Instructions on how to start the Turing Assembler:

1)Place the turing machine file(something.TM) you wish to run inside the folder containing TuringAssembler.hs

2)You can start the Turing Assembler file by
either double clicking or opening the game file labeled TuringAssembler.hs

3)Once open, you type 'main' at the prompt to launch the program.

4)Type the name of your turing machine file at the prompt.

5)Type the word you wish to test at the prompt.

The turing machine should execute printing out a trace of the machine and then prompting another turing machine file. If the file contains an error of some kind, the program will exit and you will have to check the appropriate error and begin from step 3.

NOTE: AN ERROR MAY NOT BE DETECTED UNTIL AFTER YOU INPUT A WORD.
If an element in the word given does not appear in the TMs alpha, the turing machine will run but automatically reject once it reaches the point in the word where the unknown character appears

The turing machine file should match the following form.
The program will remove beginning whitespace and comments, but the first six lines that are not removed should match the pattern under initialization. (Labels should be in the same order, encompassed by {}, correct and all lowercase, followed by ": " before beginning the list of states/alphas. Alphas should only be one character each. Main should only reference rRl, rLl, rRt, rLt, rwRt, or rwLt, followed by 2,2,3,3,4 or 4 commands respectively and ending with a semicolon.)

                     -- Initialization:
{states: Q0,Q1,Q2,Q3,Q4,Q5,Q6,Q7,A,R}
{start: Q0}
{accept: A}
{reject: R}
{alpha: 0,1,#}
{tape-alpha: 0,1,#,x}

--Main Algorithm:
-- 0:
rwRt Q0 0 x Q1;   --Read, Write, Right, Transition.
rRl Q1 0;

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rRl Q1 1;
rRt Q1 # Q3;
rRl Q3 x;
rwLt Q3 0 x Q5;

--        1;
rwRt Q0 1 x Q2;
rRl Q2 0;
rRl Q2 1;
rRt Q2 # Q4;
rRl Q4 x;
rwLt Q4 1 x Q5;

--        Find #;
rLl Q5 x;
rLt Q5 # Q6;

--        Reset;
rLl Q6 0;
rLl Q6 1;
rRt Q6 x Q0;

--        Accept:
rRt Q0 # Q7;
rRl Q7 x;
rRt Q7 _ A;
```