15 functional requirements

1. The system shall read through any provided .txt file

2. The system shall store strings 4 digits long with a + or - in front into memory ex: +0000

3. The system shall skip any line that does not follow format

4. The system shall iterate through loaded memory and act depending on the number string loaded

5. The system shall read the first two digits of the word as instructions (opcode)

6. The system shall read the last two digits of the word as a memory locations

6. The system shall have an accumulator to temporarily hold a number string

7. The system shall read a word input from the user into memory when the opcode is 10

8. The system shall write a word to the screen from memory when the opcode is 11

9. The system shall load a word from memory into the accumulator when the opcode is 20

10.The system shall store a word from the accumulator into memory when the opcode is 21

11.The system shall have the memory's capacity be from 0 to 99

12.The system shall ADD a word from memory with the word in the accumulator and leave it in the accumulator when the opcode is 30

13.The system shall SUBTRACT a word from memory with the word in the accumulator and leave it in the accumulator when the opcode is 31

14.The system shall DIVIDE a word from the accumulator with a word in memory and leave it in the accumulator when the opcode is 32

15.The system shall MULTIPLY a word from the accumulator with a word in memory and leave it in the accumulator when the opcode is 33

3 Non-functional requirements

1.The system shall have a user interface that is clear and easy to use

2.The system shall run on any computer that has java installed

3.The system shall complete operations within 1 second