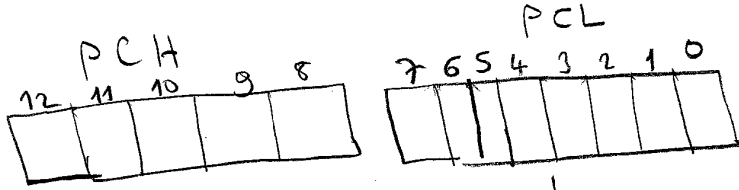


①

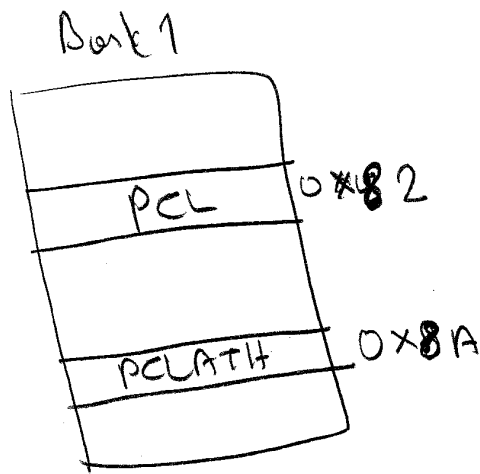
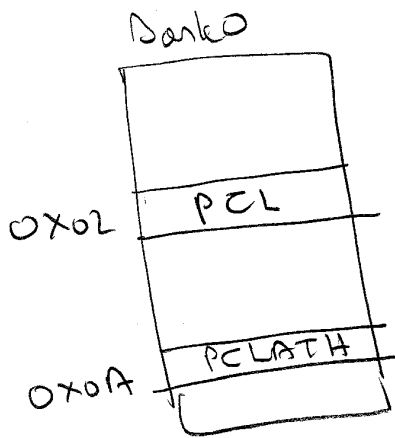
# Lookup Table

Program Counter Register



↓  
program counter high

↓  
program counter low byte.



Program counter is 13 bit register

PCLATH → is used to write data to PCH

return(k); → return with literal in W

The W register is loaded with the eight-bit literal 'k'. The program counter is loaded from the top of the Stack (the return address)

②

Examples

```
list p=16f84A
include "16f84A.INC"
clr f PORTB;
bsf STATUS, RPO;
clr f TRISB;
bcf STATUS, RPO;
```

PORTB  
IS OUTPUT,

main

```
movlw .2; → (w) ← 2
```

```
call lookup-Table; jump to subroutine  
lookup-Table  
movwf PORTB; (PORTB) ← (w)
```

```
loop goto loop;
```

```
lookup-Table
```

```
addwf PCL, F; → (PCL) ← (PCL) + (w)
```

```
retlw .0;
```

```
retlw .1;
```

```
retlw .2; (w) ← .2
```

```
retlw .3;
```

```
retlw .4;
```

end.

At the end of this program execution  
.2 is displayed in PORTB;

