Microprocessor and Computer Architecture

UE20CS252

4th Semester, Academic Year 2021-22

Date: 24/1/2022

Name: P K Navin Shrinivas	SRN: PES2UG20CS237	Section: D

Week#____2_____ Program Number: ____1___

Title of the Program

Write an ALP using ARM instruction set to check if a number stored in a register is even or odd. If even, store 00 in R0, else store FF in R0

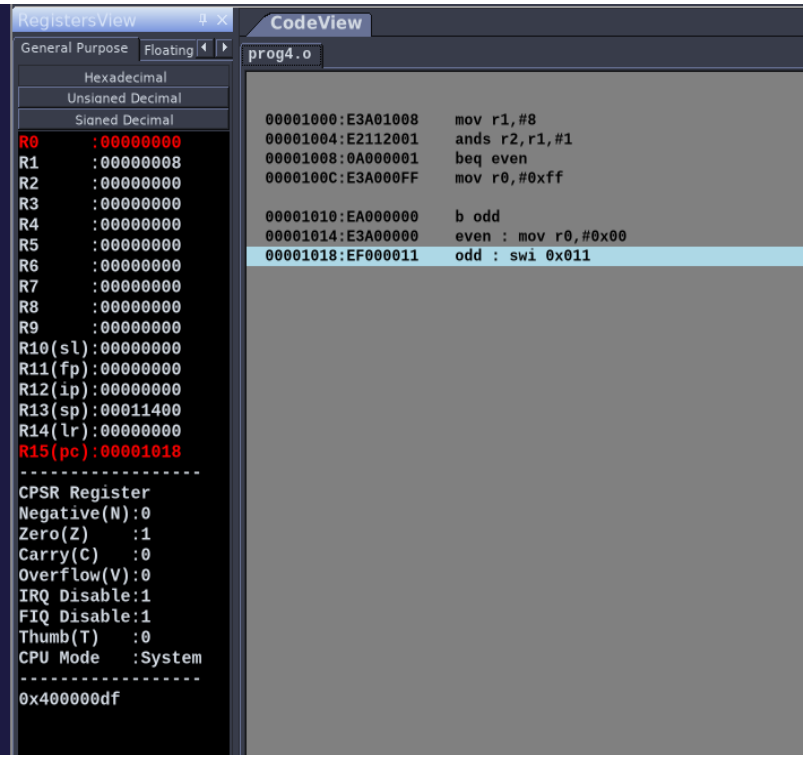
I. ARM Assembly Code(1)

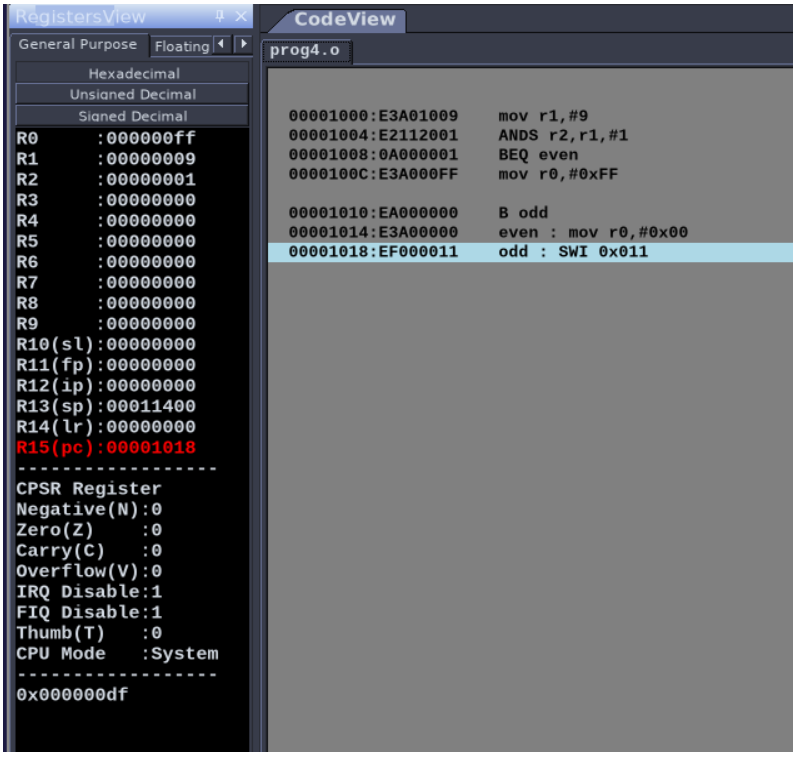
```
mov r1,#9
ands r2,r1,#1
beq even
mov r0,#0xff

b odd
even : mov r0,#0x00
odd : swi 0x011
```

II. Output Screen Shot (1)

The output should be verified for both even and odd numbers.





