Microprocessor and Computer Architecture Laboratory

UE19CS256

4th Semester, Academic Year 2020-21

Date:22/1/21

Name: Kartik Soni	SRN: PES1UG19CS212	Section D

Week#____1_____Program Number: ____1___

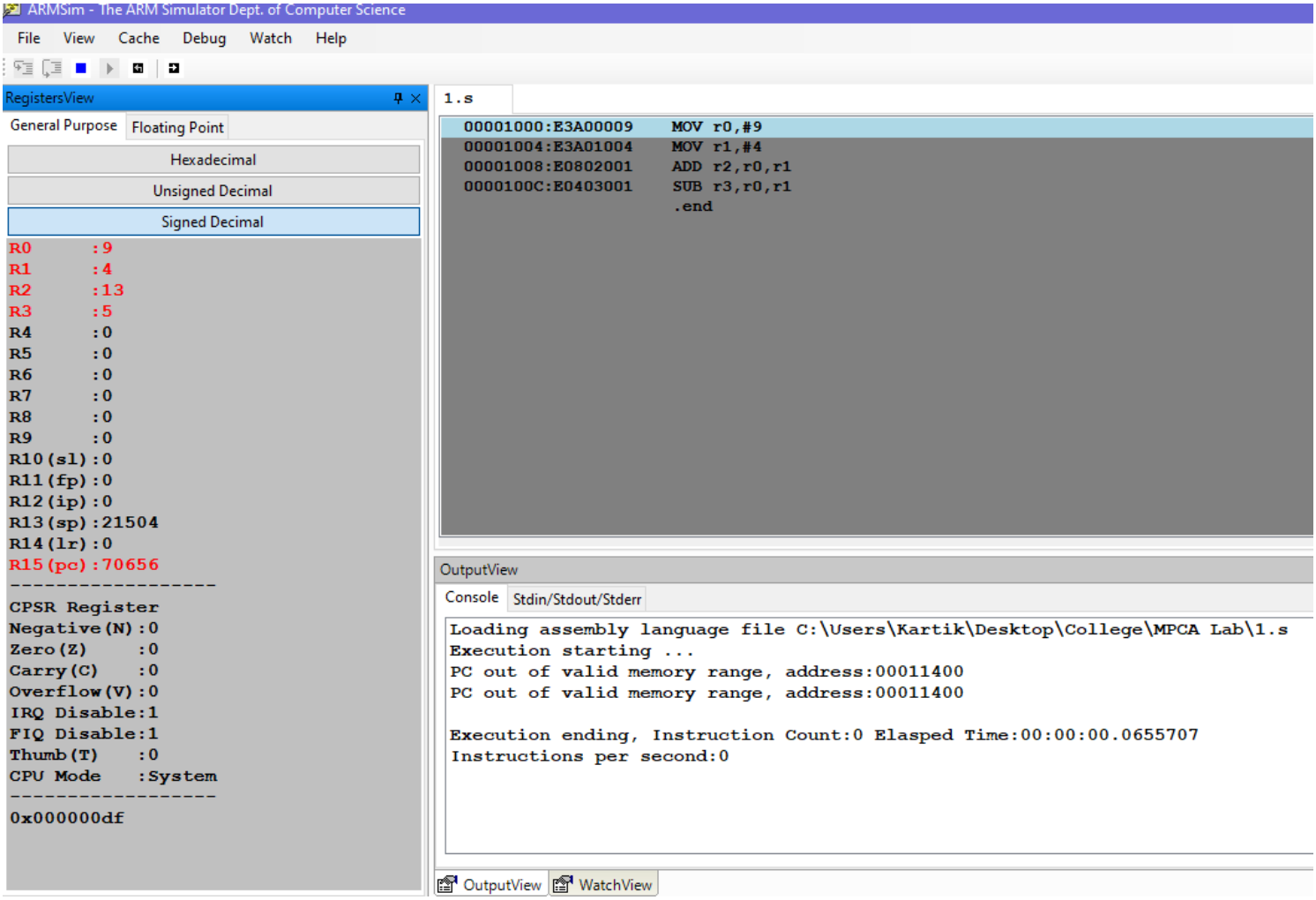
Title of the Program

Write an ALP using ARM instruction set to add and subtract two 32 bit numbers .Both numbers are in registers.

