

COP 4710 Fall 2009 Assignment 1

Due: 11:55pm, September 17, 2009. Submit via Blackboard.

A. Silberschatz book (5th edition): Exercises 1.9, 2.5, 2.11.

B. Consider the following two relations:

Relation r			Relation s		
<u>B</u>	<u>C</u>	<u>D</u>	<u>D</u>	<u>E</u>	<u>F</u>
a	75	b	b	11	6
b	30	a	c	12	3
c	3	b	b	11	5
a	75	c			

show the results of the following relational algebraic expressions. Give \emptyset as your answer if you think it should return an empty relation or the operation(s) make no sense.

- a. $\Pi_{D,E+0.5F}(\sigma_{F \leq 5}(S))$
- b. $r \times S$
- c. $r \bowtie S$
- d. $r \bowtie_{r.C=S.F} S$
- e. $r \bowtie_{r.B=S.D \text{ AND } r.C > S.F} S$
- f. $r \div (\Pi_D(S))$
- g. $r \cup S$
- h. $\Pi_{B,C}(r) - \Pi_{D,F}(S)$