**EENG 3040 Microprocessors**

**In Class Exercise 4**

**To be done during the lecture period on September 9, 2015**

* Complete the following table of bits to put into PORTD in order to display the numbers 0-9 on a seven-segment display



|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Value** | **DP** | **G** | **F** | **E** | **D** | **C** | **B** | **A** | **Hex** |
| **0** | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | C0 |
| **1** | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | F9 |
| **2** | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | A4 |
| **3** | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | B0 |
| **4** | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 99 |
| **5** | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 92 |
| **6** | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 82 |
| **7** | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | F8 |
| **8** | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 80 |
| **9** | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 90 |

* Download the sample code posted to Blackboard that displays the values 012345 and modify it so that it displays your birthdate in the format MMDDYY using a 2-digit month, 2-digit day, and 2-digit year. You will likely need to change literals and extend the table. As an example, if your birthdate were May 3, 1995 you would put 050395.

**When you have completed both this worksheet and modified the code, upload this worksheet and the modified .asm file to Blackboard.**