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#include <xc.h> //import header file
#define XTAL_FREQ 6000000 //initialize the clock speed
void init(void); //declaration of function
void lcdcmd(unsigned char); //declaration of function
void lcddata(unsigned char); //declaration of function
void lcdoutput(unsigned int); //declaration of function
unsigned char j,k[10],equal,plus,min,n; //declare the character variable
unsigned int num1,num2,m,sum; // declare the int variable
void main()
{
    init(); //call the init function
    num1=100; //store the 100 value to the num1
    num2=200; //store the 200 value to the num2
    equal='='; //assign the char = to the equal
    plus='+'; //assign the char + to the plus variable
    min='-'; //assign the char - to the min
    lcdcmd(0x80); //call the lcdcmd function and give the argument of 0x80
    lcdoutput(num1); //call the lcdoutput function and give the argument of num1
    lcddata(min); //call the lcddata function and give the argument of min
    lcdoutput(num2); //num2 will be given to the lcdoutput
    lcddata(equal); //equal will be given to the lcddata
    if(num1>num2) //check the condition num1 greater than num2
    {
        //will be true
        sum=num1-num2; //num1-num2 and store in the sum
        lcddata(plus); //char plus will be given to the lcddata
        lcdoutput(sum); //sum will be sent to the lcdoutput
    }
    else //else
    {
        sum=num2-num1; //sub num2-num1 and store in sum
        lcddata(min); //min will be sent to the lcddata
        lcdoutput(sum); //sum will be sent to the lcdoutput
    }
    while(1);
}

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void init()
{
    TRISC=0x00; //set TRISC set as output
    TRISD=0x00; //set TRISD set as output
    lcdcmd(0x30); //function set command
    __delay_ms(100); //delay
    lcdcmd(0x30); //function set command
    __delay_ms(100); //delay
    lcdcmd(0x30); //function set command
    lcdcmd(0x30); //set number line of display and font
    lcdcmd(0x0C); //set for curser off and display on
}

void lcdoutput(unsigned int i) //lcdoutput function
{
    unsigned char s,j=1; //intiallize the local variable
    m=i; //i valu store in the m
    while(m!=0) //while loop for untill m not equal 0
    {
        s=m-((m/10)*10); //separate the last integer value
        k[j]=s; //store the seperated value to the k[j] array
        j++; //post increment
        m=m/10; //remove the last intiger of the whole integer
    }
    k[j]='\0'; //last array of the k[j] will be set as null]
    j--1; //j will be minus 1 and store in the j
    while(j!=0) //wile loop for untill the j not equal to 0
    {
        n=0x30+k[j]; //the separated integer will be convert into ascii
        lcddata(n); //that ascii value will be give to the lcddata
        j--; //post decrement
    }
}

void lcdcmd(unsigned char i) //lcd command function
{

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void lcdcmd(unsigned char i)    //lcd command function
{
    PORTC&=~(0x08); //RC3 will be set as 0
    PORTD=i;        //i will be sent to the PORTD
    PORTC|=(0x01);  //enable pin will be set as high
    __delay_ms(100); //delay
    PORTC&=~(0x01); //enable pin will be set as low
}

void lcddata(unsigned char i)  //lcddata function
{
    PORTC|=(0x08); //rc3 will be set as 1
    PORTD=i;        //i will be sent to the port D
    PORTC|=(0x01);  //enable pin will be set as 1
    __delay_ms(100); //delay
    PORTC&=~(0x01); //enable pin will be set as 0
}

```
