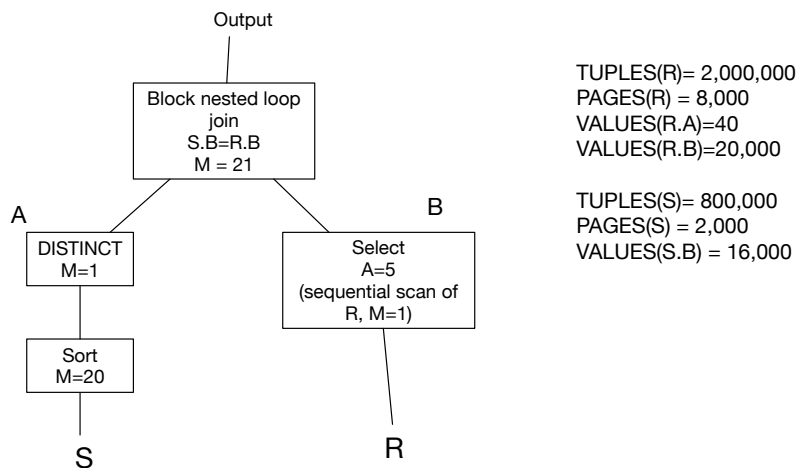


# CSCI 4380 Spring 2018 Quiz 6 [Time: 20 minutes]

Name 1:	RCS ID1:
Name 2:	RCS ID2:
Name 3:	RCS ID3:

## Rules.

- Open book and notes. Do not use any electronic tools including your computer.
- You can talk to anyone in class. If you know the answer, help someone else in class.
- Each quiz must be by at least two and at most three people. Most quizzes should be by three people, so find someone to talk to. Put your name on one quiz only.



**Question (25 points).** Suppose you are given the above query tree over two relations:  $R(\underline{A}, B, C, D)$ ,  $S(B)$ . Relation A is the result of duplicate removal of S and B is result of selection on R.

(a) Please estimate the following based on the given information. Show your work, write down calculations and explain with a single sentence why. You will not get full credit without an explanation.

**Answer here.**

**Number of expected tuples in A:**

**Number of expected pages that will take to store A:**

**Number of expected tuples in B:**

**Number of expected pages that will take to store B:**

**Answer here.**

(b) What is the cost of this operation based on your estimates? Show your work explicitly below for (1) cost of sort, (2) cost of sequential scan, and (3) cost of join.

If the join requires multiple passes over R, we will accept the naive solution of reading R completely each time. In practice, if multiple passes are needed the result of the selection is written out to disk and read in iterations.