

CA | Assignment 1

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We see a lower miss rate for larger caches as more data can be cached simultaneously decreasing capacity misses. However the cold misses would increase as some of the capacity misses get converted to cold misses as we now have more memory to cold start with.

Increasing the associativity decreases conflict misses. Hence we get a lower miss rate for higher associativity.

There can be slight deviations here and there because of the difference in what all data addresses map to the same cache row. This is because modular arithmetic is used to find out the cache row.

Note:

Details of experimental setup can be found in caches.py

Source:

<http://learning.gem5.org/book/>

(A major part of the code is as described in the tutorial with changes here and there done by me)
