

CprE 381 Homework 9

[Note: This homework is meant to help you form insights regarding the principles behind caches.]

1. Principle of Locality

a. Write a valid MIPS assembly program that executes at least 20 instructions and demonstrates spatial locality in instruction fetching, but not data accesses. Explain this locality in the assembly comments.

b. Write a valid MIPS assembly program that executes at least 20 instructions and demonstrates temporal locality in data accesses, but not instruction fetching. Explain this locality in the assembly comments.

2. Cache Configuration and Simulation

a. P&H (Textbook) 5.2.1, 5.2.2, 5.2.3, 5.2.6