

```

list p=16f84a;
include "p16f84a.inc"
__config __CP_OFF&__WDT_OFF&__XT_OSC;

bsf    STATUS,5;
clrf  TRISB; PORTB is output
clrf  TRISA; RA2 is input
bcf    STATUS,5;
clrf  PORTB;
comf  PORTB,1;
clrf  PORTA;

loop
bsf    PORTA,0; display 1 is selected
bcf    PORTA,1;
movlw .4;
call  Look_Up_Table; pin value for digit 8 in W
movwf PORTB; write value to PORTB
call  delay_5ms; wait for 5 msec
bcf    PORTA,0;
bsf    PORTA,1; display 2 is selected
movlw .5;
call  Look_Up_Table; pin value for digit 9 in W
movwf PORTB; write value to PORTB
call  delay_5ms;
goto  loop; repeat the process

Look_Up_Table
addwf PCL,1;
retlw 0x3F

```

```
retlw 0x06  
retlw 0x5B  
retlw 0x4F  
retlw 0x66  
retlw 0x6D  
retlw 0x7D  
retlw 0x07  
retlw 0x7F  
retlw 0x6F
```

delay_5ms; delay subroutine for 100ms delay

```
movlw .250;
```

```
movwf 0x0C; counter for outer loop
```

loop1; outer loop with N1=250 iterations: N1 = 250, k1 = 0

```
movlw .5;
```

```
movwf 0x0D; counter for inner loop;
```

loop2; inner loop with N2 = 98 iterations: N2 = 5, k2 = 0

```
decfsz 0x0D,1; decrement counter2 (inner loop)
```

```
goto loop2;
```

```
nop;
```

```
decfsz 0x0C,1; decrement counter1 (outer loop)
```

```
goto loop1;
```

```
return; return to delay_Nms subroutine
```

```
end;
```