CSC469: Assignment 2

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Contents

1 Introduction

Insert smart text here...

Restate the problem. Mention the papers we used (Hoard, Miser) and other resources. Describe (succintly) the goal we are trying to achieve (speed, scalability, false sharing avoidance, low fragmenation). This is a sort of related works.

Describe the structure of the report.

2 Allocator Design

Insert smart text about the design of our allocator...

What metadata do we maintain (for the allocator, for the heap, for the superblock, and for the blocks inside the superblock)? Why do we need it?

Where do we put the metadata? Why? (e.g. the structs for the free list at the end of the free memory block, because it's easier to merge to the right, where there is ususally free memory.)

How do we handle the really large allocations?

Was there something we did to boost performance (mention memory usage, processing, internal and external fragmentation)?

What other questions do we want to answer?

3 Design Alternatives

Insert smart text abot other features we considered for our allocator...

Was there something that would work better but is too hard to develop?

Was there something that was easier to develop but would give poor performance?

Was there something we tried, but found that it wouldn't work well (or took too much time/effort), and decided in favor of a simpler solution?

Was there something we did, avoided or fixed to have good performance?

Did we decide in favor or against something regarding fragmentation?

Should this be a subsections of the design section above?

4 Performance Analysis

Insert smart text about how well our allocator perfomed...

MUST-HAVE (from grading rubric) (maybe give each a subsection?): –¿ Sequential Speed –¿ Scalability –¿ False Sharing Avoidance –¿ Fragmentation

Describe the experimental setup. (Subsection?)

Describe the performance measurements. **MUST** have plenty of numbers (i.e. not "very few") (Subsection?)

Describe the memory usage, overhead, internal and external fragmentation. Pay **significant** attention to **fragmentation** and **usage**.

5 Conclusion

Insert smart text about how we did awesome... This might take work... Lots of it... :)

A References

Cite the papers that we use, and any other resources.

B Tools

Do we need this? Rather, do we have something to write for this?