I. ARM Assembly Code

```
mov r0,#9
mov r1,#4
add r2,r0,r1
sub r3,r0,r1
```

II. Final Output Screen Shot



Microprocessor and Computer Architecture Laboratory

UE19CS256

4th Semester, Academic Year 2020-21

Date:22/1/21

Name: Kartik Soni	SRN: PES1UG19CS212	Section D

Week#____1_____ Program Number: ____2___

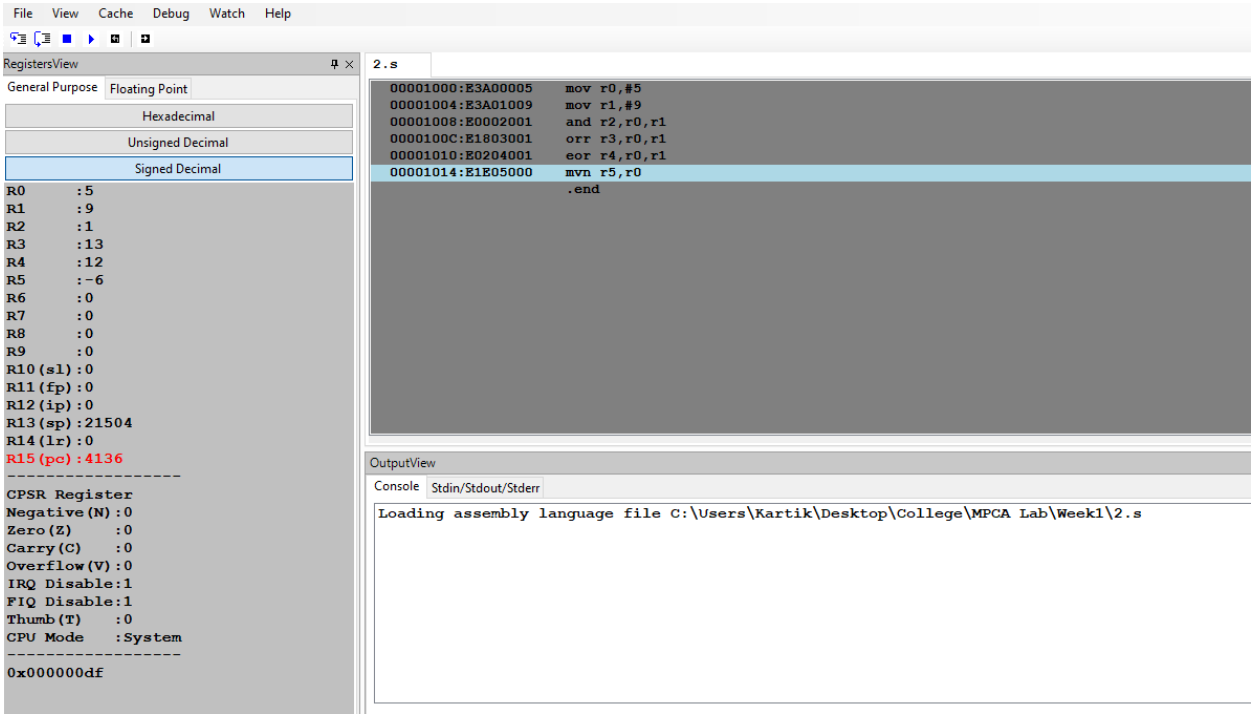
Title of the Program

Write an ALP to demonstrate logical operations. All operands are in registers.

