# **Assignment directions**

Load the SPIM program file ***bytes.s*** into the SPIM simulator, and study how the data are stored in primary storage/RAM—(in binary, but rendered as hexadecimal, with 16 bytes per row).

# **Save the execution state**

From the file menu, select **Save Log File**, and name it ***bytes.log*.**

# **Fill in the Table Below**

In the table below, fill in the column under ***Stored value*** **(in blue)** to show the stored data, 2 hex digits per memory address. Verify that the hexadecimal pairs already entered **in red** are correct.

# **Due Monday, 24 October 2011**

Submit to Blackboard in the Assignments folder the following:

1. A copy of this document with the table, below, filled in to show the stored data.
2. A word document ***bytes.docx*** containing (more detail to be given in class on Friday):
   1. The program source code for your SPIM program in store ***bytes.s***.
   2. From your ***bytes.log,*** a copy of the portion of the Data Segment that shows how SPIM stores the data.

|  |  |  |
| --- | --- | --- |
| Storage Allocation in RAM for “bytes.s” | | |
| Memory address | **Stored value** | **Decimal source** |
| 0x010010000 | **F1** | **-15** |
| 0x010010001 | **F2** | **-14** |
| 0x010010002 | **F3** | **-13** |
| 0x010010003 | **F4** | **-12** |
| 0x010010004 |  | -11 |
| 0x010010005 |  | **-10** |
| 0x010010006 |  | **-9** |
| 0x010010007 |  | **-8** |
| 0x010010008 |  | **-7** |
| 0x010010009 |  | **-6** |
| 0x01001000A |  | **-5** |
| 0x01001000B |  | **-4** |
| 0x01001000C |  | **-3** |
| 0x01001000D |  | **-2** |
| 0x01001000E |  | **-1** |
| 0x01001000F |  | **0** |
| 0x010010010 |  | **1** |
| 0x010010011 |  | **2** |
| 0x010010012 |  | **3** |
| 0x010010013 |  | **4** |
| 0x010010014 |  | **5** |
| 0x010010015 |  | **6** |
| 0x010010016 |  | **7** |
| 0x010010017 |  | **8** |
| 0x010010018 |  | **9** |
| 0x010010019 |  | **10** |
| 0x01001001A |  | **11** |
| 0x01001001B |  | **12** |
| 0x01001001C |  | **13** |
| 0x01001001D |  | **14** |
| 0x01001001E |  | **15** |