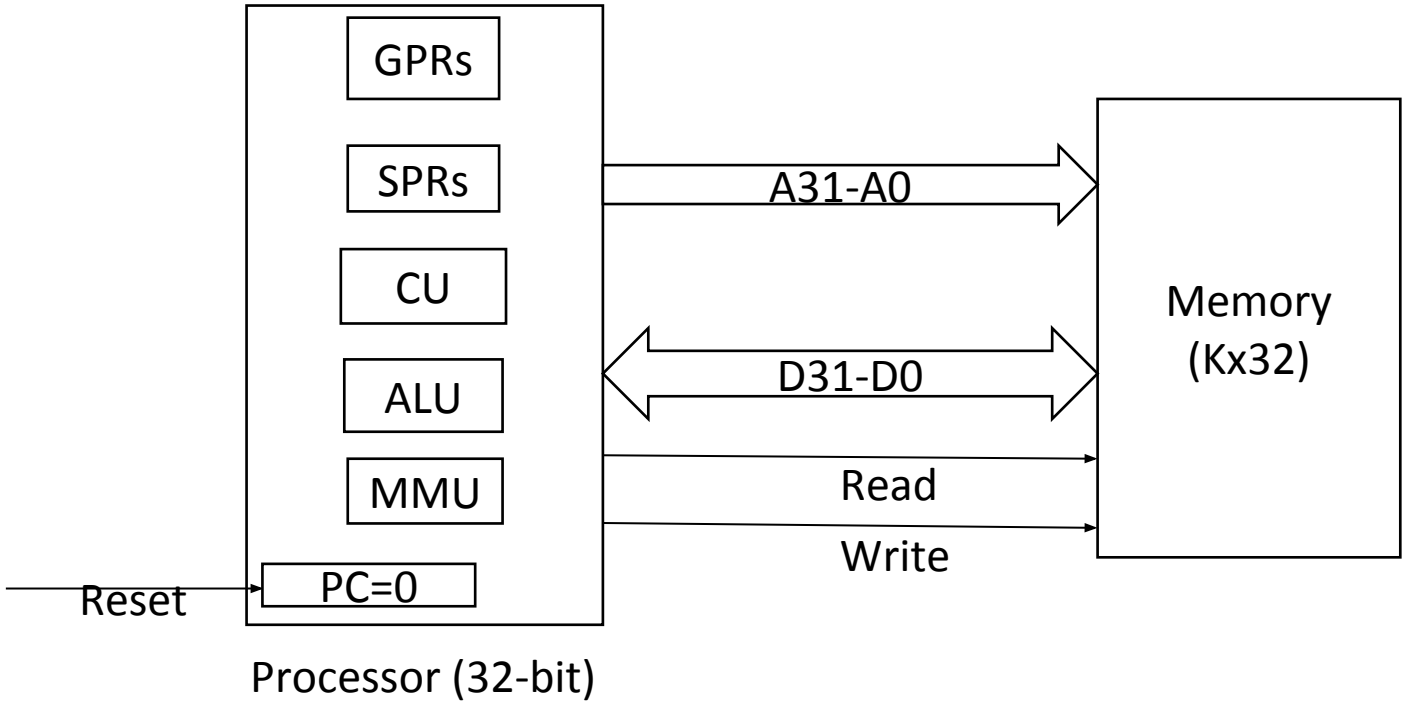
Assignment 4

RIST-32 Processor Design

Supplementary Information



Assignment 4: Functional Units

A = B + C - Immediate

A = (B+C).Immediate

Assume, R2 contains the base address of the data

00000000: Load R1, X(R2) ; Loads B
00000004: Load R3, Y(R2) ; Loads C
00000008: Add R1, R1, R3 ; Adds B+C
0000000C: Sui R1, R1, #Immediate ; Subtracts Immediate from (B+C)
00000010: Store R1, Z(R2) ; Stores result in A
00000014: HLT ; Halts execution

00000000: Load R1, X(R2) ; Loads B
00000004: Move R3, R1 ; Moves R1 to R3
00000008: Loads R1, Y(R2); Loads C
0000000C: Move R4, R1, Moves R1 to R4
00000010: OR R1, R3, R4 ; Performs OR of R3 and R4
00000014: ANI R5, R1, #Immediate ; Performs AND with Immediate
00000018: Store R5, Z(R2) ; Stores the result in A
0000001c: HLT ; Halts execution