I. ARM Assembly Code

```
mov r0,#5
mov r1,#9
and r2,r1,r0
orr r3,r1,r0
eor r4,r1,r0
mvn r5,r0
```

II. Final Output Screen Shot



Microprocessor and Computer Architecture Laboratory

UE19CS256

4th Semester, Academic Year 2020-21

Date:22/1/21

Name: Kartik Soni	SRN: PES1UG19CS212	Section D

Week#____1_____ Program Number: ____3___

Title of the Program

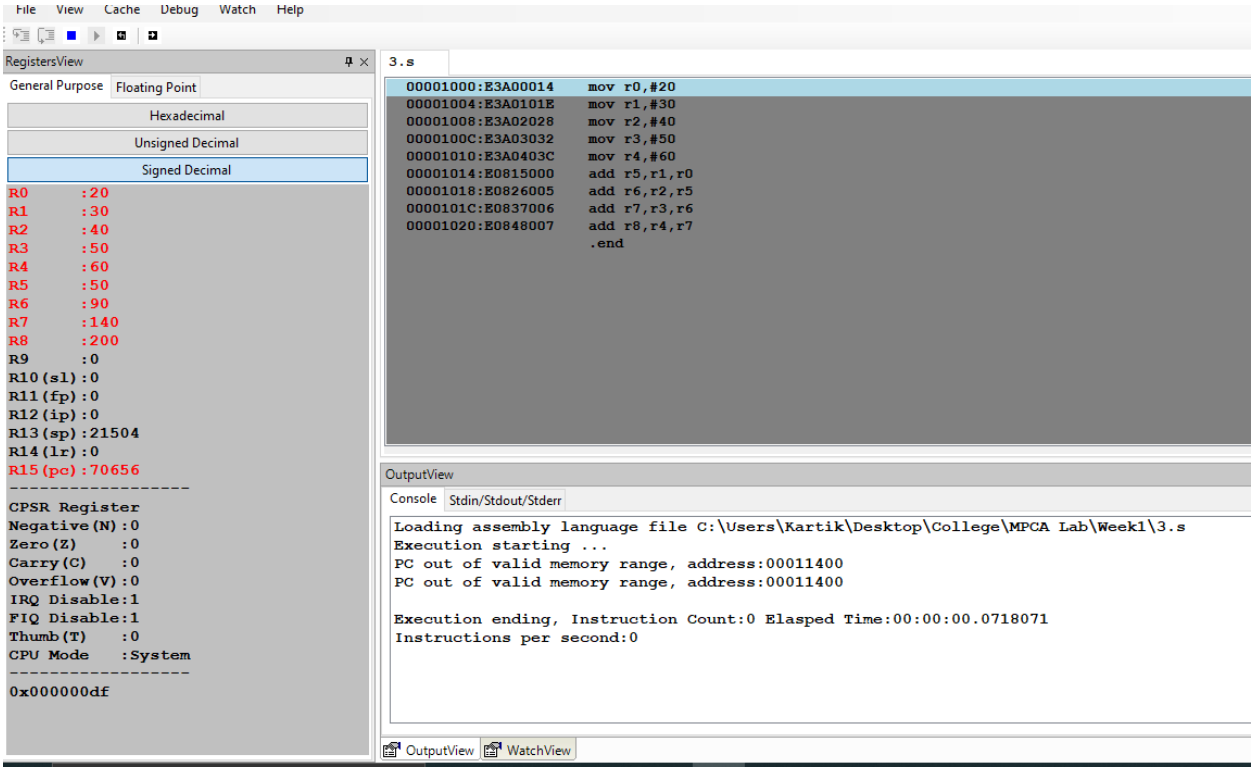
Write an ALP to add 5 numbers where values are present in registers.

I. ARM Assembly Code

```
mov r0,#20
mov r1,#30
mov r2,#40
mov r3,#50
mov r4,#60
add r5,r1,r0
add r6,r2,r5
add r7,r3,r6
```

