

1. Download and install the MARIE simulator.
<https://cs2.uco.edu/~trt/cs2833/MarieSim.jar>
Right-click and download
2. Create your MARIE assembler program using Notepad. Here is a MARIE assembler program that outputs "Hello World!"

```

    LOOP,    ORG 100           /Start at HEX 100
             LOAD SADDR       /Load the address of the string, SADDR
             ADD ONE          /Add 1 to the string address, SADDR
             STORE SADDR      /Save the current value of the
                               /string address
             LOADI SADDR      /Load the character referenced by the
                               /string address
             SKIPCOND 800     /If the character is not equal to 0,
                               /the sentinel continue the loop
             HALT             /Stop, all characters have been output
             OUTPUT           /Output the current character
             JUMP LOOP        /Do it again.
    ONE,     HEX 1             /Increment value
    SADDR,   HEX 109          /String address
    S,       HEX 48           /Letter 'H' and the beginning of the
                               /string
             HEX 65           /Letter 'e'
             HEX 6C           /Letter 'l'
             HEX 6C           /Letter 'l'
             HEX 6F           /Letter 'o'
             HEX 20           /Letter ' '
             HEX 57           /Letter 'w'
             HEX 6F           /Letter 'o'
             HEX 72           /Letter 'r'
             HEX 6C           /Letter 'l'
             HEX 64           /Letter 'd'
             HEX 21           /Letter '!'
             HEX 0            /Sentinel marking the end of the
                               /string

```

Figure 1. A MARIE Assembler Program that outputs "Hello World!"

3. Edit and assemble your program.
 - 3.1. Double-click file MarieSim.jar and select Edit.

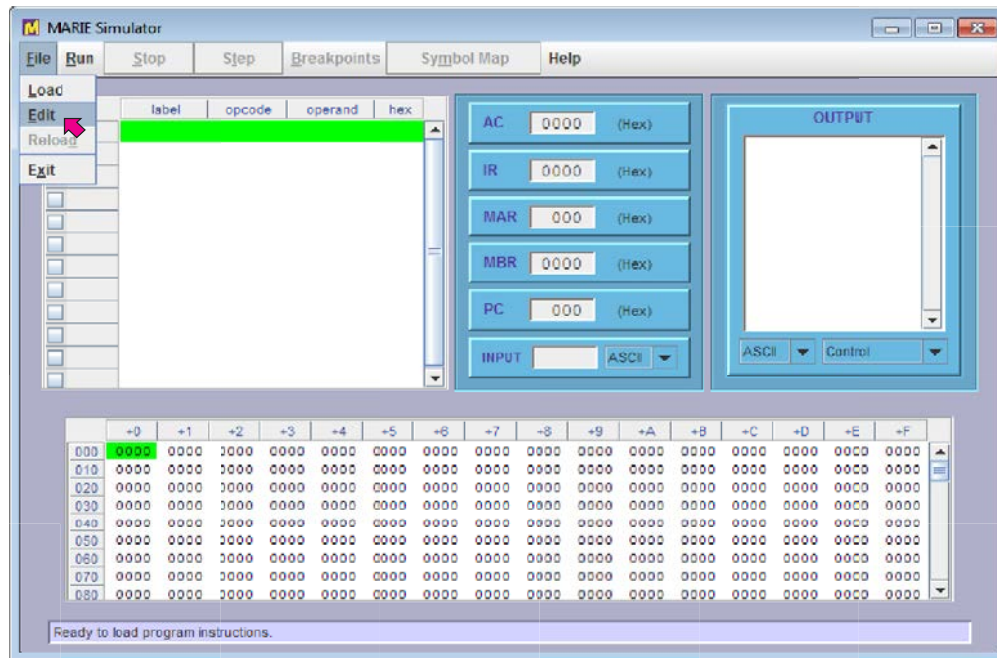


Figure 2. Editing File HelloWorld.mas, Step 1.

- 3.2. Select File | Open.

