'Header

program example_10 ' Program name

dim LCD_RS as sbit at RB4 bit ' Lcd module connections
   LCD_EN as sbit at RB5 bit
   LCD_D4 as sbit at RB0 bit
   LCD_D5 as sbit at RB1 bit
   LCD_D6 as sbit at RB2 bit
   LCD_D7 as sbit at RB3 bit
   LCD_RS_Direction as sbit at TRISB4 bit
   LCD_EN_Direction as sbit at TRISB5 bit
   LCD_D4_Direction as sbit at TRISB0 bit
   LCD_D5_Direction as sbit at TRISB1 bit
   LCD_D6_Direction as sbit at TRISB2 bit
   LCD_D7_Direction as sbit at TRISB3 bit ' End Lcd module connections

dim text as string [16] ' Variable text is of string type
   dim ch, adc_rd as word ' Variables ch and adc_rd are of word type
   dim tlong as longword ' Variable tlong is of longword type

main:
   TRISB = 0 ' All port PORTB pins are configured as outputs
   PORTB = 0xFF ' All interrupts disabled
   ANSEL = 0x04 ' Pin RA2 is configured as an analog input
   TRISA = 0x04 ' Rest of pins is configured as digital
   ANSELH = 0 ' LCD display initialization
   TRISB = 0x04 ' LCD command (cursor off)
   TRISB = 0x00 ' LCD command (clear LCD)
   Lcd_Init()
   Lcd_Cmd(_LCD_CURSOR_OFF)
   Lcd_Cmd(_LCD_CLEAR)
   text = "mikroElektronika"
   Lcd_Out(1,1,text)
   textF = "LCD example"
   Lcd_Out(2,1,text)
   ADCON1 = 0x80 ' A/D voltage reference is VCC
   TRISA = 0xFF ' All PORTA pins are configured as inputs
   Delay_ms(2000)
   tlong = adc_rd * 5000 ' Convert the result in millivolts
   tlong = tlong / 1023
   ch = (tlong / 1000) mod 10 ' Extract volts (thousands of millivolts)
   Lcd_Chr(2,9,48+ch) ' from result
   Lcd_Chr_CP(".") ' Write result in ASCII format
   ch = (tlong / 100) mod 10 ' Extract hundreds of millivolts
   Lcd_Chr_CP(48+ch) ' Write result in ASCII format
   ch = (tlong / 10) mod 10 ' Extract tens of millivolts
   Lcd_Chr_CP(48+ch) ' Write result in ASCII format
   ch = tlong mod 10 ' Extract digits for millivolts
   Lcd_Chr_CP(48+ch) ' Write result in ASCII format
   Lcd_Chr_CP("V") ' Write a mark for voltage "V"
   Delay_ms(1)
wend

end. ' End of program