## Write Pic Microcontroller in LCD

```
// LCD module connections
sbit LCD_RS at RB4_bit;
sbit LCD_EN at RB5_bit;
sbit LCD_D4 at RB0_bit;
sbit LCD_D5 at RB1_bit;
sbit LCD_D6 at RB2_bit;
sbit LCD_D7 at RB3_bit;

sbit LCD_RS_Direction at TRISB4_bit;
sbit LCD_EN_Direction at TRISB5_bit;
sbit LCD_D4_Direction at TRISB0_bit;
sbit LCD_D5_Direction at TRISB1_bit;
sbit LCD_D6_Direction at TRISB2_bit;
sbit LCD_D7_Direction at TRISB3_bit;
// End LCD module connections


char txt1[] = "mikroElektronika";
char txt2[] = "EasyPIC6";
char txt3[] = "Lcd4bit";
char txt4[] = "example";


void main() {
TRISB = 0;
Lcd_Init();
Lcd_Cmd(_LCD_CLEAR);               // Clear display
Lcd_Cmd(_LCD_CURSOR_OFF);          // Cursor off
Lcd_Out(1, 1, "PIC Microcontroller");
Lcd_Out(2, 1, "   Eng.A.S.M");
delay_ms(500);
Lcd_Cmd(_LCD_CLEAR);               // Clear display
Lcd_Out(1, 7, "GTC");
Lcd_Out_Cp(" Ashraf"); //start after last letter written previously withous
identifiying the location
Lcd_Chr(2, 5, 'A'); //show one letter only
}
```

## Write in LCD and move text

```
// LCD module connections
sbit LCD_RS at RB4_bit;
sbit LCD_EN at RB5_bit;
sbit LCD_D4 at RB0_bit;
sbit LCD_D5 at RB1_bit;
sbit LCD_D6 at RB2_bit;
sbit LCD_D7 at RB3_bit;

sbit LCD_RS_Direction at TRISB4_bit;
sbit LCD_EN_Direction at TRISB5_bit;
sbit LCD_D4_Direction at TRISB0_bit;
sbit LCD_D5_Direction at TRISB1_bit;
sbit LCD_D6_Direction at TRISB2_bit;
sbit LCD_D7_Direction at TRISB3_bit;
// End LCD module connections
```

```
char txt1[] = "mikroC";
char txt2[] = "GTC";
char txt3[] = "PICMicros";
char txt4[] = "Eng.A.S.M";

char i;                                 // Loop variable

void Move_Delay() {                     // Function used for text moving
  Delay_ms(800);                        // You can change the moving speed here
}

void main(){


  Lcd_Init();                           // Initialize LCD

  Lcd_Cmd(_LCD_CLEAR);                  // Clear display
  Lcd_Cmd(_LCD_CURSOR_OFF);             // Cursor off
  Lcd_Out(1,6,txt3);                    // Write text in first row

  Lcd_Out(2,6,txt4);                    // Write text in second row
  Delay_ms(2000);
  Lcd_Cmd(_LCD_CLEAR);                  // Clear display

  Lcd_Out(1,1,txt1);                    // Write text in first row
  Lcd_Out(2,5,txt2);                    // Write text in second row

  Delay_ms(2000);

  // Moving text
  for(i=0; i<16; i++) {                  // Move text to the right 4 times
    Lcd_Cmd(_LCD_SHIFT_RIGHT);
    Move_Delay();
  }

  /*
  while(1) {                            // Endless loop
    for(i=0; i<8; i++) {                // Move text to the left 7 times
      Lcd_Cmd(_LCD_SHIFT_LEFT);
      Move_Delay();
    }

    for(i=0; i<8; i++) {                // Move text to the right 7 times
      Lcd_Cmd(_LCD_SHIFT_RIGHT);
      Move_Delay();
    }
  } */
}
```

## Test_LCD

```
// LCD module connections
sbit LCD_RS at RB4_bit;
sbit LCD_EN at RB5_bit;
sbit LCD_D4 at RB0_bit;
sbit LCD_D5 at RB1_bit;
sbit LCD_D6 at RB2_bit;
sbit LCD_D7 at RB3_bit;
```

```
sbit LCD_RS_Direction at TRISB4_bit;
sbit LCD_EN_Direction at TRISB5_bit;
sbit LCD_D4_Direction at TRISB0_bit;
sbit LCD_D5_Direction at TRISB1_bit;
sbit LCD_D6_Direction at TRISB2_bit;
sbit LCD_D7_Direction at TRISB3_bit;
// End LCD module connections

char txt1[] = "mikroElektronika";
char txt2[] = "EasyPIC6";
char txt3[] = "Lcd4bit";
char txt4[] = "example";

char i;                               // Loop variable

void Move_Delay() {                   // Function used for text moving
  Delay_ms(500);                      // You can change the moving speed here
}

void main(){
  ANSEL  = 0;                         // Configure AN pins as digital I/O
  ANSELH = 0;
  C1ON_bit = 0;                       // Disable comparators
  C2ON_bit = 0;

  Lcd_Init();                         // Initialize LCD

  Lcd_Cmd(_LCD_CLEAR);                // Clear display
  Lcd_Cmd(_LCD_CURSOR_OFF);           // Cursor off
  Lcd_Out(1,6,txt3);                  // Write text in first row

  Lcd_Out(2,6,txt4);                  // Write text in second row
  Delay_ms(2000);
  Lcd_Cmd(_LCD_CLEAR);                // Clear display

  Lcd_Out(1,1,txt1);                  // Write text in first row
  Lcd_Out(2,5,txt2);                  // Write text in second row

  Delay_ms(2000);

  // Moving text
  for(i=0; i<4; i++) {                // Move text to the right 4 times
    Lcd_Cmd(_LCD_SHIFT_RIGHT);
    Move_Delay();
  }

  while(1) {                          // Endless loop
    for(i=0; i<8; i++) {              // Move text to the left 7 times
      Lcd_Cmd(_LCD_SHIFT_LEFT);
      Move_Delay();
    }

    for(i=0; i<8; i++) {              // Move text to the right 7 times
      Lcd_Cmd(_LCD_SHIFT_RIGHT);
      Move_Delay();
    }
  }
}
```