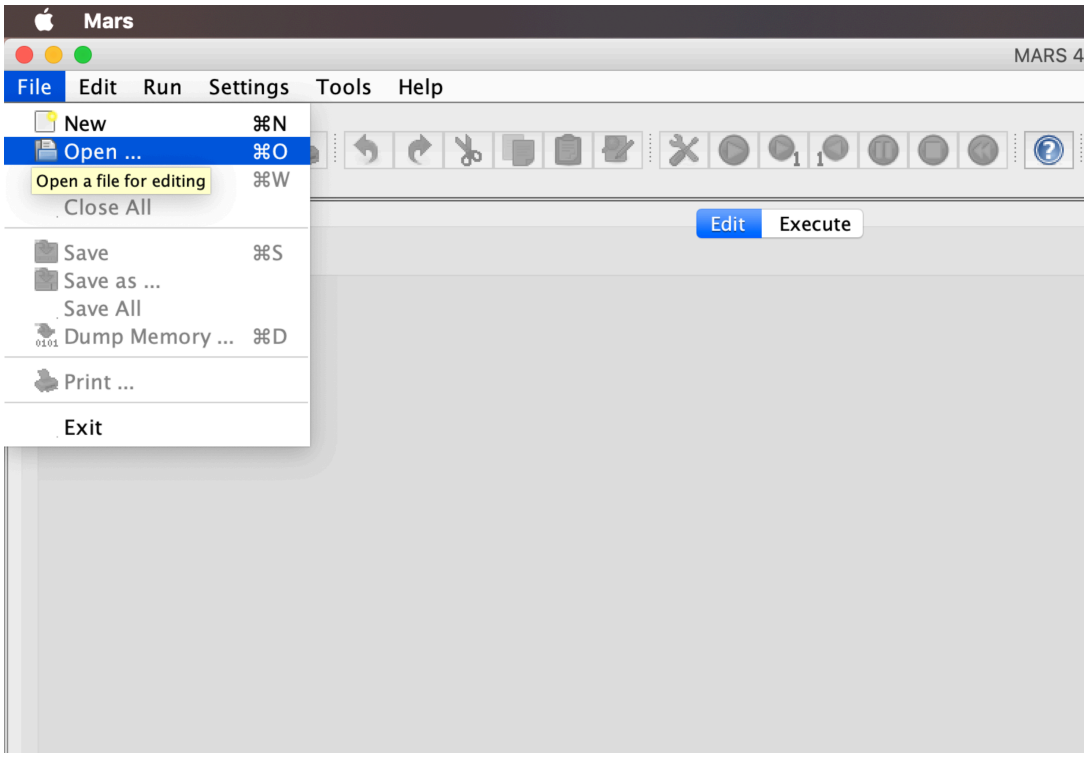
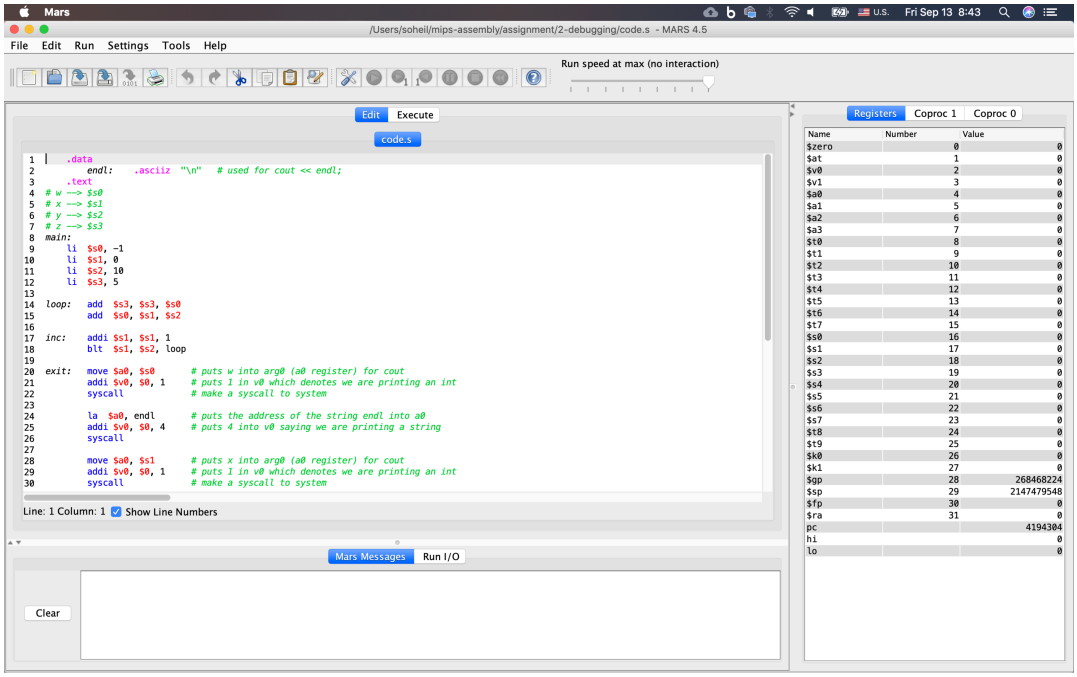
Assignment Directions – Mars Version

