

1 → { microcontroller  
RISC

2 → { Data type { byte 8 bit  
Half word 16 bit  
word 32 bit  
Registers → R0 - R15 → 32 bit

3 → Directive { AREA  
PROC, ENDP  
RW  
EQU  
DCB, DCW, DCD  
SPACE  
END

4 - memory { LDR, STR  
LDRB, STRB  
LDRH, STRH  
LDRSB  
LDRSH

5 - label pool { Label given → LDR → مقادیر → #  
Reg <sup>copy</sup> → Reg → mov

6 - ALU → { cmp  
TST  
MRS, MSR  
ALU

LPC 9768

fest proe

• 2 

1
---

2
---

0202

$58$   
 $\underline{44}$   
 $14$   
 $00$   
 $02$   
 $00$

test date  $\rightarrow$

1. List the multiples of each denominator.

2. Find the smallest number that is a multiple of both denominators.

3. The LCD is 6.

LUKV  $R_1, [R_0]$

LDK  $R_6 = \text{my-byte}$

2 0 0 0 < 111

my - 127e

b12
cc
138
2A

F 1 → 1 1 1 1 1

→ 0 0 0 0 0 - 1

1-1-1-1-1 F1

0 0 0 1 0

0 0 0 0 0 15

55
00
00
00

0 2 FF

LD RB 0x000000ff

LD RB 0xffffffff

0 2 FF
--------

1 x 2 = 2 left shift

2 ÷ 2 = 1 right shift

X 1 ⇒ 0 1 ⇒ 0 1

0 1 ⇒ 0 1

cmp

$$12 - 12 = 0 \dots$$

3 2 1 0  
1 0 1 1

0 0 1 0  
0 0 1 0

1 = 1  
0 1 = 0

$$- 1 \ll 1 \Rightarrow 0001 \Rightarrow 0010$$

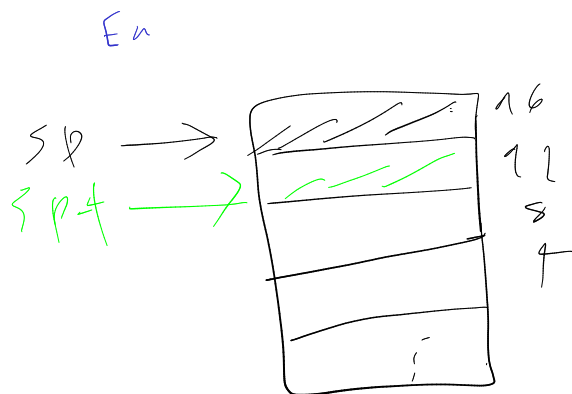
1 0 1 1

0 1 0 0  
0 0 1 0

$$1 \ll 2 \Rightarrow 0010 \Rightarrow 0100$$

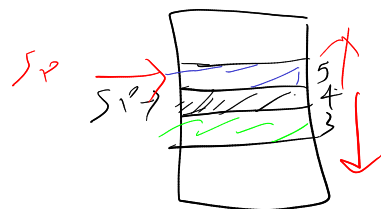
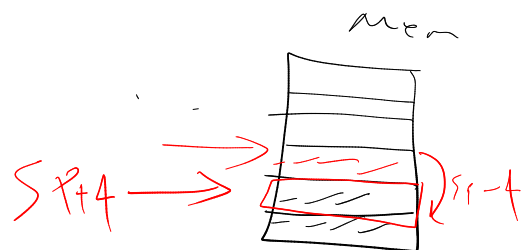
$z=1 \rightarrow 0$   
 $z=0 \rightarrow 1$

