

T62 Tutorial 6

1. Write a program to display letters “**XYZ**F” in 4 x 7-segment LED. **X**, **Y** and **Z** are the last three digits of your student ID number. Copy the program from the editor window.
(12 marks)

```

LIST      P=18F4520          ;directive to define processor
#include <P18F4520.INC> ;CPU specific variable definitions
;Configuration bits definitions
CONFIG   OSC = XT
CONFIG   WDT = OFF
CONFIG   LVP = OFF

CBLOCK   0x000
    DELAY_H
    DELAY_L
ENDC
;student ID number 12345678
ORG 0x0000 ;code origin, program starts from here
goto     Main

Main:     ORG      0x0100
movlw    0x0F      ;Set all Ports digital I/O
movwf    ADCON1
clrf     TRISB     ;Set Port B direction output
clrf     PORTB
clrf     TRISD     ;Set Port D direction output
clrf     PORTD

Loop:
movlw    0x00
movwf    PORTB
movlw    0x7D      ;Display '6'
movwf    PORTD
call     Delay
movlw    0x01
movwf    PORTB
movlw    0x07      ;Display '7'
movwf    PORTD
call     Delay
movlw    0x02
movwf    PORTB
movlw    0x7F      ;Display '8'
movwf    PORTD
call     Delay
movlw    0x03
movwf    PORTB
movlw    0x71      ;Display 'F'
movwf    PORTD
call     Delay
goto     Loop

Delay:    movlw    0x07
movwf    DELAY_H
LOP_1:    movlw    0xFF
movwf    DELAY_L
LOP_2:    decf     DELAY_L, F
|         bnz      LOP_2
         decf     DELAY_H, F
         bnz      LOP_1
         return

END

```