


```
#include <pic.h>

__CONFIG(FOSC_HS & WDTE_OFF & PWRTE_ON & BOREN_OFF & LVP_OFF);

#define _XTAL_FREQ 20000000

#define RS RD0

#define RW RD1

#define EN RD2


int adc;


void interrupt adcc() {

    if (ADIF == 1) {

        __delay_ms(100);

        adc = (ADRESH << 8);

adc=adc + ADRESL;

        ADIF = 0;

    }

}
```

```
void lcd_data(unsigned char data) {  
    PORTC = data;  
  
    RS = 1;  
  
    RW = 0;  
  
    EN = 1;  
  
    __delay_ms(5);  
  
    EN = 0;  
  
}
```

```
void lcd_command(unsigned char cmd) {  
    PORTC = cmd;  
  
    RS = 0;  
  
    RW = 0;  
  
    EN = 1;  
  
    __delay_ms(5);  
}
```

```
EN = 0;
```

```
}
```

```
void lcd_string(unsigned char *s, unsigned char len) {
```

```
    unsigned char i;
```

```
    for (i = 0; i < len; i++) {
```

```
        lcd_data(s[i]);
```

```
    }
```

```
}
```

```
void lcd_init() {
```

```
    lcd_command(0x38);
```

```
    lcd_command(0x06);
```

```
    lcd_command(0x0C);
```

```
    lcd_command(0x01);
```

```
}
```

```
void main() {  
    int a, b, c, d, e, f;  
    float adc1,temp;  
    GIE = PEIE = ADIE = 1;  
    TRISD = TRISC = PORTC = PORTD = 0x00;  
    lcd_init();  
    lcd_command(0x80);  
    lcd_string("Temperature:", 13);  
    ADCON0 = 0x41;  
    ADCON1 = 0x8E;  
    while (1)  
    {  
        ADCON0=ADCON0 | 0x04;  
        adc1 = adc / 2.04666;  
        temp = adc1 * 100;  
        lcd_command(0xC0);
```

```
a = (int)temp / 10;
```

```
b = (int)temp % 10;
```

```
c = a % 10;
```

```
d = a / 10;
```

```
e = d % 10;
```

```
f = d / 10;
```

```
lcd_data(f + 0x30);
```

```
lcd_data(e + 0x30);
```

```
lcd_data('.');
```

```
lcd_data(c + 0x30);
```

```
lcd_data(b + 0x30);
```

```
lcd_string(" centigrade", 11);
```

```
}
```

```
}
```