

Opcode Table:

Instruction	Opcode	RegWrite	AluSrc	Branch	MemRe	MemWr	MemtoReg	ALUOp	Byte
R-Type	0110011	1	0	0	0	0	0	X	0
I-Type	0010011	1	1	0	0	0	0	X	0
lw	0000011	1	1	0	1	0	1	X	0
sw	0100011	0	1	0	0	1	0	X	0
BEQ	1100011	0	0	1	0	0	0	X	0
JAL	1101111	1	0	1	0	0	0	X	0
lb	0000011	1	1	0	1	0	1	X	1
sb	0100011	0	1	0	0	1	0	X	1
lui	0110111	1	1	0	0	0	0	X	0

Datapath + Controller:

