
```
1:  '*****
2:  'receive data use USART          *
3:  '                                *
4:  '*****
5:
6:      DEVICE 16F877A
7:      XTAL 20
8:
9:      ALL_DIGITAL TRUE
10:     CLRF TRISA
11:     BSF  TRISC.7
12:     BCF  TRISD.1
13:     PORTC = 0
14:     SPBRG = 129
15:     OPTION_REG=7
16:
17:     DECLARE LCD_TYPE  ALPHA
18:     DECLARE LCD_DTPIN PORTB.4
19:     DECLARE LCD_RSPIN PORTB.3
20:     DECLARE LCD_ENPIN PORTB.2
21:     DECLARE LCD_INTERFACE 4
22:     DECLARE LCD_LINES 2
23:
24:     DIM  INDEX      AS BYTE
25:     DIM  ARRAY      AS BYTE
26:     DIM  B1          AS BYTE
27:     DIM  B2          AS BYTE
28:     DIM  FLAG3       AS BIT
29:     DIM  SECOND      AS BYTE
30:     DIM  BVC         AS BYTE
31:
32:     CLEAR FLAG3
33:
34:     SYMBOL GIE      = INTCON.7
35:     SYMBOL PEIE     = INTCON.6
```

```
36:
37:     SYMBOL RCIF    = PIR1.5
38:
39:     SYMBOL SPEN    = RCSTA.7
40:     SYMBOL RX9     = RCSTA.6
41:     SYMBOL CREN    = RCSTA.4
42:     SYMBOL RX9D    = RCSTA.0
43:     SYMBOL FERR    = RCSTA.2
44:     SYMBOL OERR    = RCSTA.1
45:
46:     SYMBOL RCIE    = PIE1.5
47:
48:     SYMBOL SYNC    = TXSTA.4
49:     SYMBOL BRGH    = TXSTA.2
50:
51:     SYMBOL LED     = PORTD.1
52:
53:     CLS
54:
55:
56:     ON INTERRUPT GOTO RECEIVE_DATA
57:     GOTO SET_VALUE
58:     '-----
59:     DISABLE
60:
61: RECEIVE_DATA:
62:
63:     IF FERR = 1 THEN
64:     CLR INDEX
65:     FLAG3 = 1
66:     ENDIF
67:
68:     IF INTCON.2=1 AND FLAG3=1 THEN
69:     INC SECOND
70:     CLEAR INTCON.2
```

```
71:          ENDIF
72:
73:          IF FLAG3 = 1 AND SECOND = 76 THEN
74:          INC BVC : CLRF SECOND
75:          ENDIF
76:
77:          IF FLAG3 = 0 AND RCIF = 1 THEN
78:          INDEX = RCREG
79:          ENDIF
80:
81:          RESUME
82:          ENABLE
83:
84:          '-----
85:  SET_VALUE:
86:
87:          BSF   PEIE      'PREPHERAL INTERRUPT ENABLE
88:          BSF   SPEN      'SERIAL PORT ENABLE BIT
89:          BCF   RX9       'SELECT 8-BIT DATA RCEIVE
90:          SET   CREN      'CONTINUOS RECEIVE DATA
91:          SET   RCIE      'ENABLE INTERRUPT FOR USART
92:          BCF   SYNC      'SELECT ASYNCHRONUOS MODE
93:          BCF   BRGH      'SELECT LOW SPEED BAUD RATE
94:          BSF   GIE       'GLOBAL INTERRUPT ENABLE
95:          SET   INTCON.5
96:
97:
98:  MAIN:
99:
100:         IF FLAG3 = 0 THEN
101:         SET LED
102:         ELSE
103:         CLEAR LED
104:         ENDIF
105:         PRINT AT 2,1,DEC2 INDEX
```

```
106:      PRINT AT 2,5,DEC2 BVC
107:      PRINT AT 2,8,DEC2 SECOND
108:      IF BVC = 3 THEN
109:      CLEAR FLAG3 : CLRF BVC : CLEAR CREN
110:      DELAYMS 1
111:      SET CREN : INDEX = RCREG : CLRF INDEX
112:      ENDIF
113:      PRINT AT 1,1,DEC OERR,DEC FERR,DEC FLAG3,DEC RCIF
114:      GOTO MAIN
115:      END
```