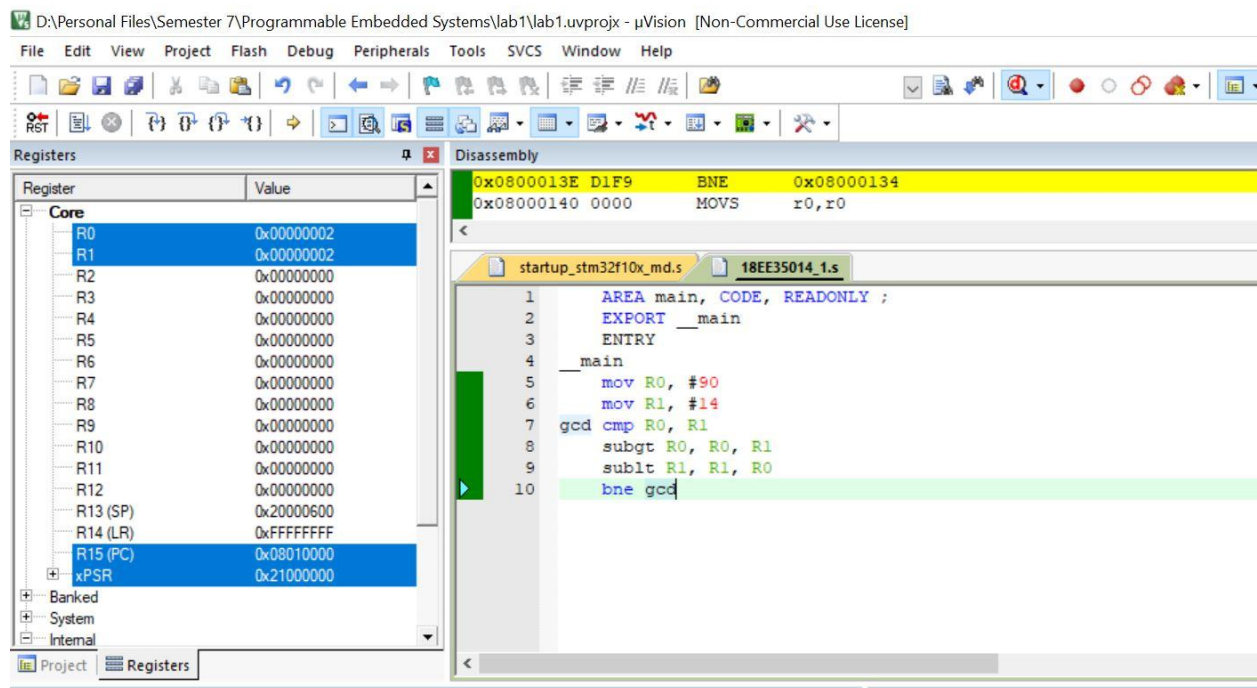


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**Q1.**

```
AREA main, CODE, READONLY ;
EXPORT __main
ENTRY
__main
    mov R0, #90
    mov R1, #14
gcd cmp R0, R1
    subgt R0, R0, R1
    sublt R1, R1, R0
    bne gcd
```



**Q2.**

```
AREA main, CODE, READONLY ;
EXPORT __main
ENTRY
__main
    MOV    R1, #13    ; n = 13
    MOV    R3, #1     ; fn1 = 1
    MOV    R0, #1     ; fn = 1
    MOV    R2, #1     ; curr = 1
whn CMP    R2, R1     ; loop
    BHS    endwhn    ; {
```

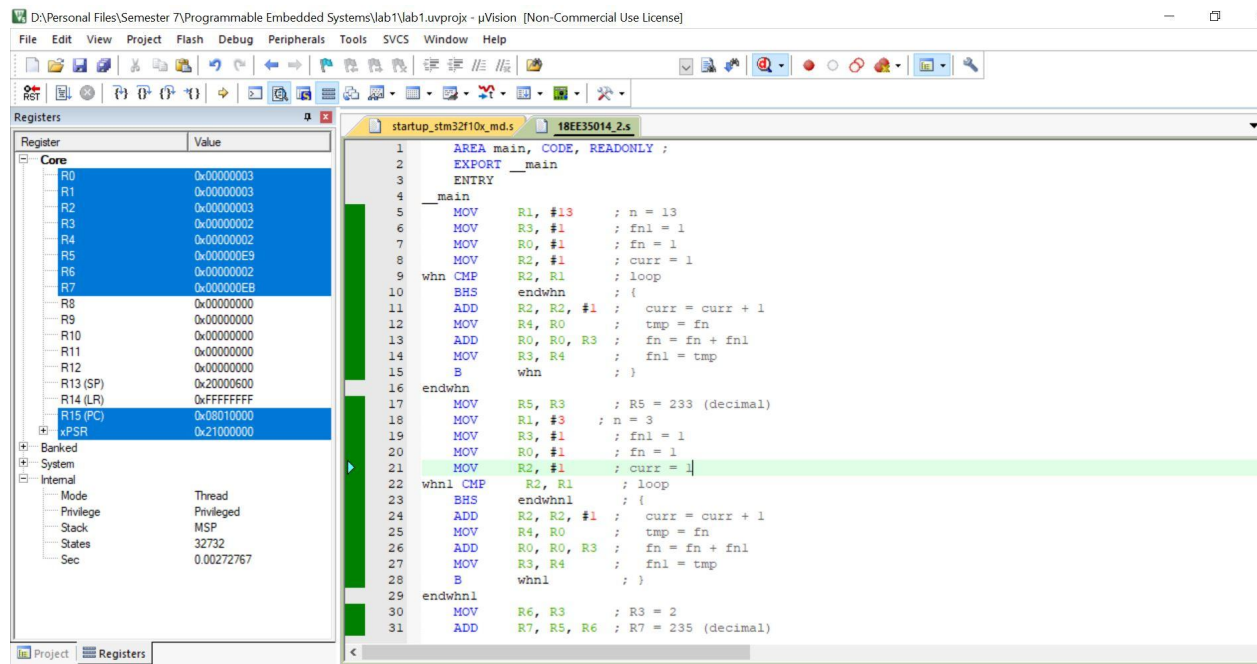
```

ADD    R2, R2, #1 ; curr = curr + 1
MOV     R4, R0    ; tmp = fn
ADD     R0, R0, R3 ; fn = fn + fn1
        MOV     R3, R4    ; fn1 = tmp
        B      whn      ;}
endwhn

        MOV     R5, R3    ; R5 = 233 (decimal)
        MOV     R1, #3    ; n = 3
        MOV     R3, #1    ; fn1 = 1
        MOV     R0, #1    ; fn = 1
        MOV     R2, #1    ; curr = 1
whn1    CMP     R2, R1    ; loop
        BHS     endwhn1   ;{
        ADD     R2, R2, #1 ; curr = curr + 1
        MOV     R4, R0    ; tmp = fn
        ADD     R0, R0, R3 ; fn = fn + fn1
        MOV     R3, R4    ; fn1 = tmp
        B      whn1      ;}
endwhn1

        MOV     R6, R3    ; R3 = 2
        ADD     R7, R5, R6 ; R7 = 235 (decimal)

```



**Q3.**

```

AREA main, CODE, READONLY ;
EXPORT __main
ENTRY

```

```
__main
    mov R0, #0
    mov R1, #0x25

    cmp R1, #0
    bgt NO
YES
    b stop
NO
    lsl R1, R1, #1
    add R0, R0, #1

    lsr R3, R0, #31
    cmp R3, #0
    beq NO

stop b stop

END
```