add r8,r4,r7

II. Final Output Screen



Microprocessor and Computer Architecture Laboratory

UE19CS256

4th Semester, Academic Year 2020-21

Date:22/1/21

Name: Kartik Soni	SRN: PES1UG19CS212	Section D

Week#____1_____ Program Number: ____4___

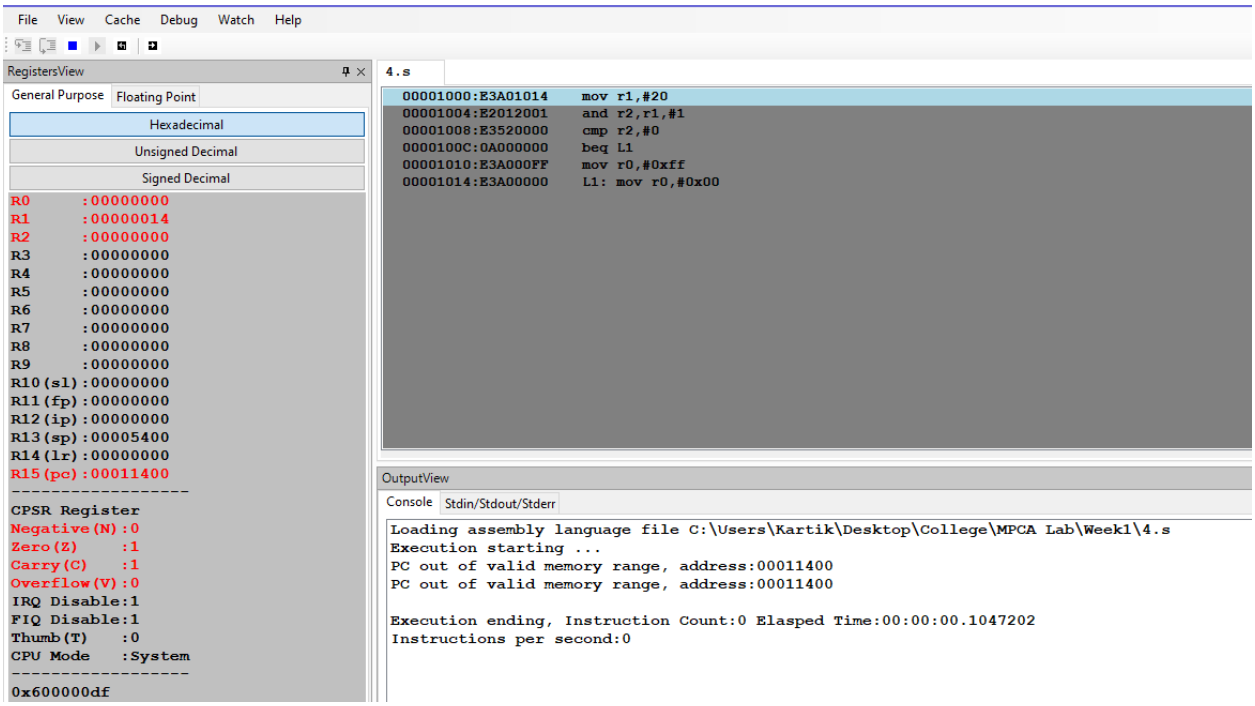
Title of the Program

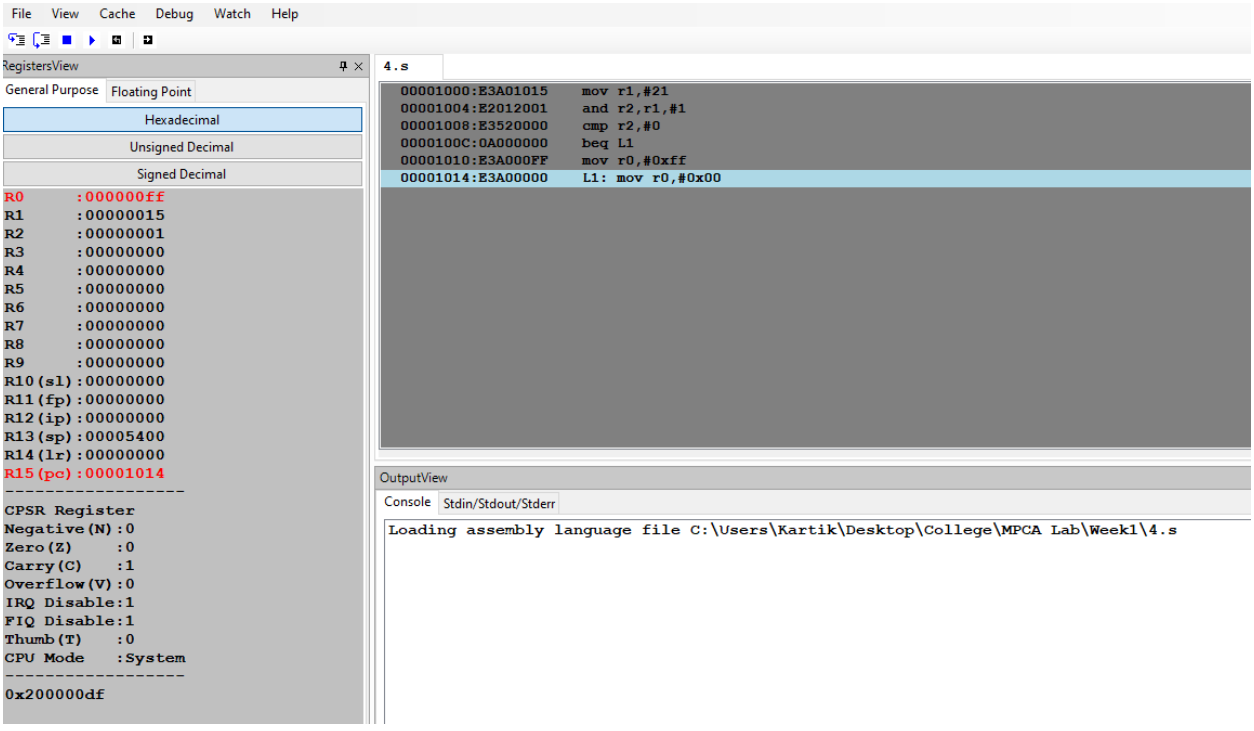
Write an ALP using ARM instruction set to check if a number stored in a register is even or odd. If even, store 00 in R0, else store FF in R0

I. ARM Assembly Code

```
mov r1,#21
and r2,r1,#1
cmp r2,#0
beq L1
mov r0,#0xff
L1: mov r0,#0x00
```

II. Final Output Screen Shot





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.

Signature: Kartik
Name: Kartik Soni
SRN: PES1UG19CS212
Section: D
Date:23/1/21