Assignments 4

In the following questions, use the files student.txt, majors.txt, book.txt, cites.txt, and buys.txt that are provided for this assignment. Use the same relations as in Assignment 2.

Write the following queries as RA expressions. For each such RA expression, write a SQL query (using the WITH statement) that mimics this expression. Include that solution in a separate .sql file.

1. Find the Sid and Sname of each student who bought a book that cites another book.

$$\pi_{sid,sname}(Student \bowtie Buys \bowtie cites)$$

2. Find the Sid and Sname of each student who has at least two majors.

Let $Major_1$ be a copy of $Major$ with schema $(sid, major)$.

$$\pi_{sid,sname}(Student \bowtie \sigma_{M.major \neq M1.major}(Major \bowtie Major_1))$$