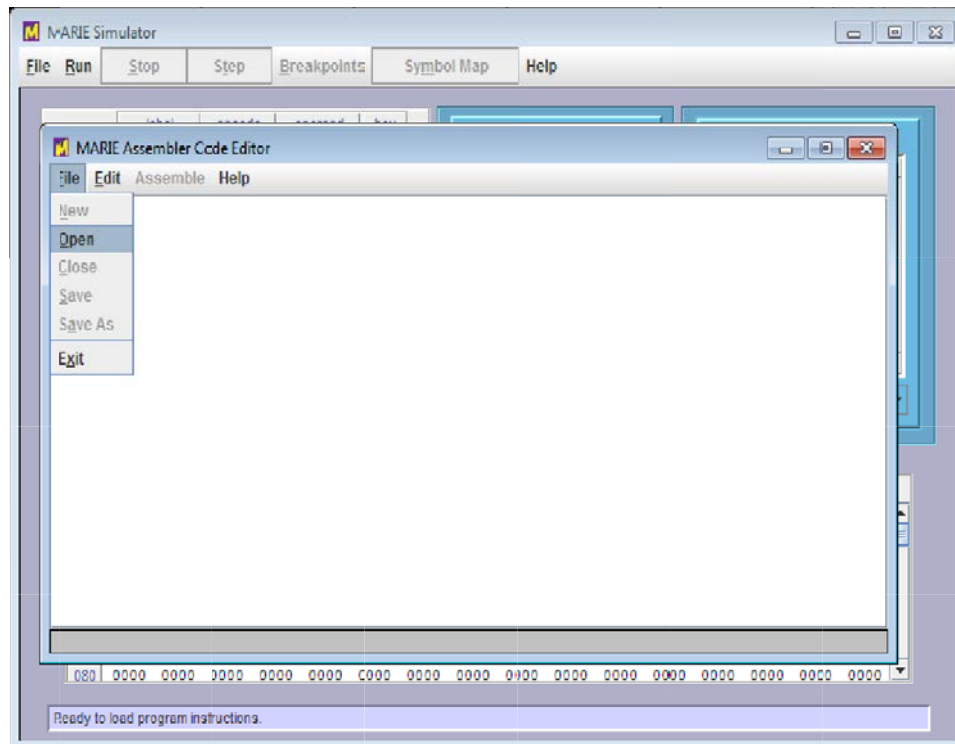


Figure 3. Editing File HelloWorld.mas, Step 2

3.3. Select File | Open.

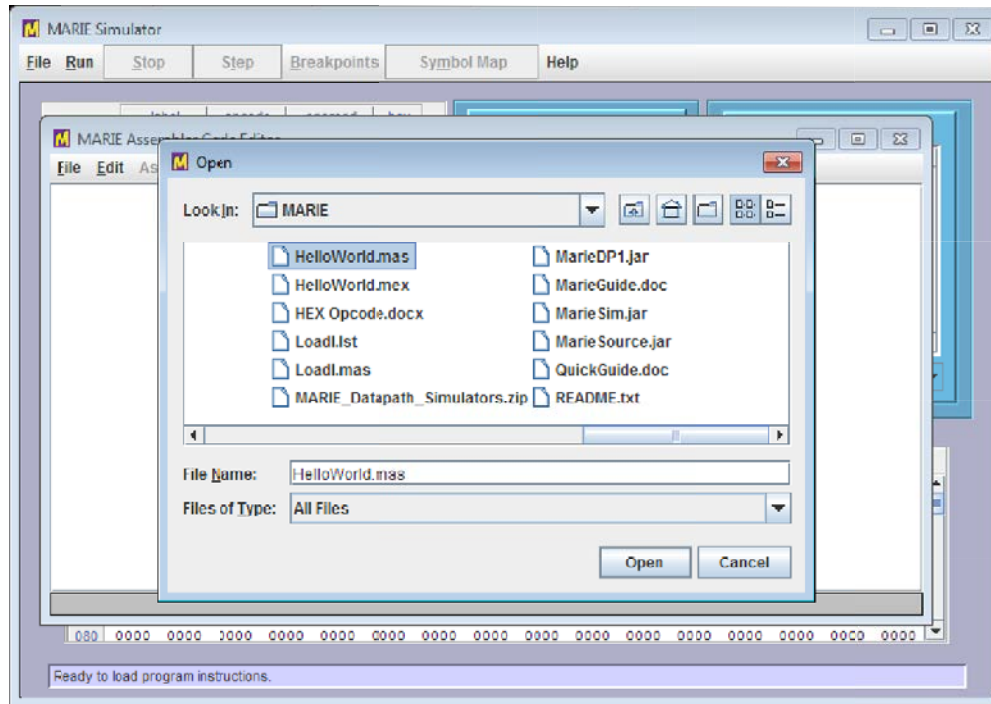


Figure 4. Editing File HelloWorld.mas, Step 3

3.4. Select Assembler.

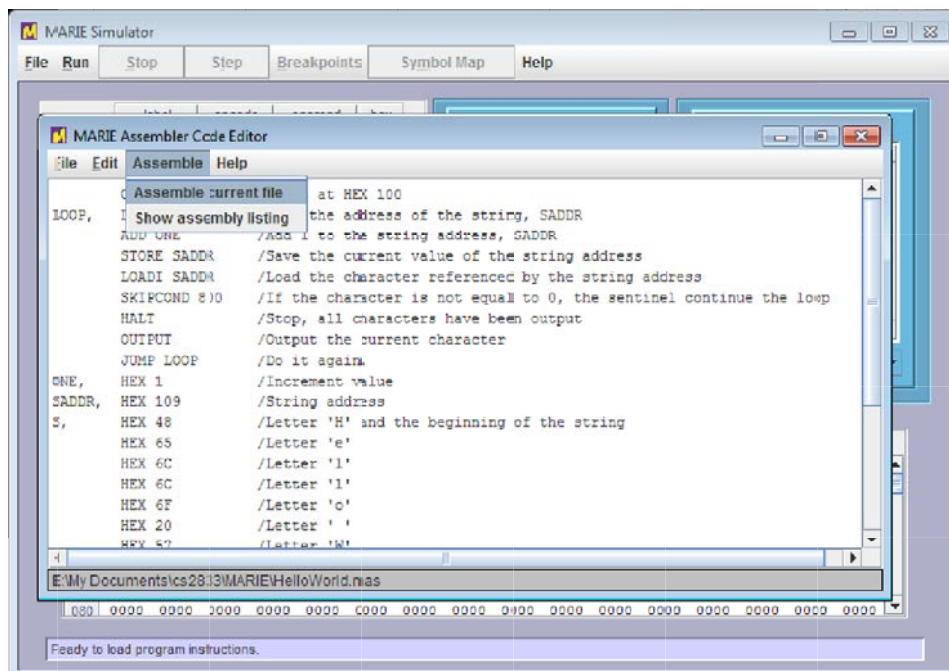