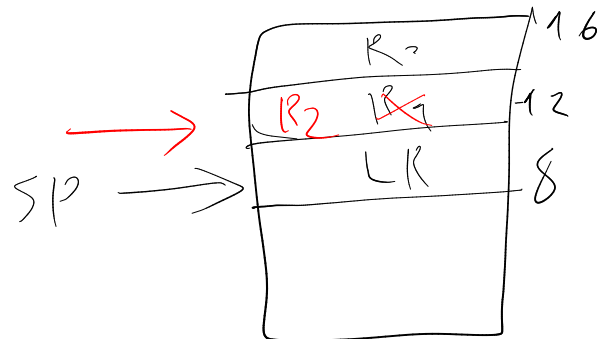
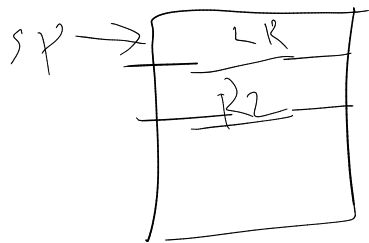
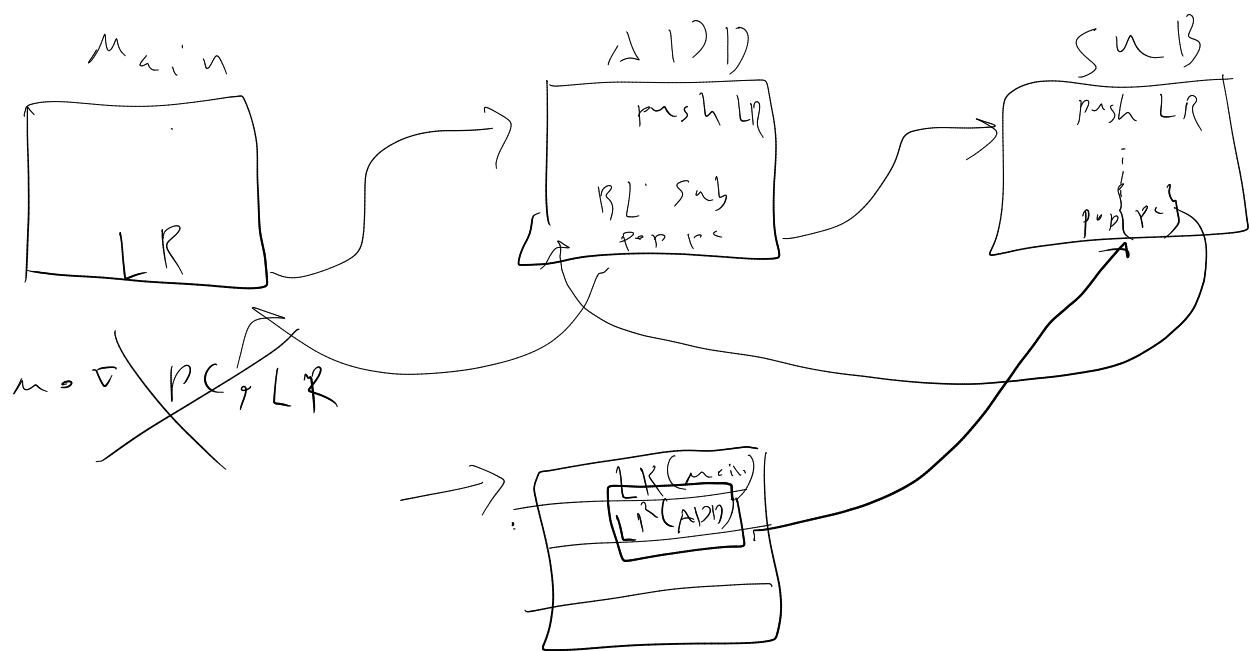
R<sub>0</sub> - R<sub>15</sub>



push { R<sub>0</sub> - R<sub>2</sub> }

pop { R<sub>4</sub> }





R0 ← 5

R1 ← 6

R2 ← 7

R3 ← 8

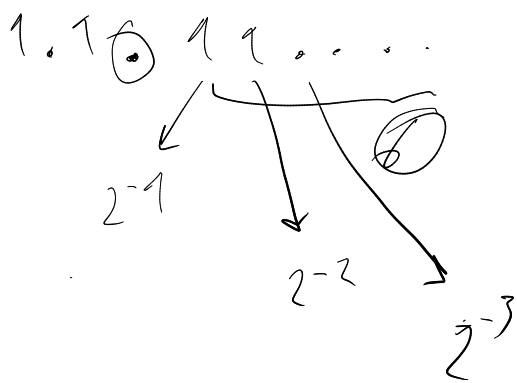
~~Stack ← 9~~

R0 ← 11

R1

R2

R3



1 2 1 . . . .

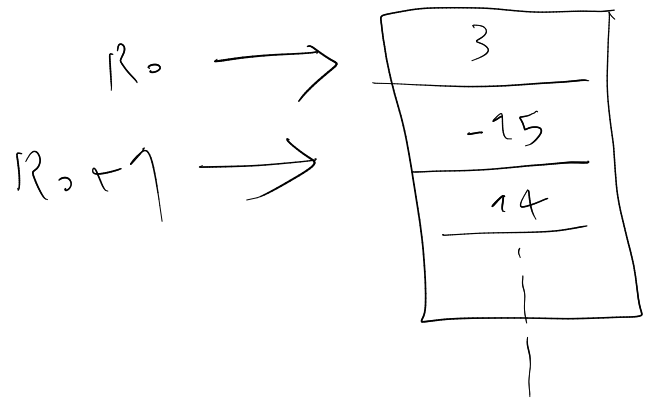
4

$$1 \rightarrow k-1$$

$$2 \rightarrow k-2$$

$$3 \rightarrow k-3$$

⋮



```

while (flag == 1) {
    flag = 0
    for (cnt = col * row) {
        lower case
    }
    for (cnt = col * row) {
        if (upper) {
            flag = 1
        }
    }
}

```



1 1 0 1 0 0

$$\boxed{\uparrow \text{tmp} = \text{bit } 0}$$

$$f \text{ or } \text{cnt} = 1$$

$$\text{bit}(\text{cnt})$$

$$\text{tmp} \text{ or } \text{bit}(\text{cnt}) \text{ tmp}$$

$$\text{Data} \gg \text{cnt} = 0 \ 1 \ 1 \ 1 \ 0$$

$$\begin{array}{r} \text{--- -- -- -- --} \uparrow \\ \hline \text{--- -- -- -- --} \textcircled{0} \end{array}$$

1 1 1 0 0

$$\text{mask} = 1$$

$$\text{tmp2} = \boxed{\begin{array}{c} \text{bit} \nearrow \\ \downarrow \end{array}} \rightarrow \text{bit7 result}$$

bit 0  
 $\hookrightarrow 7 - \text{cnt} 1$

$$\text{cnt} 1 = 0 \rightarrow 7$$

$$1 = 1 \rightarrow 6$$

$$= 2 \rightarrow 5$$

⋮

$$7 \rightarrow 0$$

$$\textcircled{0}11 \dots 11 \Rightarrow 0 \dots 0 \dots \textcircled{0}$$

$$\Rightarrow 0 \dots 0 \dots 1$$

$$\Rightarrow \dots 0 \dots 1$$