Computer Architecture – CA2 (RISC-V Design)– Report

Amir Abbas Moumeni Zadeh – Taha Abdollahnejad

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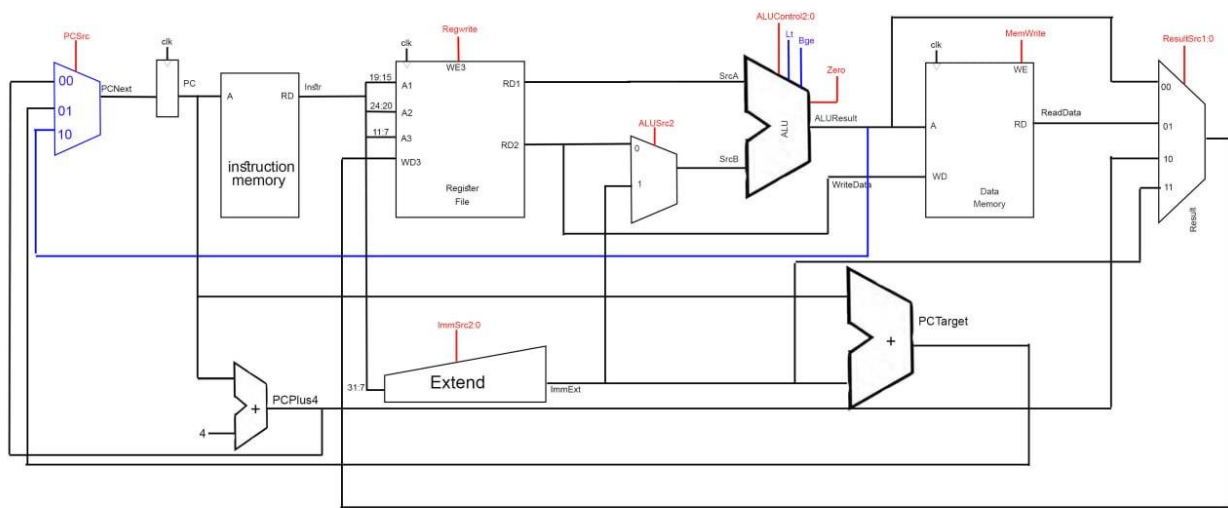| ALUControl	Operation
000	+
001	-
010	&
011	|
100	XOR
101	slt
110	sltu

DataPath For RISC-V (Code included)

Test : writing assembly code to find lowest Data in a array of numbers.

Instruction

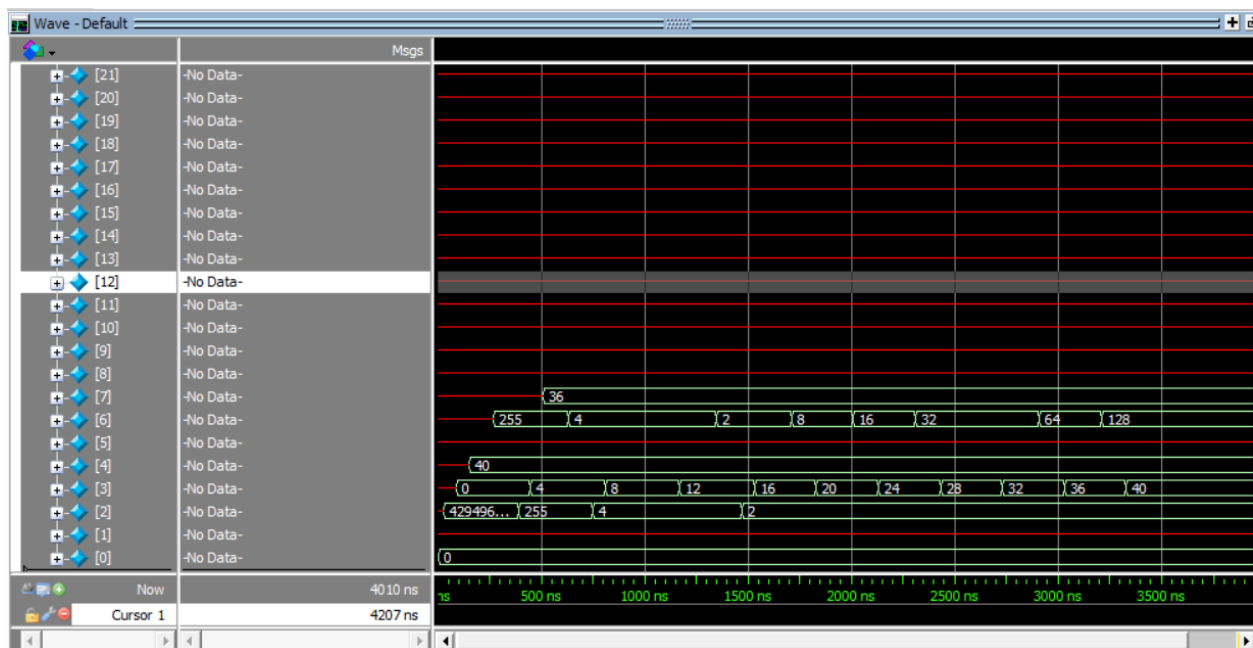|		
	addi X2, Zero, -1	#Loading X2 with Maximum number Available
	addi X3, Zero, Zero	#Loading X3 (Array index) with 0
	addi X4, Zero, 40	#Loading X4 (Max number of loop)
FOR :	bge X3, X4, END-FOR	#LOOP
	Lw t1, A[X3]	#Loading Array number X3
	Blt X2, t1, END-IF	#Check if lower than 16'b1
	add X2, Zero, t1	#Replace Array number with 16'b1 if lower
END-IF:	addi X3, X3, 4	#Increment index
	Jal rd, FOR	#Restart Loop
END-FOR		#END Programm

X2 is loaded with minimum number.