

End of Hashing

9-25-2003

Opening Discussion

- What did we talk about last class?
- Do you have any questions about the assignment? Remember that the design and test code is due today.

Universal Hashing

- This is a method by which the hash function is randomized for every new hash. This guarantees that the average performance over many runs is always $O(1)$.
- However, the math involved for doing it well involves number theory so we aren't going to work on that in this course.

Perfect Hashing

- All the techniques we have discussed give $O(1)$ average behavior, but they can be $O(n)$ worst case.
- If the data in the hash is static (it doesn't change after some point), then we can do perfect hashing which has worst case performance of $O(1)$.
- For this we use a hash of hashes and have universal hash functions at both levels.

Code, Code, and more Code

- Now we want to spend a lot of time looking at code in C++ for doing the things that we have been talking about. We want to look at the completed hash that uses linking and then write a hash that uses open addressing.

Minute Essay

- Which type of hash, of the ones that we have covered, do you intend to use for assignment #3? Why?
- Please start reading CLR 253-272 for next class.
- Quiz #2 will be given next class and assignment #2 is due on that day.
