B561 Advanced Database Concepts Assignment 2

Fall 2022

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Q4) Reconsider Problem 1. Find each triple (c, p, s) where c is the cname of a company, p is the pid of a person who earns the lowest salary at that company and knows at least someone who has Operating Systems skill, and s is the salary of p.

* + 1. Formulate this query in Relational Algebra in standard notation. (4.5 points)

Q5) Reconsider Problem 2. Find the name, salary and city of each person who (a) lives in a city where no one has the Networks skill and (b) earns the highest salary in his/her company.

* + 1. Formulate this query in Relational Algebra in standard notation. (4.5 points)

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Q6) Reconsider Problem 3. Find each pair (*c*1*, c*2) of cnames of different companies such that no employee of c1 and no employee of c2 live in Chicago.

* + 1. Formulate this query in Relational Algebra in standard notation. (4.5 points)

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*Q7)*

Each manager knows all of his/her employees. (6 points)

Q8)

No person who works at Amazon knows at-most 2 people. (6 points)

* Persons who work for Amazon

* Person who knows at least 3 people

Constraint

Q9)

Some person who works for a company headquartered at Cupertino has a salary less than person with no skills. (6 points) (Assumption: Only 1 person with no skills)

* Persons working for companies headquartered in Cupertino along with their salaries.

* Person with no skills
* the salary of the person with no skills

Constraint