3

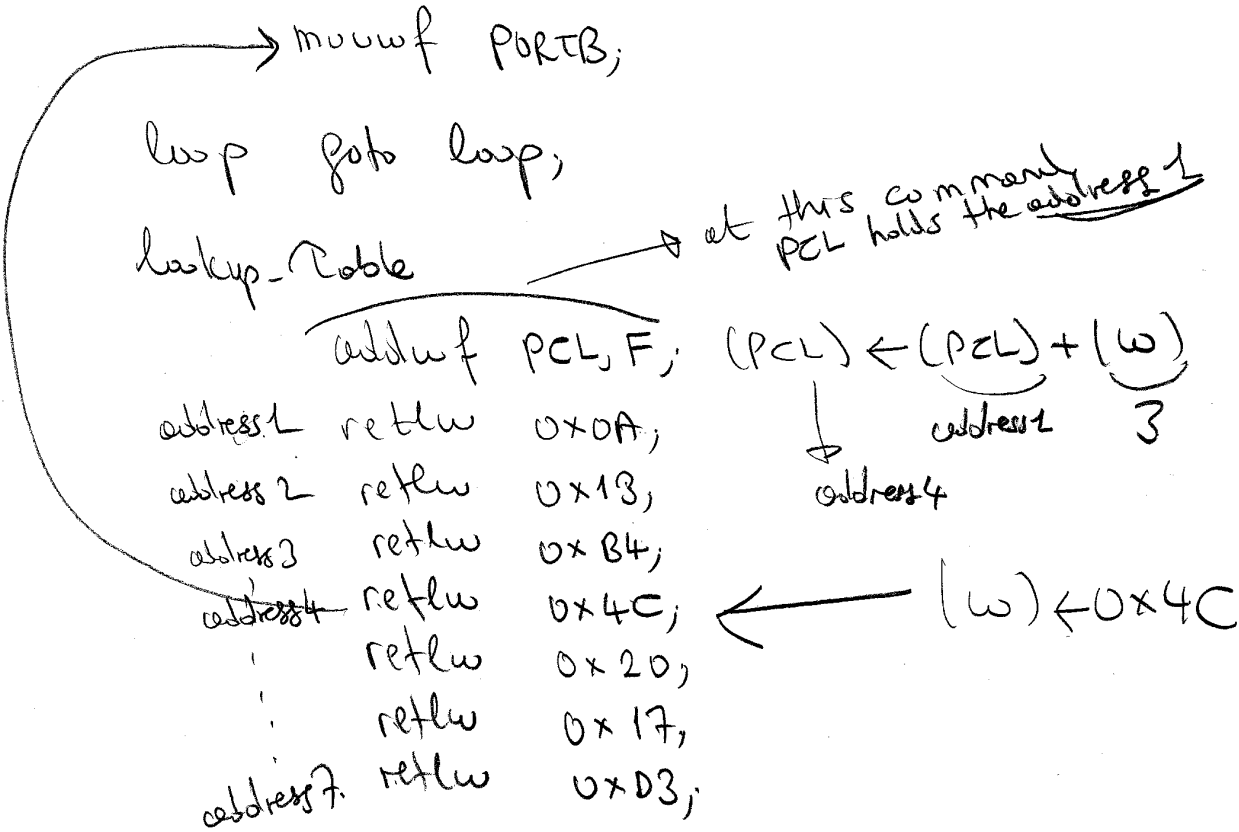
Ex<sup>10</sup>

What is displayed at PORTB after the execution of the following program.

```

movlw 3; → (w) ← 3
call lookup-Table

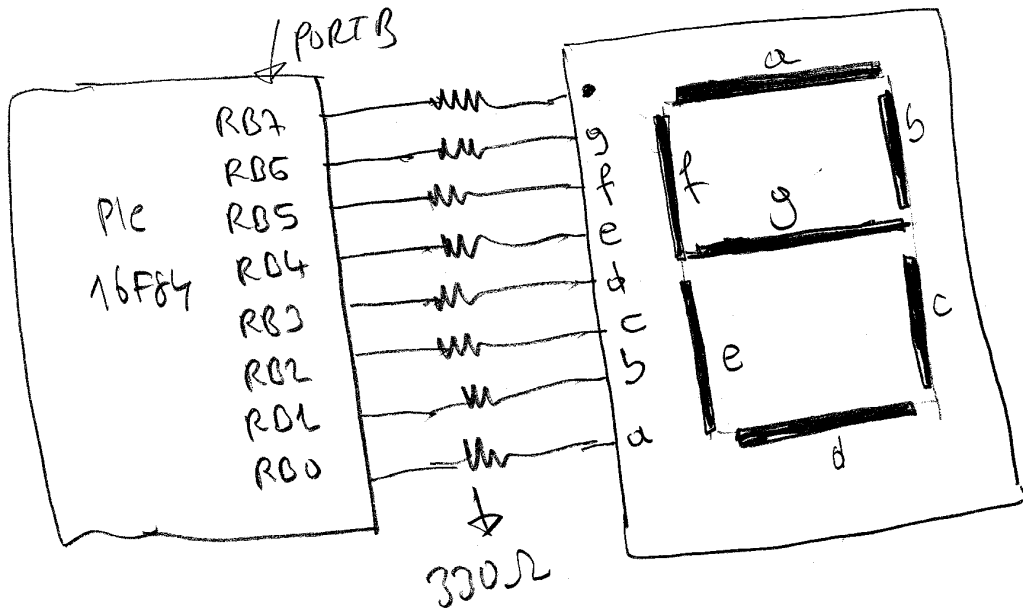
```



0x4C is displayed at PORTB

④

# Seven Segment Display with PIC 16F84A



Number of PORTB	Displayed Number at 55
0x3F	0
0x06	1
0x5B	2
0x4F	3
0x66	4
0x6D	5
0x7D	6
0x07	7
0x7F	8
0x6F	9
0x77	10
0x7C	11
0x39	12
0x5E	13
0x79	14
0x71	15
0x80	.

A B C D E F

6

## lookup-SS-Table

```
addw f PCL, F;
retdw 0x2F, 0
retdw 0x06, 1
retdw 0x5B, 2
retdw 0x4F, 3
retdw 0x66, 4
retdw 0x6D, 5
retdw 0x7D, 6
retdw 0x07, 7
retdw 0x7F, 8
retdw 0x6F, 9
retdw 0x77, 10
retdw 0x7C, 11
retdw 0x7B, 12
retdw 0x5E, 13
retdw 0x73, 14
retdw 0x74, 15
```

## delay-02sec

```
movlw 0xFF;
movwf Counter1;

loop1 movlw 0xFF;
      movwf Counter2;

loop2 decfsz Counter2, F;
      goto loop2;
      decfsz Counter1, F;
      goto loop1;

return
end
```