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# Query Optimization

## 7. Exercise, Winter 2007/2008

Due 2007-12-18

1. Create the DP table (manually) for the relations  $A, B, C$  with cardinalities  $|A| = 10, |B| = 20, |C| = 100$  and selectivities  $f_{AB} = 0.5, f_{BC} = 0.1$  (cost function  $C_{out}$ ). Mark the final table entries, but include discarded entries. Consider cross products. (4)
2. What are the requirements for using DP to solve (join ordering) problems? What does this imply for the cost function? (2)
3. Consider the initial sequence  $\langle 1, 2, 3, 4 \rangle$  and the random permutation generation from the lecture.
  - (a) Give the rank of the sequence  $\langle 1, 4, 2, 3 \rangle$  (2)
  - (b) Give the 19th sequence (i.e., the results of unranking 19) (2)