This past week I continued to work on the processing code for the monitor, as well as began looking into the speech module and how it will connect to our system. I began to work with MPLab and the microchip education board, but some technical difficulties with MPLab arose which prevented me from downloading my LCD code to the microprocessor. Hopefully this issue will be resolved sometime this week, because I would like to start working with MPLab and the “Hi-Tech” compiler together. Even if we get MPLab to work this will not yet be possible, because we still have not obtained the registration key for the “Hi-Tech” compiler that we are going to use to convert our code to C. I would like to get this situation resolved by the end of the week at the latest. I used the assembly language code I previously wrote for the A/D converter as a template for my A/D code in C. Below is a sample, un-compiled A/D converter code I wrote.

```c
#include <pic.h>
#include "delay.h"

void initA/D(void)
{
    ADCON0=65;    // select Fosc/32
    ADCON1=128;   // select right justify result. all A/D port configuration
    ADON=1;       // turn on the A2D conversion module
    DelayUs(50);  //using delay.h – 50us
}

/* Return an 10 bit result */

unsigned int ReadADC(unsigned char ADC_Channel){
    volatile unsigned int ADC_VALUE;

    /* Selecting ADC channel */
    ADCON0 = (ADC_Channel << 3) + 1;  /* Enable ADC*/
    ADIE = 0;                         /* Masking the interrupt */
```

ADIF = 0; /* Resetting the ADC interrupt bit */
ADRESL = 0; /* Resetting the ADRES value register */
ADRESH = 0; /* Staring the ADC process */
ADGO = 1; /* Staring the ADC process */
while(!ADIF) continue; /* Wait for conversion complete */

ADC_VALUE= ADRESL; /* Getting HSB of CCP1 */
ADC_VALUE+= (ADRESH << 8); /* Getting LSB of CCP1 */
return (ADC_VALUE); /* Return the value of the ADC process */
}

In terms of the Windbond speech module, it will utilize USART (Universal Synchronous Asynchronous Receiver). In doing this, the RX and TX pins on the speech module will be connected to the RC6/TX and RC7/RX pins on the microprocessor, which is shown below.
Future Work

Work on the microprocessor has been going a little slower than planned. I believe this is partly due to the fact that both MPLab and Hi-Tech is unavailable. Once Hi-Tech becomes available, I will be able to work with the compiler, and hope I will not have any problems integrating the two. So far, I have pieces of the LCD code and the A/D conversion code. I have an idea of how to revise it to our design specifications, but it is going to take more work. My current goal is to have working code for 6 analog inputs for the A/D converter before spring break.

Total Hours Worked: 16