

Digital Design and Computer Architecture LU

Lab Protocol

Exercise III

Group 3

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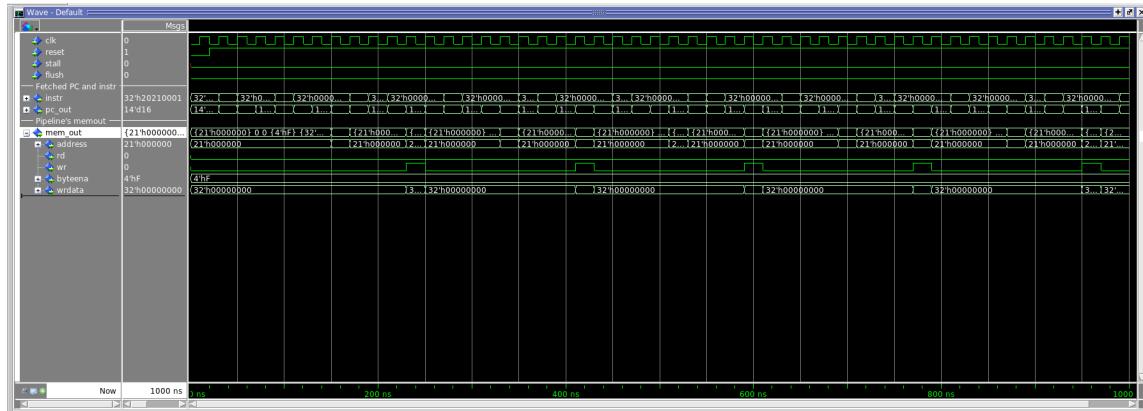