Figure 5. Assemble File HelloWorld.mas

4. Load and execute your program.
 - 4.1. Load your program. Select File | Load

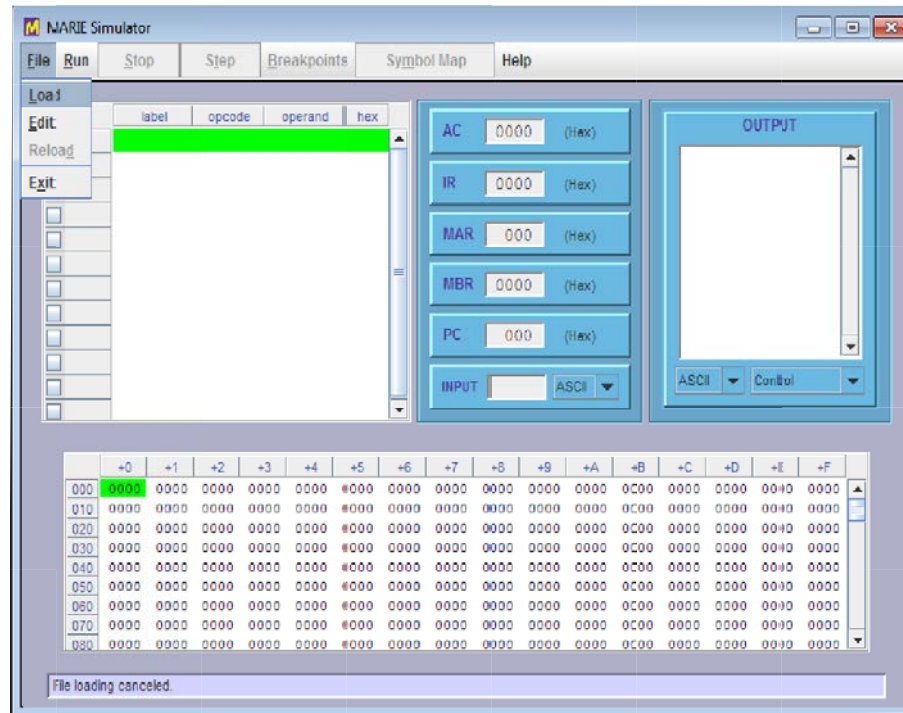


Figure 6. Load File HelloWorld.mex, Step 1

- 4.2. Select the file you wish to execute and click the open button.

