Project: indexing system for main memory

- index must be capable of supporting
  - exact match queries and range queries
  - updates, inserts, and deletes.
- must support serializable execution of user-specified transactions
- choice of data structures (e.g., B-tree, AVL-tree, etc.) as well as the mechanism for enforcing serializability (locking, OCC, one-at-a-time) is up to us
- we will try out different techniques in different teams
- system does **not** need to support crash recovery

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ACM SIGMOD Programming Contest

- during the semester we will combine our findings in a single or multiple best student system(s)
- we will send it to the ACM SIGMOD programming contest
- what we could win.
  - The winning team of the ACM SIGMOD contest will be awarded a prize of $5,000: if it is a team from this lecture, the winning students will take home the price
  - Submissions will be judged based on their overall performance on a supplied workload.
  - up to two students from each team will receive travel grants from ACM SIGMOD to attend the conference in the US
  - there will be a final competition among the world-wide top-three submissions at the conference

Project: How to evaluate?

- during the semester each team will be evaluated twice based on a demo session
- in each session each student is expected to be able to answer questions about his part of the code
- you are allowed to fail in such a session once during the semester and then will get a second chance
- however, a second failure implies: you do not pass this lecture
- evaluations are part of the score of the exercises
- we will score
  - code design
  - level of task fulfillment
  - performance

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Project Deadlines

- December 1, 2008: Detailed specification of the system will be available on the website given above.
- until then:
  - you should learn the principles
  - start playing around with different components, e.g., indexes, storage, etc.
- January 15, 2009: The workload will be made available.
- March 15, 2009: Submissions due