# Program=addition of two number

1

# #include<stdio.h>

**#include<p18f4550.h>**

**void main(){**

**int sum = 0;**

**sum = 0x0A + 0x02;**

**TRISD = 0;**

**PORTD = sum;**

**}**

**Add n numbers**

**#include<stdio.h>**

2

**#include<P18F4550.h>**

**void main(){  
int i, sum, n;**

**int number[]= {1,2,3,4,5,6,7,8,9,10};**

**sum = 0;**

**for(i=0;i<=9;i++)**

**{**

**sum = sum + number[i];**

**}**

**TRISD = 0;**

**PORTD = sum;**

**}**

# Transfer element one location to another

# #include<stdlib.h>

3

# #include<P18F4550.h>

# void main(void)

# {

# int i;

# int source1[]={0x21,0x22,0x23,0x24,0x25};

# int dest[]={0x00,0x00,0x00,0x00};

# for(i=0;i<=4;i++)

# {

# dest[i] = source1[i];

# }

# 

# TRISB=0;

# PORTB=dest[i];

# }

# Multiply 8 bit no

# #include<stdio.h> #include<P18F4550.h>

4

# void main( ){ int MUL, DIV;

# MUL=0;

# DIV=0;

# MUL = 0X04 \* 0X02;

# DIV = 0X06 / 0X02;

# TRISD = 0;

# PORTD = MUL;

# TRISC = 0;

# PORTC = DIV;

# }

# sorting

# #include<stdio.h>

5

# #include<P18F4550.h>

# void main(void)

# {

# int i,j,key,temp;

# int arr[]={4,1,3,55,20};

# TRISD=0;

# for(i=1;i<5;i++)

# {

# for(j=0;j<5-i;j++)

# {

# if(arr[j]>arr[j+1])

# {

# temp=arr[j];

# arr[j]=arr[j+1];

# arr[j+1]=temp;

# }

# }

# }

# for(i=0;i<5;i++){

# PORTD=arr[i];

# }

# }

# Program: Led blink

6

#include<P18F4580.h>

void T0delay(void);

#define mybit PORTBbits.RB4 //LED connected to RB4

void main(void)

{

TRISBbits.TRISB4=0; //output port

while(1)

{

mybit =1; //send 1 to port B turn on lED

T0delay(); // for specific time

mybit=0; // send 0 to port B turn on LED

T0delay(); // for specific time

}

}

void T0delay(void)

{

T0CON=0x01; // Timer 0 control register

TMR0H=0xff; // load high value TH0

TMR0L=0x00; //Loadlow value TH0

T0CONbits.TMR0ON=1; // turn on timer0

while(INTCONbits.TMR0IF ==0); // WAIT For TF0 to rollover

T0CONbits.TMR0ON=0; // turn off timer 0

INTCONbits.TMR0IF=0;//handling Interrupts

}

# Program:ISR based bozzer

7

**#include<p18f4550.h>**

**#pragma config FOSC = HS**

**#pragma config WDT = OFF**

**#pragma config LVP = OFF**

**#pragma config PBADEN = OFF**

**#define LCD\_DATA PORTD**

**#define ctrl PORTE**

**#define rs PORTEbits.RE0**

**#define rw PORTEbits.RE1**

**#define en PORTEbits.RE2**

**void init\_LCD(void);**

**void LCD\_command(unsigned char cmd);**

**void LCD\_data(unsigned char data);**

**void LCD\_write\_string(static char \*str);**

**void msdelay(unsigned int time);**

**void main(void)**

**{**

**char var1[]="wel-come";**

**char var2[]="SE IT DEPARTMENT";**

**ADCON1=0X0F;**

**TRISD=0X00;**

**TRISE=0X00;**

**init\_LCD();**

**msdelay(50);**

**LCD\_command(0x0C0);**

**LCD\_write\_string(var1);**

**LCD\_write\_string(var2);**

**while(1);**

**}**

**void msdelay(unsigned int time)**

**{**

**unsigned int i,j;**

**for(i=0;i<time;i++);**

**for(j=0;j<710;j++);**

**}**

**void init\_LCD(void)**

**{**

**LCD\_command(0x38);**

**msdelay(15);**

**LCD\_command(0x01);**

**msdelay(15);**

**LCD\_command(0x0C);**

**msdelay(15);**

**LCD\_command(0x80);**

**msdelay(15);**

**}**

**void LCD\_command (unsigned char cmd)**

**{**

**LCD\_DATA=cmd;**

**rs=0;**

**rw=0;**

**en=1;**

**msdelay(15);**

**en=0;**

**}**

**void LCD\_data (unsigned char data)**

**{**

**LCD\_DATA=data;**

**rs=1;**

**rw=0;**

**en=1;**

**msdelay(15);**

**en=0;**

**}**

**void LCD\_write\_string(static char\*str)**

**{int i=0;**

**while(str[i]!=0)**

**{**

**LCD\_data(str[i]);**

**msdelay(15);**

**i++;**

**}**

**}**

# Program:Interfacing PIC18xxx

8

#include<p18F4550.h> #include<stdio.h> #define Fosc 48000000UL

void InitUART(unsigned int baudrate)

