Bilkent University CS Department CS224 Computer Organization

Lab No: 5 Design Report

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Part 1-b:

1- Hazard type: Load-use

The instruction that comes after load instruction must wait for load instruction to write the data to be written to registers to use that data, therefore execute and memory stages (of the instruction comes after load) are affected.

2- Hazard type: Load-store

Due to unvalid data data stored into the memory from the register, store instruction's memory stage will be affected.

3- Hazard type: Compute-use

Since registers are not updated with last calculated values, affected instruction's decode stage will be affected and other stages (execute and writeback) will be affected by the chain effect of wrong results.