

BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI K. K. BIRLA Goa Campus
First Semester 2020-2021
CS F342 Computer Architecture
Lab-3

Implement Instruction Memory for the following instructions
The instruction format is given as follows:

Type	Instruction	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
		opcode						rs				rt				rd				shamt				funct									
R	sub	000000						rs				rt				rd				00000				100010									
	add	000000						rs				rt				rd				00000				100000									
	or	000000						rs				rt				rd				00000				100101									
I	addi	001000						rs				rt				immediate																	

The following instructions are to be implemented (in the given order):

- 1) **sub \$s2, \$s1, \$s0**
- 2) **add \$t3, \$t2, \$t0**
- 3) **or \$s1, \$t1, \$t4**
- 4) **addi \$t4, \$s0, 0x000D**

https://drive.google.com/file/d/1p00KcMnydSe6lFUP_a3E6aUwAC_O3nDz/view?usp=sharing



a) IR[31:26] (opcode) (2 marks)
b) IR[5:0] (funct) (2 marks)

	7 sec	14 sec	21 sec	28 sec	35 sec	42 sec	49 sec
0				8		0	
32			37	13		0	
4			8	12		16	
37058	21518368	19695653	571211789	0			