III. **Output table (1)**

Included in screenshots above

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Week#____1_____ Program Number: ____2___

Title of the Program

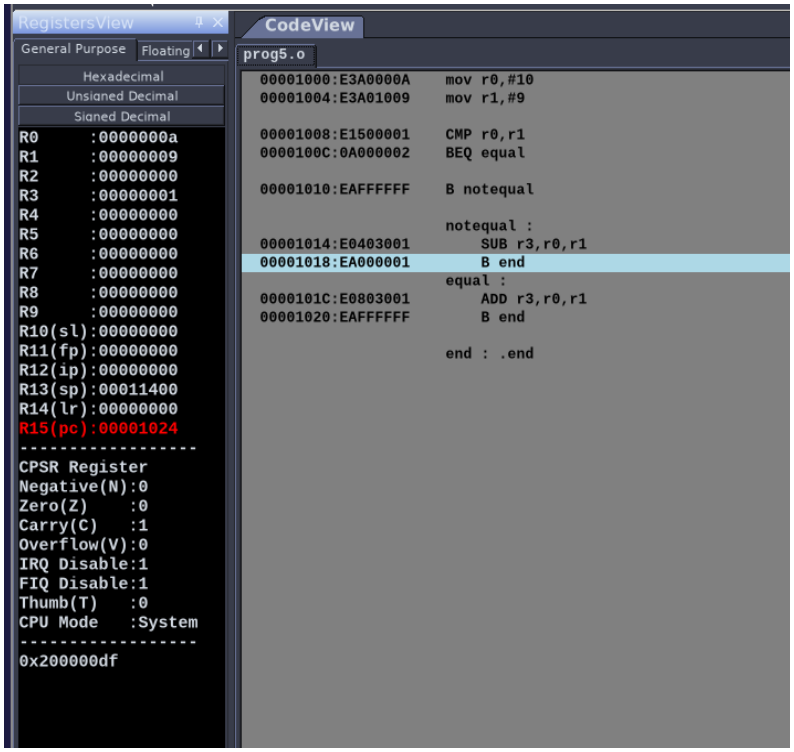
Write an ALP to compare the value of R0 and R1, add if R0 = R1, else subtract

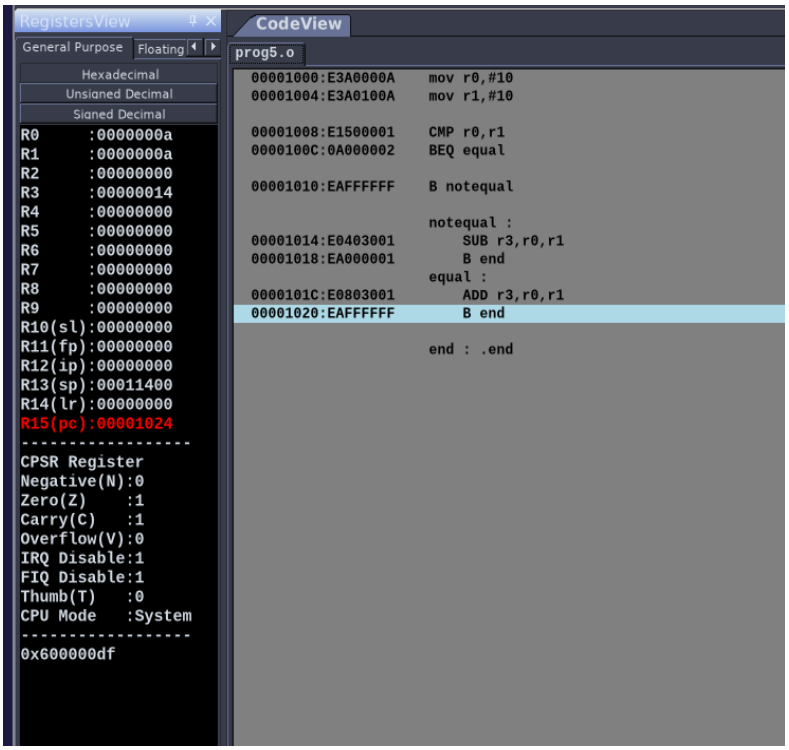
1.ARM Assembly Code(1)

```
mov r0,#10
mov r1,#10
CMP r0,r1
BEQ equal
B notequal
notequal :
    SUB r3,r0,r1
    B end
equal :
    ADD r3,r0,r1
    B end
end : .end
```

2.Output Screen Shot (1)

Considering both equal and not equal:





Disclaimer:

- The programs and output submitted is duly written, verified and executed by me.
- I have not copied from any of my peers nor from the external resource such as internet.
- If found plagiarized, I will abide with the disciplinary action of the University.

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