

Instruction	Reg2Loc	ALUSrc	MemtoReg	RegWrite	MemRead	MemWrite	Branch	UncondBranch	ALUOp	SignOp	ImmToReg
AND	0	0	0	1	0	0	0	0	0000	xx	0
ORR	0	0	0	1	0	0	0	0	0001	xx	0
ADD	0	0	0	1	0	0	0	0	0010	xx	0
SUB	0	0	0	1	0	0	0	0	0110	xx	0
ADDI	x	1	0	1	0	0	0	0	0010	00	0
SUBI	x	1	0	1	0	0	0	0	0110	00	0
LDUR	0	1	1	1	1	0	0	0	0010	11	0
STUR	1	1	x	0	0	1	1	0	0010	11	0
CBZ	1	0	x	0	0	0	0	0	0010	01	0
B	x	x	x	0	0	0	0	1	0111	10	0
MOVZ	x	x	x	1	0	0	0	0	xxxx	00	1

To add the MOVZ function: add a mux to choose from the output of the Sign-Extension module and output of the MemToReg mux. This also needs a control signal to choose the path to send our immediate value with 0's to write register, we will name the control signal "ImmToReg". All other instructions will have this mux set to 0 only movz will use this