Microprocessor and Computer Architecture

UE20CS252

4th Semester, Academic Year 2021-22

Date: 24/1/2022

Name: VISHWAS M	SRN: PES2UG20CS390	Section: F

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)
II. Output Screen Shot (1)
The output should be verified for both even and odd numbers.
III. Output table (1)

I.CODE:

```
.text
MOV r1, #8
ANDS r2,r1,#1
```

BEQ L1

MOV r0,#0xFF

B L2

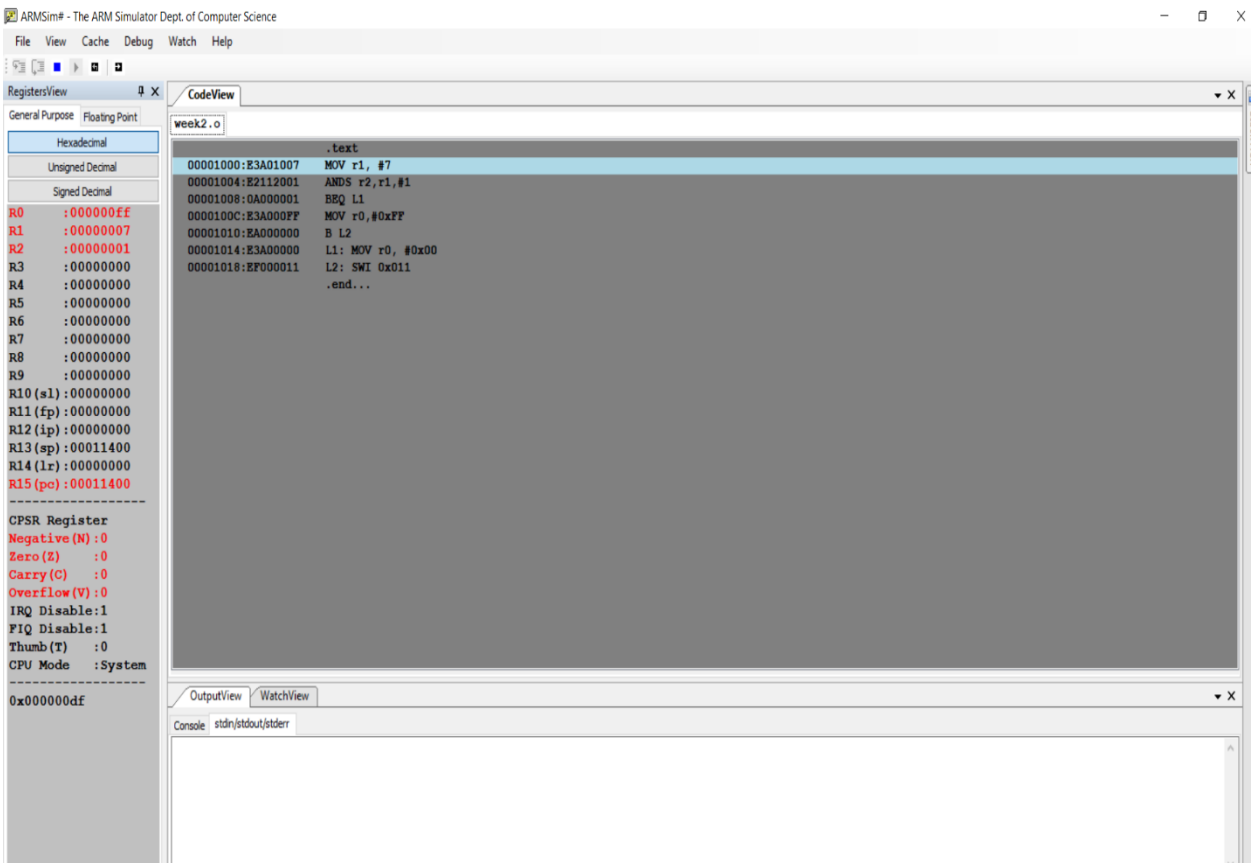
L1: MOV r0, #0x00

L2: SWI 0x011

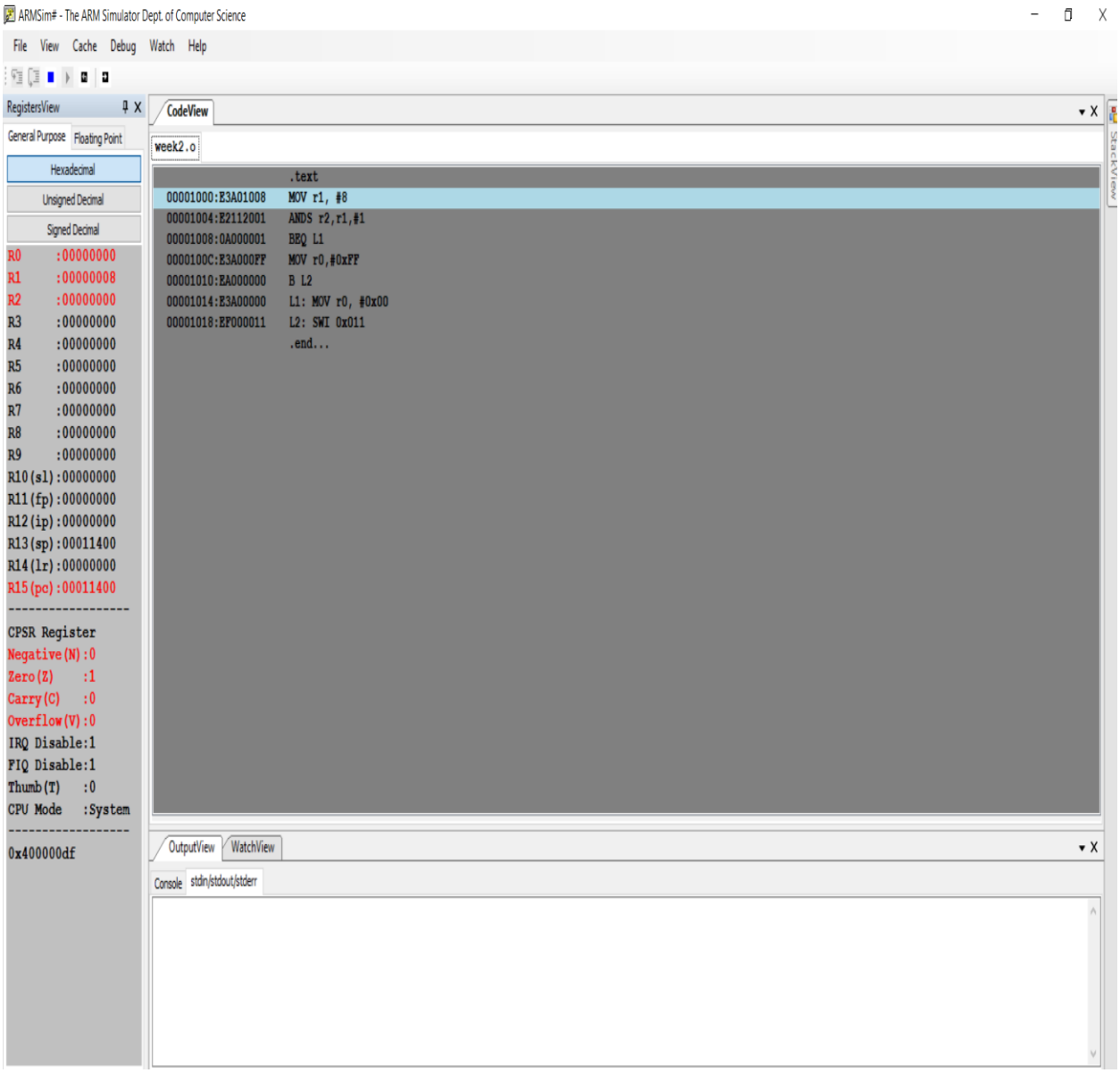
.end

II.SCREENSHOT:

a)for odd number:



b)for even number:



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UE20CS253

4th Semester, Academic Year 2021-22

Date:

