Implementing Data Management Systems

Midterm Details

The terms:

- *You will have one week to choose a question, get it approved, and write your essay.*
- *The essay should be in the 5-10 page range, formatted in a fashion similar to a research paper.*
- *You will be graded on organization, clarity, technical accuracy, and depth of understanding.*
- *You will be allowed to revise your essay up to twice in the two weeks after getting feedback, with the possibility of earning back 20% of the points deducted.*

Possible midterm essay questions (you are free to suggest others):

1. Compare and contrast the different query optimization search strategies, highlighting the strengths and weaknesses of each approach. Illustrate your points with one or more example SQL or relational algebra queries.

2. Compare the local and distributed data management contexts from the perspective of query optimization, and highlight specific ways this affects the design of a query optimizer and/or the trade-offs it must incur.

3. Compare the local and distributed data management contexts from the perspective of query execution, and highlight specific ways this affects the design of a query execution engine.

4. Compare the local-as-view and global-as-view approaches to data integration.

5. Consider the different approaches to concurrency control, and highlight cases where one or the other may be advantageous. You may wish to read the Agrawal et al. paper in the course reader as a supplementary document.