Please make sure to read the general assignment instruction. This document only explains the steps for setting a breakpoint in mars.

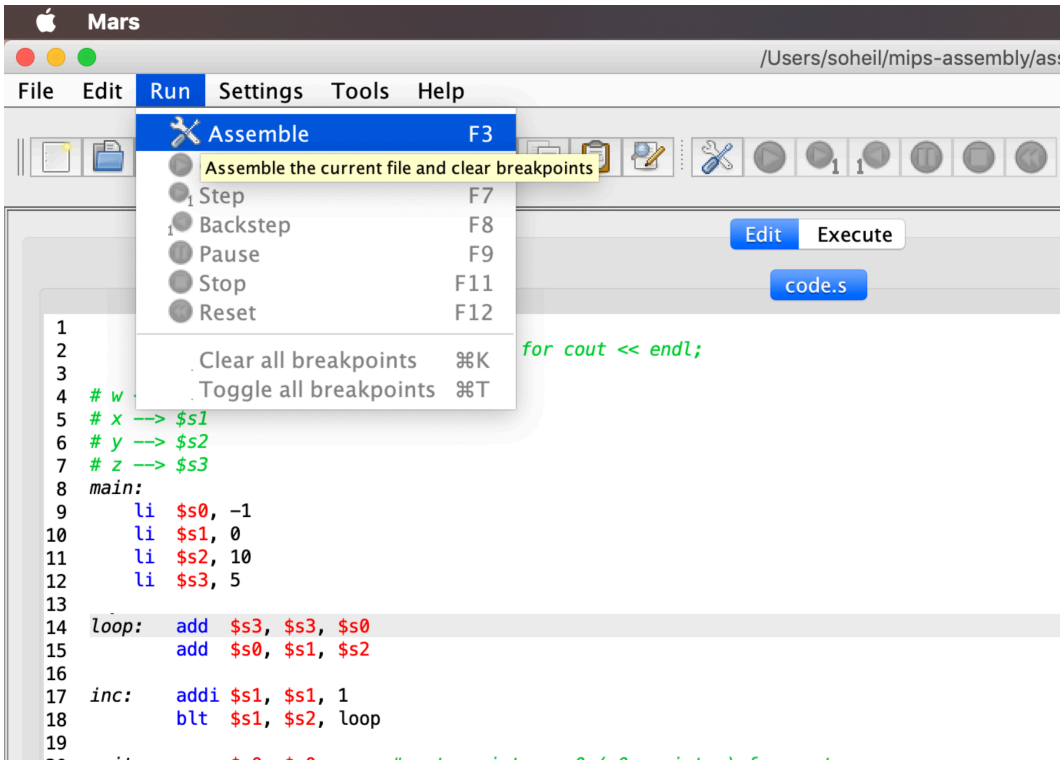
- Load the code.s file you into Mars. This can be done via the ”Open” button from the File menu.



