LDUR X0, [X1, #8]

opcode	address	op2	Rn	Rt
11 bits	9 bits	2 bits	5 bits	5 bits

Load/store instructions
– Rn: base register
– address: constant offset from contents of base register (+/- 32 double words)
– Rt: destination (load) or source (store) register number
– Example of D-type instructions are:

1986	8	0	1	0

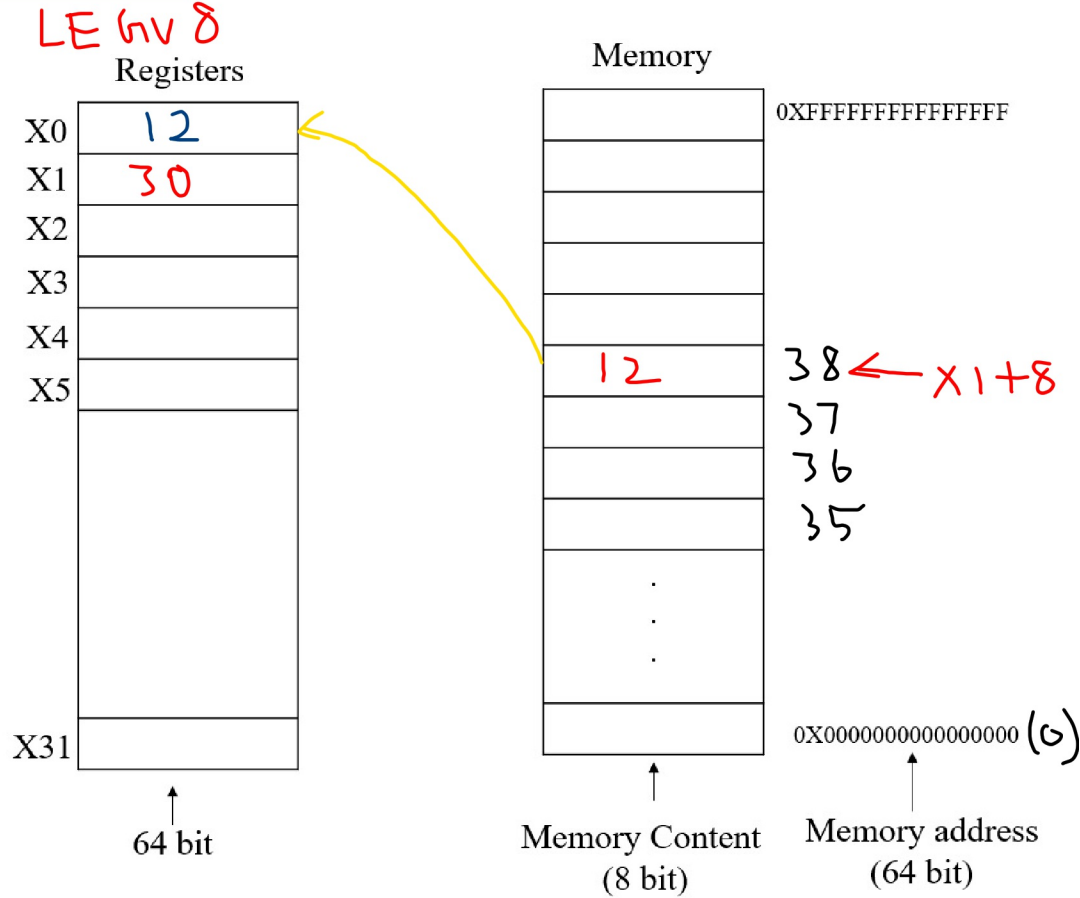
