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1 ; *****
2 ; ** PROGRAM MADE BY FADISHOP Card: FADIBUS http://www.fadishop.eu FADITECO, S.L.U. Lleonard G. **
3 ; ** This program reads the PORT_0 AND TAKES THE DATA FOR READ IMMEDIATELY PORT_1 **
4 ; ** I2C SLAVE ADDRESS IS $ 42 SW2(A=0, B=0, C=1) **
5 ; ** SW1(I0=1, I1=0, I2=0, portC=0, Rpullup=1)** **
6 ; ** JP9(not affect JUMPER BLUE) **
7 ; *****
8 #picaxe 28x2
9 ; SETTINGS
10 let dirsB=%00000000 ; 1=output 0=input
11 let dirsC=%00000000 ; 1=output 0=input
12 ; C.3 I2C_SCL
13 ; C.4 I2C_SDA
14 ;adcsetup = %00000000 ; SETTING ANALOG
15 ;setfreq em16 ; Oscillator / external oscillator to 16Mhz.
16 ; DEFINITIONS AND INITIALIZATIONS DEVICES.
17 device_PCA9555N: ;INTERNAL ADDRESS BUS EXPANDER PCA9555N
18 symbol inport_0 = 0 ; Read register inputs port_0.
19 symbol inport_1 = 1 ; Read register inputs port_1.
20 symbol outport_0 = 2 ; Write register outputs port_0.
21 symbol outport_1 = 3 ; Write register outputs port_0.
22 symbol polaritat_port_0 = 4 ; Polarity register port_0 inputs -> 0 = no_inverted, 1 = inverted.
23 symbol polaritat_port_1 = 5 ; Polarity register port_1 inputs -> 0 = no_inverted, 1 = inverted.
24 symbol config_port_0 = 6 ; Configuration register port_0 as input or output. 1=input 0= utput.
25 symbol config_port_1 = 7 ; Configuration register port_1 as input or output. 1=input 0= utput.
26 ; SETTINGS
27 config_PCA9555N_A: ;DEVICE_A SETUP (A, B, C, D, E, F, G, H. Maximum 8)
28 symbol adress_slave_A =$42 ; I2C Address PCA9555N %0100ABC(rw). SLAVE PCA9555N (0X4E-0X4F).
29 symbol polport0_A = %00000000 ; polarity port_0 inputs: 0-no inverted 1-logical inverted.
30 symbol polport1_A = %00000000 ; polarity port_1 inputs: 0-no inverted 1-logical inverted.
31 symbol confport0_A = %11111111 ; IN ; configuration port_0 1=input 0=output.
32 symbol confport1_A = %00000000 ; OUT ; configuration port_1 1=input 0=output.
33 transfer_config_PCA9555N_A: ;TRANSFER ALL SETTINGS TO DEVICE_A.
34 i2cslave adress_slave_A, i2cslow, i2cbyte ; send/call to address the peripheral/slave.
35 writei2c polaritat_port_0,(polport0_A,polport1_A); polarity send entries and port_1 port_0
36 writei2c config_port_0,(confport0_A,confport1_A); send configuration and puerto_1 puerto_0.
37 ; READ SETTINGS(NEGLIGIBLE)
38 ;lectura_inicial_debug_A: ;READING THE INTERNAL REGISTERS DEVICE_A
39 ;i2cslave adress_slave_A, i2cslow, i2cbyte ; I2C Address PCA9555N %0100ABC(rw). SLAVE PCA9555N (0X4E-0X4F).
40 ;readi2c inport_0,(b0,b1) ; Read input ports.
41 ;readi2c outport_0,(b2,b3) ; Read output ports.
42 ;readi2c polaritat_port_0,(b4,b5) ; Read polarity registers of the inputs.
43 ;readi2c config_port_0,(b6,b7) ; Read configuration registers of the ports.
44 ; INTERRUPT SETTING
45 configuracio_interrupcions:
46 hint0flag = 0 ; Clear the flag INT_0.
47 symbol hint_setting = %00000001 ; Activate INT0 interrupts.
48 hintsetup hint_setting ; Transfiere dicha activación.
49 setintflags %00000001,%00000001 ; Transfers such activation. ;
50 ;CYCLIC PROGRAM
51 main: ; CYCLIC PROGRAM.

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C:\Users\BREAKOUT\web_faditeco\data\fbus_ang\2a_fbus_lecint.bas

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52 debug ; Take a pop all registros.Añande delay.
53 goto main ; Start over.
54 ; INTERRUPT SEQUENCE
55 interrupt:
56 i2cslave adress_slave_A, i2cslow, i2cbyte ; CYCLIC PROGRAM
57 readi2c inport_0,(b0) ; Read input port. inport_0 --> b0
58 writei2c outport_1,(b0) ; Read what is written in the port_1 b0 --> outport_1
59 hint0flag = 0 ; INT0 flag is cleared.
60 hintsetup hint_setting ; Re-enable interrupts INT0
61 setintflags %00000001,%00000001 ; INT0 interrupts are enabled per falling edge.
62 return ;
63
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