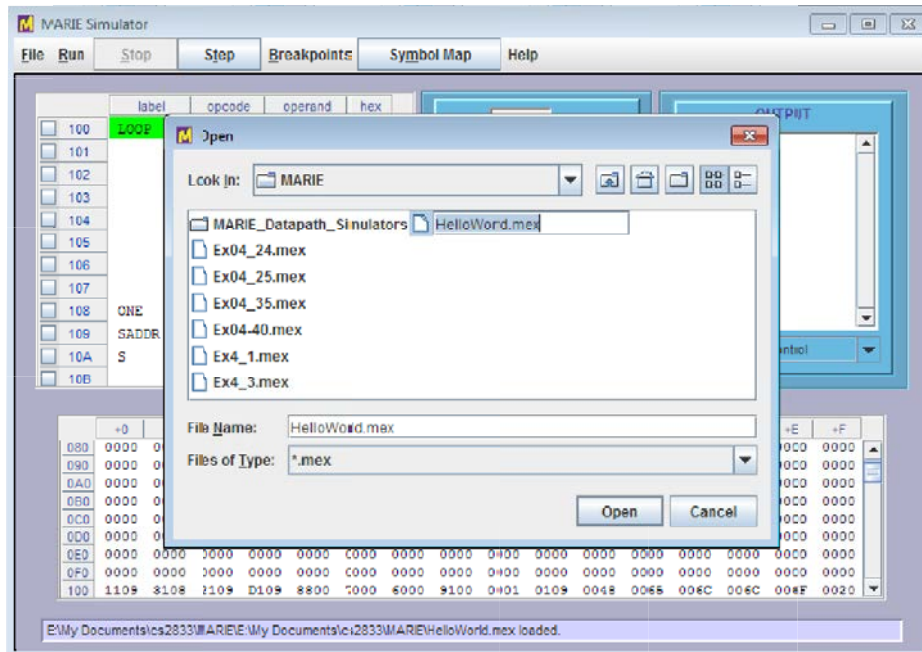


Figure 7. Load File HelloWorld.mex, Step 2

4.3. Click Step.

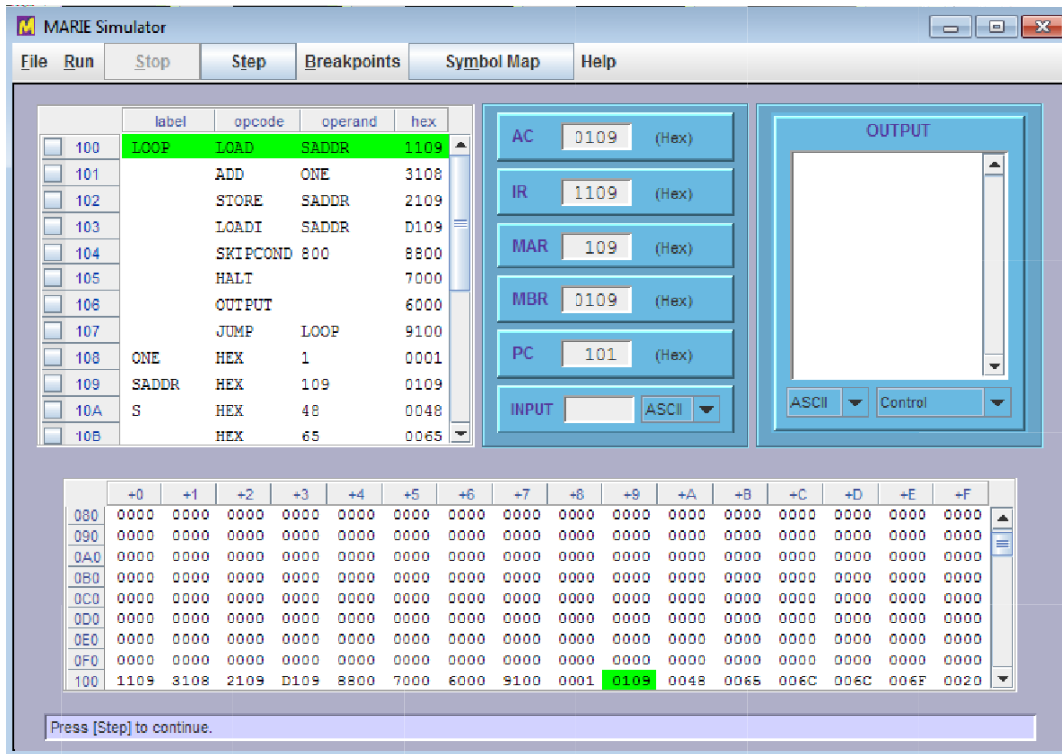


Figure 8. Load File HelloWorld.mex, Step 3