaving the result in the accumulator if the first two digits of the BasicML equals 31.
8. The system shall divide the word in the accumulator by a word from a specific location in memory, leaving the result in the accumulator if the first two digits of the BasicML equals 32.
9. The system shall multiply a word from a specific location in memory to the word in the accumulator, leaving the result in the accumulator if the first two digits of the BasicML equals 33.
10. The system shall branch to a specific location in memory if the first two digits of the BasicML equals 40.
11. The system shall branch to a specific location in memory if the accumulator is negative and the first two digits of the BasicML equals 41.
12. The system shall branch to a specific location in memory if the accumulator is zero and the first two digits of the BasicML equals 42.
13. The system shall stop the program if the first two digits of the BasicML equals 43.
14. The system shall automatically add a plus sign to a user input integer that is not specified to be negative.

15. The system shall support a 100-word memory for BasicML words.
16. If a user's input is not accepted the system shall allow them to enter input again to correct the mistake.
17. The system shall display all registers and the accumulator for users to see.
18. The system shall allow users to manually edit registers.

Non-Functional Requirements

1. The system shall be created with a consistent and modest color scheme.
2. The system shall operate without unexpected crashes.
3. The system shall include documentation to help users understand BasicML vocabulary.
4. The system shall have properly labeled controls.
5. The system shall have an intuitive workflow.