

# **3-Level Cache Simulation Using SimpleScalar**

## **Individual Report**

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### **1. Personal Contribution**

I make the following contribution in this project:

- Provide a correct block present counter (please refer to our report for the details) in the cache block data structure, so my partner can rely on this counter to enforce the inclusive property in his replacement policy.
- Add level 3 cache support.
- Add multicore support.

My works take around 200 lines of c codes in total.

### **2. What I learnt from this project:**

- A better understanding of cache.
- C language programming knowledge such as shared memory and shared mutex.
- The system design of the SimpleScalar toolsets.

### **3. Evaluate my team member's work**

Honghao is very responsive in this project. He found many useful references which help us to get started on track in this project. Although his part does not need as much coding as mine, he takes the responsibility of writing the report drafts, which is a great relieve to me.

### **4. My comment on this project:**

This project is really a big challenge to us, but our group finally achieved our goals. I think I learnt a lot from this project. I not only get experiences in cache design and simulation, but it also forces me to use many Operating System concepts that I learnt in the class such as synchronization and inter-process communication. I think this is really a comprehensive project.