Name: VISHWAS M	SRN: PES2UG20CS390	Section F

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

I.CODE:

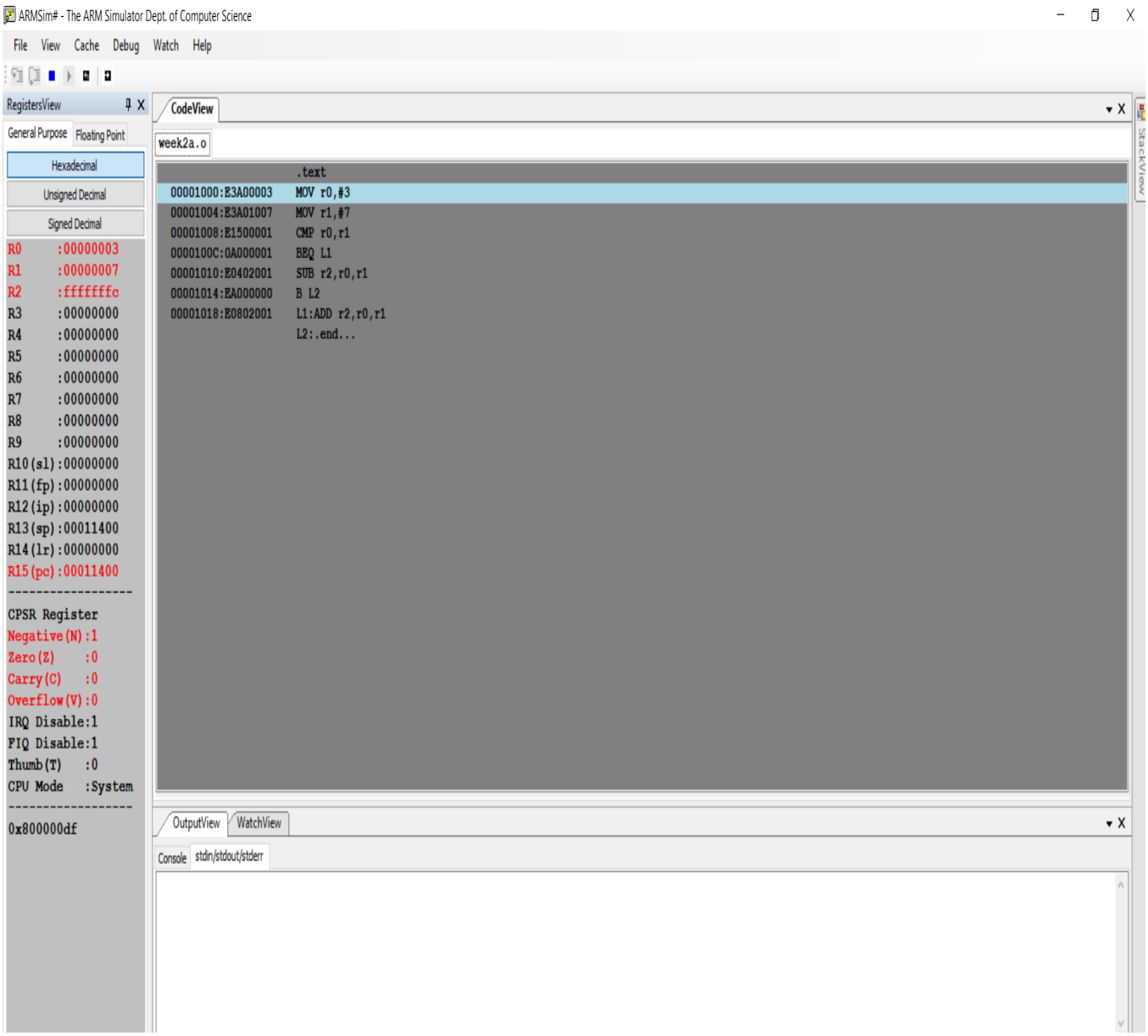
```
.text
MOV r0,#7
MOV r1,#7
CMP r0,r1
BEQ L1
SUB r2,r0,r1
B L2
```

