

CMSC 424 – Database design
Lecture 18
Query optimization

Mihai Pop

Admin

- Homework 3 due

Choice of Evaluation Plans

- Must consider the interaction of evaluation techniques when choosing evaluation plans
 - choosing the cheapest algorithm for each operation independently may not yield best overall algorithm. E.g.
 - merge-join may be costlier than hash-join, but may provide a sorted output which reduces the cost for an outer level aggregation.
 - nested-loop join may provide opportunity for pipelining
- Practical query optimizers incorporate elements of the following two broad approaches:
 1. Search all the plans and choose the best plan in a cost-based fashion.
 2. Uses heuristics to choose a plan.