**{**

TRISCbits.RC6 = 0; //TX pin set as output

TRISCbits.RC7 = 1; //RX pin set as input

//Non-inverted data; 8-bit baudrate generator

SPBRG = (unsigned char)(((Fosc /64)/baudrate)-1); BAUDCON = 0b00000000 ;

//Asynchronous 8-bit; Transmit enabled; Low speed baudrate select TXSTA = 0b00100000;

//Serial port enabled; 8-bit data; single receive enabled RCSTA = 0b10010000; }

void SendChar(unsigned char data)

**{**

while(TXSTAbits.TRMT == 0); //Wait while transmit register is empty

TXREG = data; //Transmit data

**}**

void putch(unsigned char data)

**{**

SendChar(data);

**}**

unsigned char GetChar(void)

**{**

while(!PIR1bits.RCIF); //Wait till receive buffer becomes full return RCREG; //Returned received data

**}**

void main(void)

**{**

InitUART(9600);

printf("\r\nHello MicroPIC-18F: Enter any Key from Keyboard\r\n"); while(1)

**{**

printf("%c! ",GetChar()); //Receive character from PC and echo back

**}**

while(1);

**}**

# Program:

9

#include <pic18f4550.h> #include <stdio.h>

#define LCD\_EN LATAbits.LA1 #define LCD\_RS LATAbits.LA0 #define LCDPORT LATB

unsigned char str[16];

void lcd\_delay(unsigned int time)

**{**

unsigned int i , j ;

for(i = 0; i < time; i++)

**{**

for(j=0;j<100;j++);

**}**

**}**

void SendInstruction(unsigned char command)

**{**

LCD\_RS = 0; // RS low : Instruction LCDPORT = command;

LCD\_EN = 1; // EN High lcd\_delay(10);

LCD\_EN = 0; // EN Low; command sampled at EN falling edge lcd\_delay(10);

**}**

void SendData(unsigned char lcddata)

**{**

LCD\_RS = 1; // RS HIGH : DATA

LCDPORT = lcddata;

LCD\_EN = 1; // EN High lcd\_delay(10);

LCD\_EN = 0; // EN Low; data sampled at EN falling edge lcd\_delay(10);

**}**

void InitLCD(void)

**{**

ADCON1 = 0x0F;

TRISB = 0x00; //set data port as output TRISAbits.RA0 = 0; //RS pin TRISAbits.RA1 = 0; // EN pin

SendInstruction(0x38); //8 bit mode, 2 line,5x7 dots SendInstruction(0x06); //entry mode SendInstruction(0x0C); //Display ON cursor OFF SendInstruction(0x01); //Clear display SendInstruction(0x80); //set address to 0

**}**

void LCD\_display(unsigned int row, unsigned int pos, unsigned char \*ch)

**{**

if(row==1)

SendInstruction(0x80 | (pos-1)); else

SendInstruction(0xC0 | (pos-1));

while(\*ch)

SendData(\*ch++);

**}**

void ADCInit(void)

**{**

//ADC channel 7 input TRISEbits.RE2 = 1;

//Ref voltages Vdd & Vss; AN0 - AN7 channels Analog ADCON1 = 0b00000111;

//Right justified; Acquisition time 4T; Conversion clock Fosc/64 ADCON2 = 0b10101110;

**}**

unsigned short Read\_Temp(void)

**{**

ADCON0 = 0b00011101; //ADC on; Select channel;

GODONE = 1; //Start Conversion

while(GO\_DONE == 1 ); //Wait till A/D conversion is complete return ADRES; //Return ADC result

**}**

int main(void)

**{**

unsigned int temp;

InitLCD();

ADCInit();

LCD\_display(1,1,"Temperature:"); while(1)

**{**

temp = Read\_Temp();

temp = ((temp \* 500) / 1023); sprintf(str,"%d'C ",temp); LCD\_display(2,1,str); lcd\_delay(9000);

**}**

return 0;

**}**

#include<stdio.h>

#include<P18F4550.h>

void main(void)

{

int fact=1,i,n;

TRISD=0;

n=5;

for(i=1;i<=n;i++)

{

fact=fact\*i;

}

PORTD=fact;

}