L1:ADD r2,r0,r1

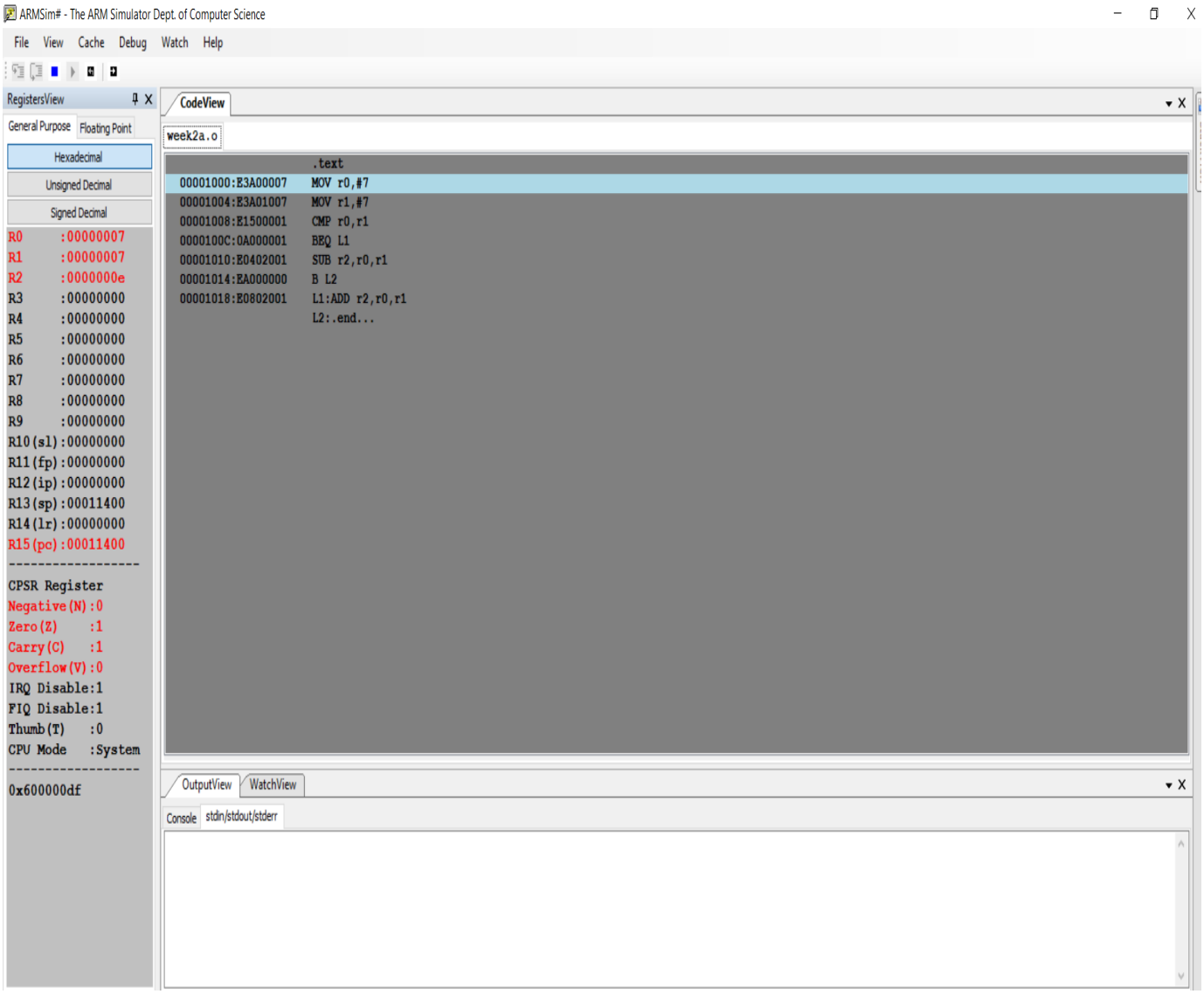
L2:.end

II.SCREENSHOT:

a)for different numbers:



b)for same numbers:



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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Date: 24-01-2022