

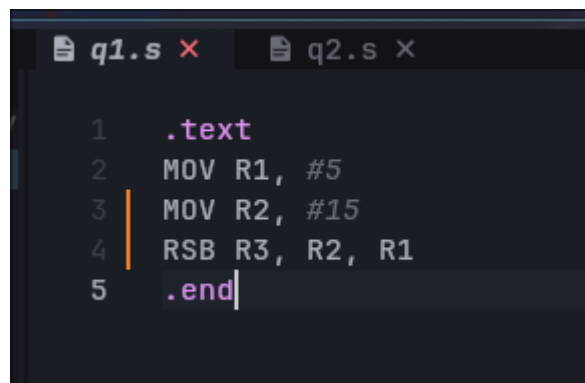
MPCA Lab 1

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Section: D

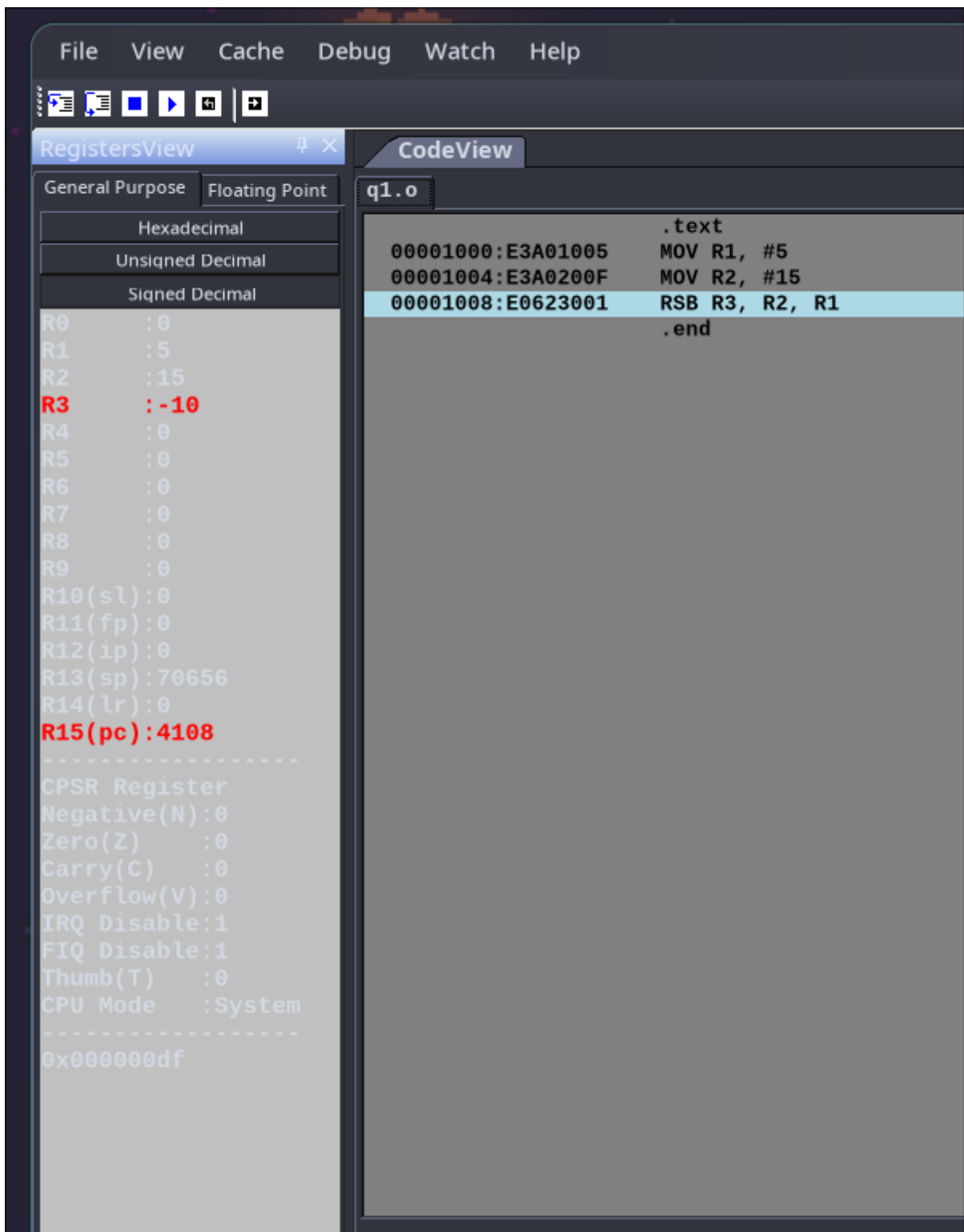
Question 1: Perform $D = A - C$ using *RSB* Instruction



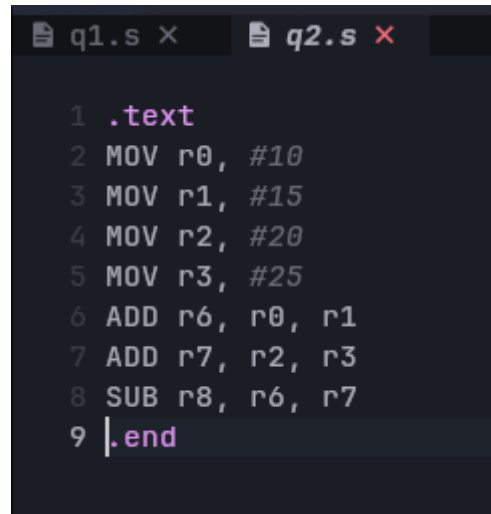
```
q1.s x q2.s x
1  .text
2  MOV R1, #5
3  MOV R2, #15
4  RSB R3, R2, R1
5  .end
```

Here:

1. Register *R1* stores the value of *A* which is 5
2. Register *R2* stores the value of *C* which is 15
3. Register *R3* stores the output of *RSB* instruction which does *A-C* which is -10.



Question 2: Perform $F = (G + H) - (I + J)$



```
q1.s x  q2.s x
1 .text
2 MOV r0, #10
3 MOV r1, #15
4 MOV r2, #20
5 MOV r3, #25
6 ADD r6, r0, r1
7 ADD r7, r2, r3
8 SUB r8, r6, r7
9 .end
```

Here:

1. Register *r0* has the value of *G* which is 10.
2. Register *r1* has the value of *H* which is 15.
3. Register *r2* has the value of *I* which is 20.
4. Register *r3* has the value of *J* which is 25.
5. Register *r6* stores the value of $10 + 15$.
6. Register *r7* stores the value of $20 + 25$
7. Register *r8* stores the value of -20 since we are doing $25 - 45$

FileViewCacheDebugWatchHelp

RegistersView

CodeView

General PurposeFloating Point

HexadecimalUnsigned DecimalSigned Decimal

R0:10

R1:15

R2:20

R3:25

R4:0

R5:0

R6:25

R7:45

R8:-20

R9:0

R10(sl):0

R11(fp):0

R12(ip):0

R13(sp):70656

R14(lr):0

R15(pc):4124

CPSR Register

Negative(N):0

Zero(Z):0

Carry(C):0

Overflow(V):0

IRQ Disable:1

FIQ Disable:1

Thumb(T):0

CPU Mode:System

0x000000df

q2.o

.text

00001000:E3A0000AMOV r0, #10

00001004:E3A0100FMOV r1, #15

00001008:E3A02014MOV r2, #20

0000100C:E3A03019MOV r3, #25

00001010:E0806001ADD r6, r0, r1

00001014:E0827003ADD r7, r2, r3

00001018:E0468007SUB r8, r6, r7

.end