CS5200: Homework 1: Relational Algebra

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**1 Questions**

**1.1 Part 1**

1. The model of every PC product whose speed is equal or more than 3.0.

2.

3.

4.

5.

6.

7.

8. All manufacturers (makers) that sell PCs with price less than 750.

|  |
| --- |
| **maker** |
| A |
| B |
| C |
| D |

**1.2 Part2**

1. schema of the result: (userID : string, firstName : string, lastName : string, numPostsCommented : integer)

2. The expression has type error which is incorrect attribute references in selection,

because the result of the sub-expression in parentheses (below) does **not** have the attribute **posted : date**.

For selection operation , R must contain attributes in condition c.

The well-typed expression should be:

3. The query (b) is not well-typed.

For semijoin operation User ⋉ R,

the result schema is equal to User’s schema and relation User does not contain attribute **numPosts**,

so the result of the sub-expression in parentheses (below) does not have the attribute **numPosts** .

In addition, for selection operation , R must contain attribute **numPosts**,

therefore there is a type error which is incorrect attribute references in selection.

4.