**Lab 11 Worksheet Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**LCD Interface Instruction/Data Examples**

**Part I**

|  |  |  |
| --- | --- | --- |
| **Commands written to the LCD (RS=0, RW=0)** | **DB7 … DB0 (Binary)** | **DB7 … DB0 (Hex)** |
| Clear the screen | 0b | 0x |
| Display is on with a blinking cursor | 0b | 0x |
| Display is on with a solid cursor | 0b | 0x |
| Cursor is moved to top row, 3rd position (DDRAM Addr) | 0b | 0x |
| Cursor is moved to bottom row, 1st position | 0b | 0x |
|  |  |  |
| **Commands read from the LCD (RS=0, RW=1)** | **DB7 … DB0 (Binary)** | **DB7 … DB0 (Hex)** |
| Cursor is at the top row, 3rd position and the LCD is not ready for the next operation (busy) | 0b | 0x |
| Cursor is at the top row, 3rd position and the LCD is ready for the next operation | 0b | 0x |
| Cursor is at the bottom row, 1st position and the LCD is not ready for the next operation (busy) | 0b | 0x |
| Cursor is at the bottom row, 1st position and the LCD is ready for the next operation | 0b | 0x |
|  |  |  |
| **Data Written to the LCD (RS=1, RW=0)** | **DB7 … DB0 (Hex)** | |
| The ASCII code for character ‘H’ | 0x | |
| The ASCII code for character ‘i’ | 0x | |
| The ASCII characters codes for your first name (in Hex) |  | |
|  |  | |

**Part II Verification Screenshot:**

**Part IV / V Checklist:**

* *Source Code (readably formatted with comments)*
* *Screenshot of first several EN pulses & comments on each*
* *Video submission (link above)*