Reading Homework 12 (Due Mon, April 23, 3:20PM)

Due Apr 23, 2018 at 3:25pm **Points** 9 **Questions** 7 **Time Limit** None

Instructions

This quiz covers Section 12.5 of the textbook.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	4 minutes	0 out of 9

Score for this quiz: **0** out of 9
Submitted Apr 23, 2018 at 3:26pm
This attempt took 4 minutes.

For all the questions on this quiz, assume we have two tables that we want to equi-join: Table 1 is 2,000,000 bytes and consists of fixed-size tuples of 1000 bytes. Table 2 is 4,000,000 bytes and consists of fixed-size tuples of 100 bytes. Assume that we have 1,000,000 bytes of memory that we are willing to allocate to the join, not including memory required to store the output of the join, and database block size is 10,000 bytes.

Question 1

2 / 2 pts

Estimate the total number of blocks read from Table 1 if it is the inner table of a nested-loop join. Assume that as part of the first step of the join algorithm, you will bring as much of Table 1 into memory as possible and leave it there throughout the nested-loop join algorithm (the blocks read during this initial read should be included in your answer). Thus, all but 2 blocks of memory will be consumed by Table 1 data. One of the final two blocks of memory will be devoted to storing the remaining blocks of Table 1, and the other for storing blocks from Table 2.

Correct!

4080098.0000

orrect Answers

4080098.0 (with margin: 0.0)
0.0 (with margin: 0.0)

Question 2

1.5 / 1.5 pts

Estimate the total number of seeks involved in a nested-loop join algorithm if Table **2** is the inner table. As before, assume that as part of the first step of the join algorithm, you will bring as much of the inner table into memory as possible and leave it there throughout the nested-loop join algorithm

Correct!

2200.0000

orrect Answers

2200.0 (with margin: 0.0)
0.0 (with margin: 0.0)

Question 3

1.5 / 1.5 pts

Estimate the total number of blocks read from Table 1 if it is the inner table of a block nested-loop join.

Please note that the formula from the textbook (which includes an expression (M - 2)) needs to be adjusted for our assumption set listed above. Please make the appropriate adjustment(s) before answering this question.

Correct!

1000.0000

orrect Answers

1000.0 (with margin: 0.0)
0.0 (with margin: 0.0)

Question 4

1 / 1 pts

Estimate the total number of seeks involved in a block nested-loop join algorithm if Table **2** is the inner table.

Correct!

6.0000

orrect Answers

6.0 (with margin: 0.0)
0.0 (with margin: 0.0)

Question 5

1 / 1 pts

Estimate the total number of blocks read from Table 1 if it is the outer table of an index nested-loop join. Assume the index has a height of 5 and that the join key is unique.

Correct!

200.0000

orrect Answers

200.0 (with margin: 0.0)
0.0 (with margin: 0.0)

Question 6

1 / 1 pts

Estimate the total number of blocks read (total) for a sort merge join between Table 1 and Table 2. Assume that both tables are already sorted by the join attribute, and that the join attribute is unique in each table.

Correct!

600.0000

orrect Answers

600.0 (with margin: 0.0)
0.0 (with margin: 0.0)

Question 7

1 / 1 pts

Estimate the total number of blocks transferred (read or written) for a hash join between Table 1 and Table 2 (assume no hash table overflow, no recursive partitioning, and the algorithm does not result in any partially filled blocks being read or written in any step of the algorithm).

Correct!

1800.0000

orrect Answers

1800.0 (with margin: 0.0)
0.0 (with margin: 0.0)

Quiz Score: **0** out of 9

This quiz score has been manually adjusted by -9.0 points.