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Programming Assignment #4  
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The only data structure I used was cache line. Cache line contains accessed (which is used for LRU protocol), tag, and is\_valid;

is\_valid is either a 1 or a 0, and the tag is a long int used to find the block that will hold or will hold that address. This structure is used in conjunction with a 2d array to simulate a cache.

I observed that there were a lot more cache hits and less cache misses when using prefetch. Also that memory writes remained the same.

Both of these occurrences are due to prefetch taking advantage of spatial locality.

My program gives me a 50 on the autograder on the ilab machine, So hopefully everything goes well! Thank you.