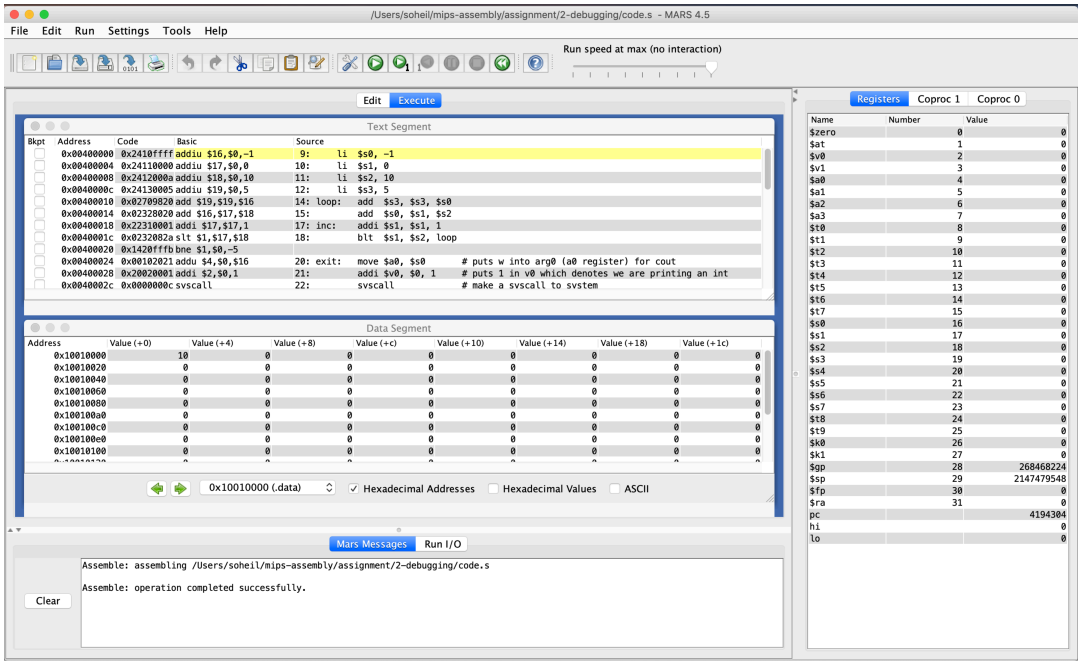
You will get the following screen:



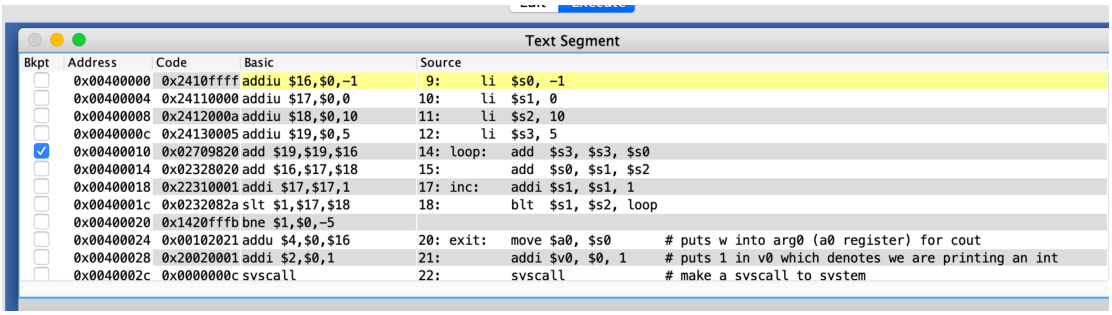
- From the Run menu select “Assemble”. This will compile the assembly code into machine code.



