Bowei Zhao
HW5 Submission

ECE 2534 – Homework 5 (55 points)
A/D Conversion, Interrupt Service Routines, Glyphs and OLED Graphics
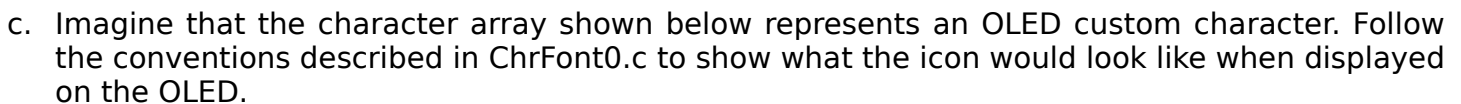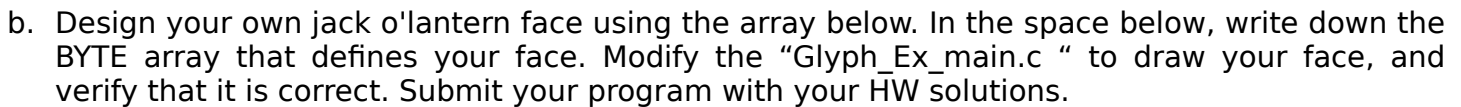
For each problem, write the code that solves the problem in its own .c file. Name your files accordingly: hw5_problem2, *etc*. Give consistent names to any header files you produce for the purpose of completing this assignment.

Submit a document containing your answers to Problem 1 and a zipped archive containing the source code for Problem 1b and 2. Use this naming convention for the archive that you submit:

<Last name>_<First name>_HW5.zip

Replace <Last name> and <First name> by your family name and given name respectively.

Problem 1 (15 points)

a. Imagine that the "icon" shown below is to be mapped to the OLED as a custom character. Follow the conventions described in ChrFont0.c to create the array that would display the icon as a character on the OLED.

BYTE problem1a[8] =   { 0x00, 0x64, 0xC6.0x90, 0x90, 0xC4, 0x66,0x00}

b. Design your own jack o'lantern face using the array below. In the space below, write down the BYTE array that defines your face. Modify the "Glyph_Ex_main.c " to draw your face, and verify that it is correct. Submit your program with your HW solutions.

	X	X			X	X	
	X	X			X	X	
			X				
	X	X	X	X	X	X	

BYTE problem1b[8] =   { 0x00, 0x46, 0x46, 0x50, 0x40, 0x46, 0x46, 0x00}

c. Imagine that the character array shown below represents an OLED custom character. Follow the conventions described in ChrFont0.c to show what the icon would look like when displayed on the OLED.

BYTE problem1c[8] = {0xFF, 0x18, 0x18, 0xFF, 0x00, 0xFA, 0x1C, 0xBF}

X			X				X
X			X		X		X
X			X			X	X
X	X	X	X		X	X	X
X	X	X	X		X	X	X
X			X		X		X
X			X		X		
X			X		X		X