11111000010	000010000	00	00001	00000

← 32 machine code

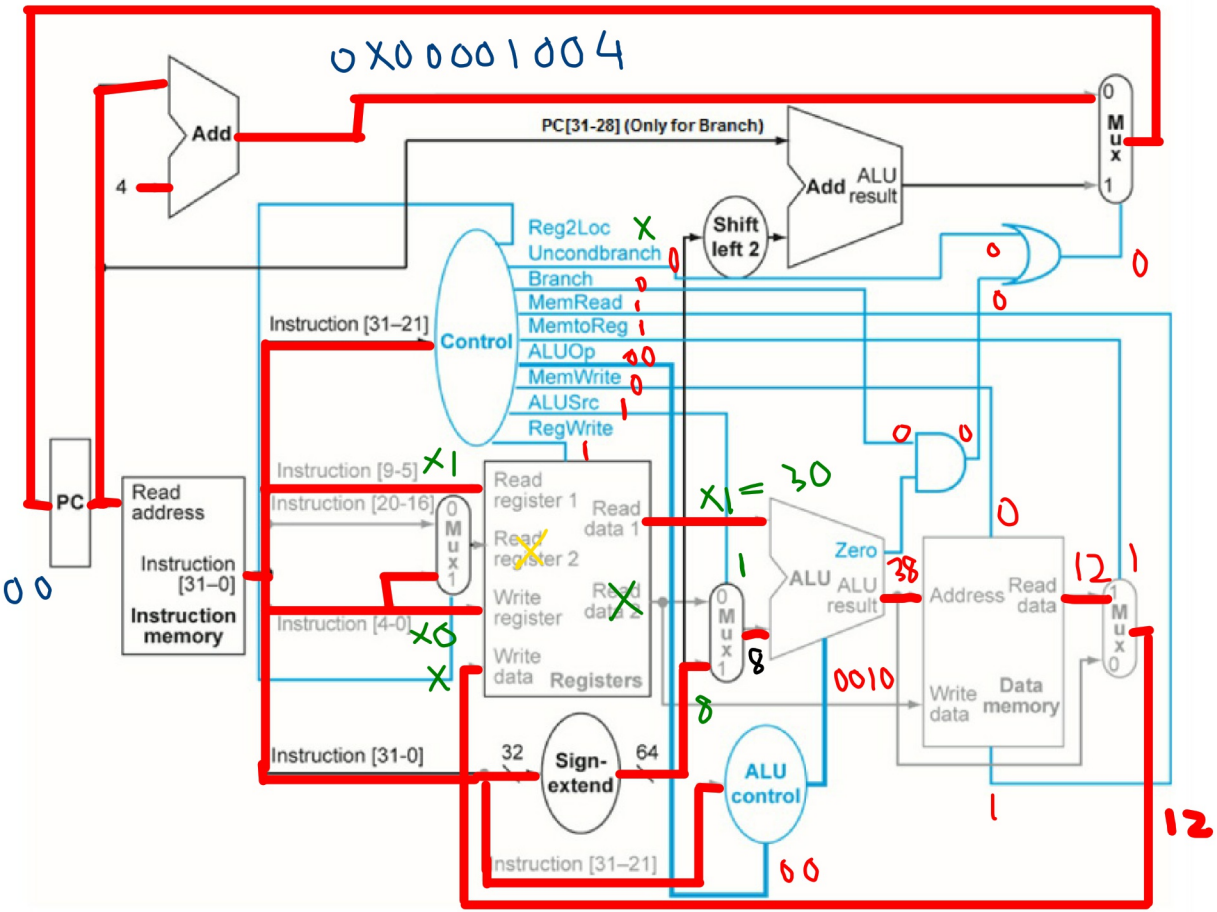
LDUR X0, [X1, #8]

Assume , X1 = 30

X1 + 8 = 30 + 8 = 38



Tracing Datapath: LDUR X0, [X1, #8]



Reg2Loc = X

Uncondbranch = 0

Branch = 0

MemRead = 1

MemtoReg = 1

ALUOp = 00

MemWrite = 0

ALUSrc = 1

RegWrite = 1

0x00001000 LDUR X_0, [X1, #8]

0x00001004