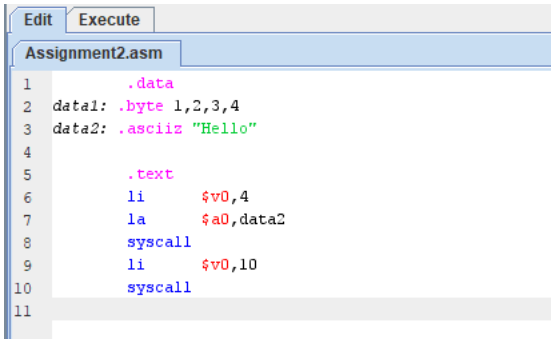


Open the (installed) MARS simulator. Open the source code “Assignment2.asm”. Save the file, then click “Run->Assemble”. Try to explore the different views including the text segment, data segment, I/O window, and registers. Then answer the followings:

1. What is the purpose of line 1?
   ***To define the start of the data segment***

2. What is the purpose of line 5?
   ***To define the start of the text segment***

3. What is data1?
   ***data1 is a label that points to the first data being stored in the data segment. data1 is defined as 4 bytes data i.e. 0x01,0x02,0x03,0x04***

4. What is the difference between line 2 and line 3 in terms of the data stored in the data segment?
   ***Line 2 stores data1 defined in byte format, whereas line 3 stores data2 defined in ascii format***

5. Where is data1 stored? What is the address of data1?
   ***data1 is stored in the data segment at address 10010000-10010003***

6. Where is data2 stored? What is the address of data2?
   ***Data2 is stored in the data segment at address 10010004-1001009 (including the null byte)***

7. What happens after line 6 is executed?
   ***$v0 is loaded with value 0x00000004, i.e. $v0=0x00000004***

8. What happens after line 7 is executed?
   ***$a0 is loaded with the address of data2, i.e. $a0=0x10010004***

9. What happens after line 9 is executed?
   ***$v0 is loaded with value 0x0000000a, i.e. $v0=0x0000000a***

10. Based on the syscall services table, what are the purpose of lines 6-8?
    ***To print string. The string to be printed is initialised/stored in data2, i.e. string is “Hello”***