Your task in this assignment is to build a program in assembly language for the Arduino that uses the LED marked "L" to convey a message in Morse code. When hosted on the Arduino, your program must run in a continuous loop that blinks the Morse code sequence corresponding to the last 4 digits of your UI student ID and then delay with the LED off for 5 Morse code units. The length of a Morse code unit shall be 1 second in your program. For instance, if your student ID is ktjg8071, your program must run in a continuous loop that blinks the Morse code sequence for "8071", delays with the LED off for 5 Morse code units, and then goes back to the beginning of the loop.

You may not use the inline assembly facilities built into the Arduino IDE to complete this assignment. Please name the file containing your program hw6.asm. When your program is complete, email a copy of it to your instructor. Please ensure that you place your name in a comment at the top of your program before you turn it in. You are required to turn in only your source code for this assignment. The work you submit for this assignment must be entirely your own.

Please see http://en.wikipedia.org/wiki/Morse_code for a tutorial on Morse code. A reference card depicting the Morse code alphabet is contained on the next page of this assignment.

**Extra Credit**

If you would like to extra credit for this course, translate your finished assembly language program into machine code. If you choose to do this extra credit, you must turn in both your assembly language and machine code programs. Your machine code program should be named hw6.bin if using binary, or hw6.hex if using hexadecimal.
International Morse Code

1. The length of a dot is one unit.
2. A dash is three units.
3. The space between parts of the same letter is one unit.
4. The space between letters is three units.
5. The space between words is seven units.