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ECGR 3183: Computer Organization

## Project 1: Basic LEGv8 Coding

Source Code:

```
LDUR X2, [X1, #0] //LOADS X1 AND M[0] INTO X2
LDUR X3, [X1, #8] // LOADS X1 AND M[8] INTO X3
LDUR X4, [X1, #16]
LDUR X5, [X1, #24]
ADD X6, X2, X3
ADD X6, X6, X4
SUB X6, X6, X5 //MATH FOR PROJECT
STUR X6, [X1, #32] // STORES X6 INTO X1 AND M[32]
```

PARTICIPATION  
ACTIVITY

2.24.1: Addition, subtraction, and registers.

1. Run the simulation step-by-step, observing register values.
2. Change X2's value to 10 by clicking the register value on the right, then run again.
3. Modify line 3 to be SUB X7, X4, X1, then run again.

Assembly

Line 1 LDUR X2, [X1, #0] //LOADS X1 AND M[0] INTO  
Line 2 LDUR X3, [X1, #8] // LOADS X1 AND M[8] INTO  
Line 3 LDUR X4, [X1, #16]  
Line 4 LDUR X5, [X1, #24]  
Line 5  
Line 6 ADD X6, X2, X3  
Line 7 ADD X6, X6, X4  
Line 8 SUB X6, X6, X5 //MATH FOR PROJECT  
Line 9  
Line 10 STUR X6, [X1, #32] // STORES X6 INTO X1 AND

Registers

X1	4000
X2	30
X3	40
X4	50
X5	60
X6	60
X7	1

Memory

4000	30
4008	40
4016	50
4024	60
4032	60

EXIT SIMULATION

START AGAIN

More options ▾

Feedback?