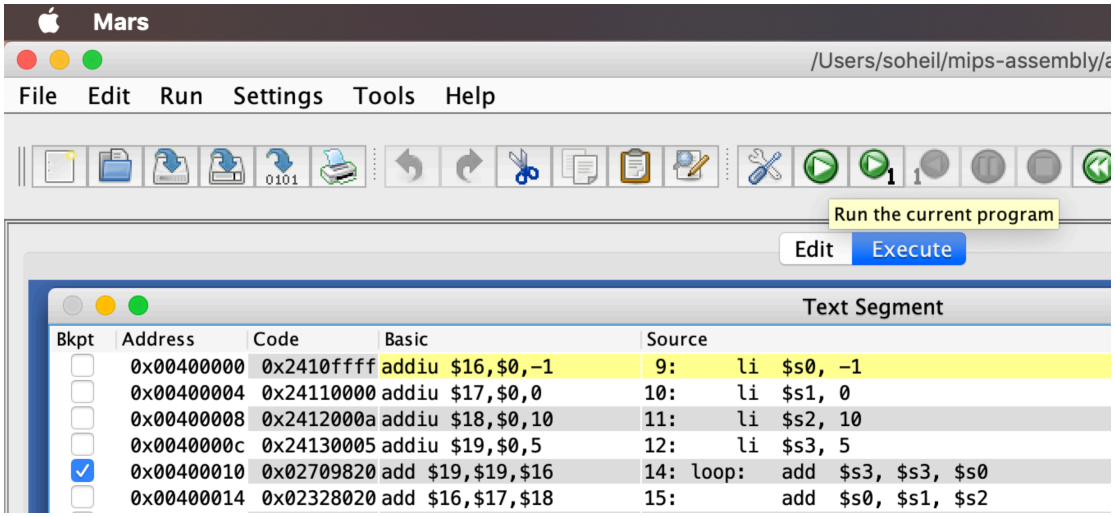
You should get the following screen:



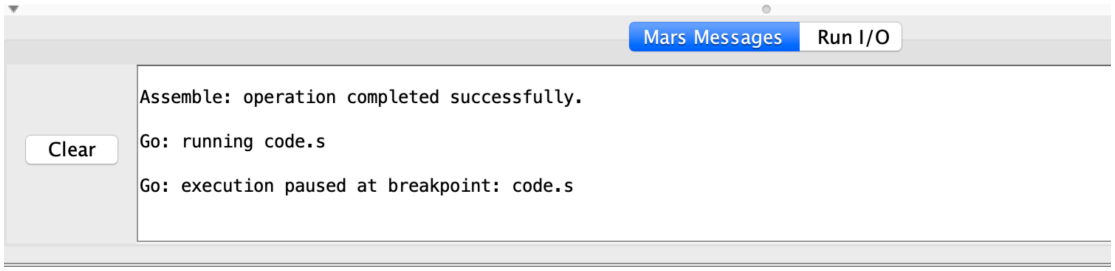
- Set a breakpoint at the loop label. This at line 14 in the assembly source code file. It contains the instruction add $s3, $s3, $s0. A breakpoint can be set in Mars by clicking on the Bkpt column of that line.



- Click the play button in the top toolbar to run the MIPS program.



- The execution should pause saying ”Execution has paused at breakpoint”. Figure below



- Looking to your right on the GUI, you will see a list of registers. Find the registers being used in the program. These are $s0 to $s3. Here you can view the values. To make things easier, you can see the values in demical by unchecking the option “values displayed in hexadecimal” from the settings menu. Before continuing execution, you will want to write down the values of the four registers. Make sure to use the format described earlier in this document (QTSPIM Version).

$s0	16	-1
$s1	17	0
$s2	18	10
$s3	19	5

- Repeat this step. Press the play button and write the values for every time the program execution stops on the loop label. Repeat this until the program finishes.

When you have completed the assignment please upload your properly formatted .txt file to ilearn under the Project 2 section. PLEASE MAKE SURE YOUR FILE IS A .txt FILE AND NOTHING ELSE. ANY OTHER FILE TYPE SUBMITTED WILL BE IGNORED.