

Homework 10

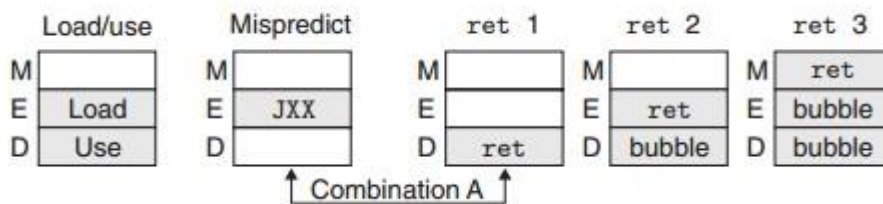
Problem 1

Suppose we use a branch prediction strategy that achieves a success rate of 65%, such as backward taken, forward not-taken, as described in Section 4.5.4. What is the value of CPI, and what is the impact? Assuming all of the other frequencies are not affected?

(the misprediction frequency is 0.35)

Problem 2

Write a Y86 assembly-language program that causes combination A to arise and completes with a halt instruction if the pipeline operates correctly.



Problem 3

Write HCL code for the signal E_bubble in the PIPE implementation.