

For my program, I decided to use a hashlist for the sets and a linked list for the lines. The hashlist made the most sense to me since I could use the index bits as a way to hash through the cache. I used the linked list for the lines in the set because it fit well with the fifo policy that I was going to use. The prefetcher added a small number of memory reads and a large number of cache hits. This is because when prefetching, it only reads from memory if we do not find the adjacent address in the cache, so the consequences are fairly small in regard to extra reads. However, spatial locality dictates that memory addresses close to each other are usually accessed around the same time. By putting the adjacent address in the cache, we are substantially increasing the likelihood of getting cache hits, as can be seen in the result of running the program.