Figure 1: Simulation screenshot for Listing 1. 0 - 1000 ns

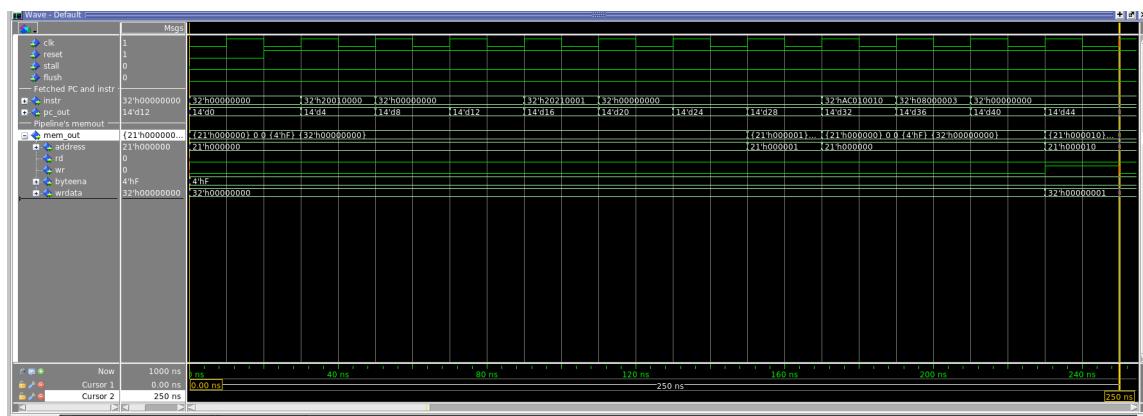


Figure 2: Simulation screenshot for Listing 1. 0 - 250 ns

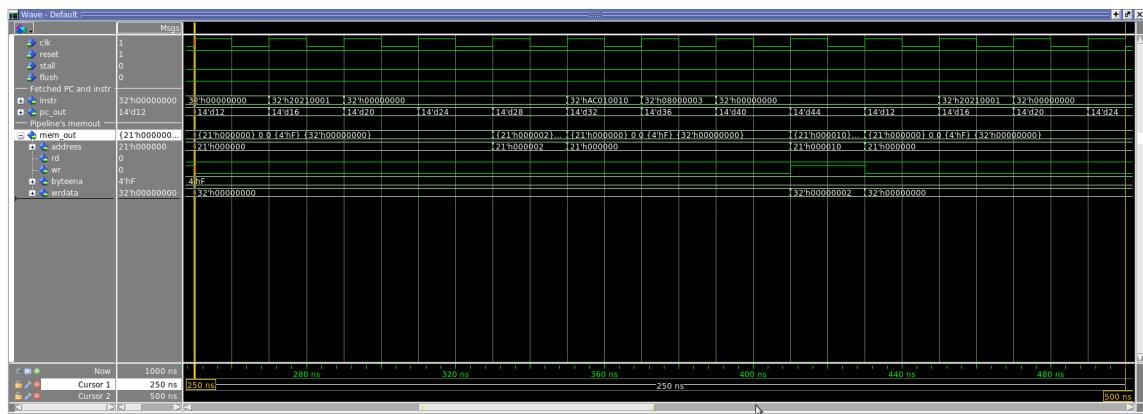


Figure 3: Simulation screenshot for Listing 1. 250 - 500 ns

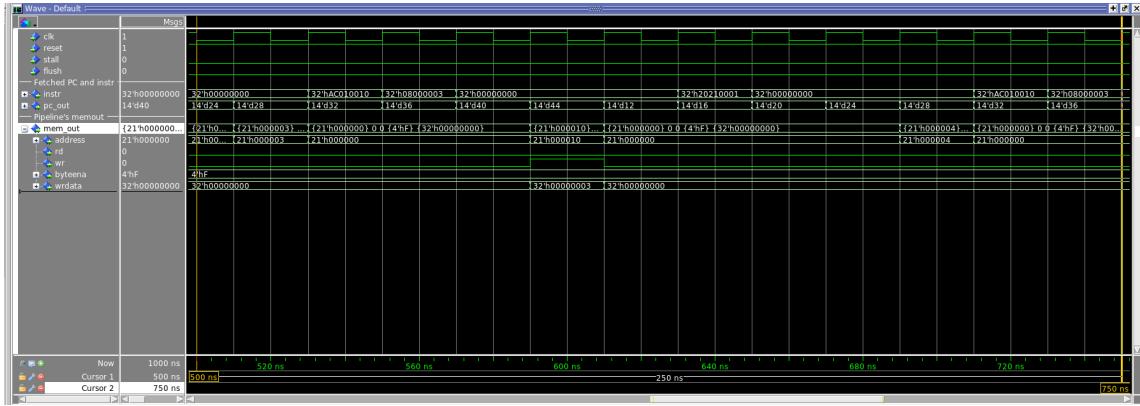


Figure 4: Simulation screenshot for Listing 1. 500 - 750 ns

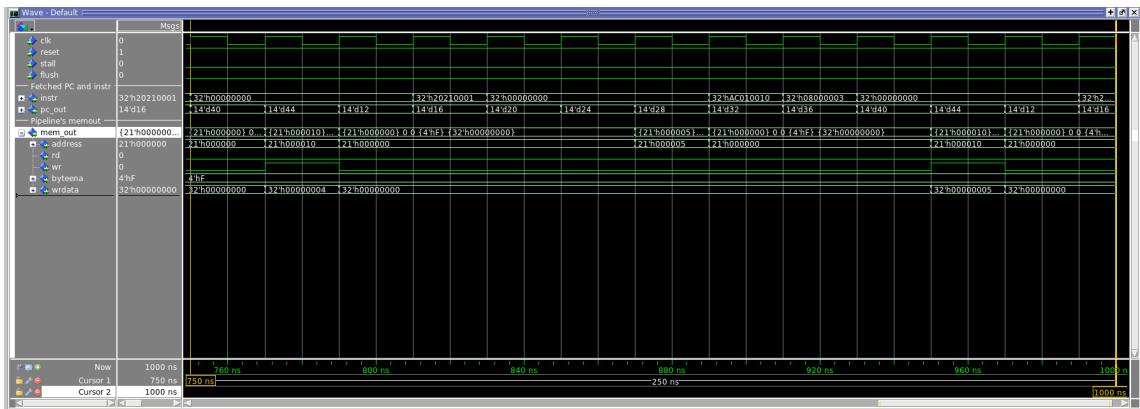


Figure 5: Simulation screenshot for Listing 1. 750 - 1000 ns

Make sure the following signals are visible in Figure 1 and the signal values are readable: the program counter in the fetch stage, the instruction being fetched, and the fields `address`, `rd`, `wr`, `bytelen`, and `wrdata` in the `mem_out` signal coming out of the pipeline.

Listing 1: Assembler example without forwarding

```

addi $1, $0, 0
nop
nop
loop:
    addi $1, $1, 1
    nop
    nop
    sw $1, 16($0)
    j loop
    nop
    nop
    nop

```