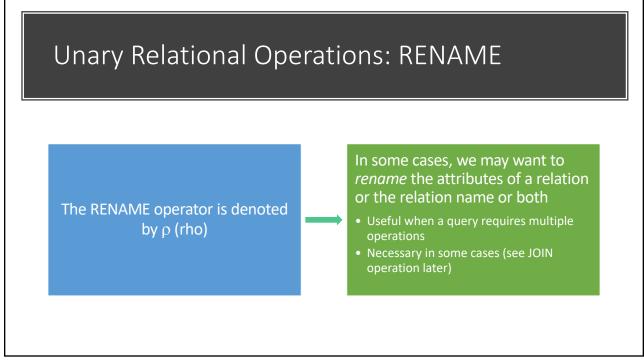


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Unary Relational Operations: RENAME (continued)

- The general RENAME operation ρ can be expressed by any of the following forms:
 - ρ_{S (B1, B2, ..., Bn)}(R) changes both:
 - the relation name to S, and
 - the column (attribute) names to B1, B1,Bn
 - $\rho_s(R)$ changes:
 - the *relation name* only to S
 - $\rho_{(B1, B2, ..., Bn)}(R)$ changes:
 - the column (attribute) names only to B1, B1,Bn

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Ambiguous Attribute Names

- Same name can be used for two (or more) attributes in different relations
 - As long as the attributes are in different relations
 - Must qualify the attribute name with the relation name to prevent ambiguity

Q1A: S

SELECT FROM WHERE Fname, EMPLOYEE.Name, Address EMPLOYEE, DEPARTMENT

DEPARTMENT.Name='Research' AND

DEPARTMENT.Dnumber=EMPLOYEE.Dnumber;

Aliasing, and Renaming

• Aliases or tuple variables

 Declare alternative relation names E and S to refer to the EMPLOYEE relation twice in a query:

Query 8. For each employee, retrieve the employee's first and last name and the first and last name of his or her immediate supervisor.

SELECT E.Fname, E.Lname, S.Fname, S.Lname
FROM EMPLOYEE AS E, EMPLOYEE AS S
WHERE E.Super_ssn=S.Ssn;

 Recommended practice to abbreviate names and to prefix same or similar attribute from multiple tables.

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Aliasing, Renaming and Tuple Variables (contd.)

The attribute names can also be renamed

EMPLOYEE AS E(Fn, Mi, Ln, Ssn, Bd, Addr, Sex, Sal, Sssn, Dno)

- Note that the relation EMPLOYEE now has a variable name E which corresponds to a tuple variable
- The "AS" may be dropped in most SQL implementations

Figure 8.2 Results of a sequence of operations. (a) π Fname, Lname, Salary (σ Dno=5(EMPLOYEE)). (b) Using intermediate relations and renaming of attributes.

(a)

	Fname	Lname	Salary	
	John	Smith	30000	
	Franklin	Wong	40000	
	Ramesh	Narayan	38000	
	Joyce	English	25000	

(b) TEMP

Fname	Minit	Lname	<u>Ssn</u>	Bdate	Address	Sex	Salary	Super_ssn	Dno
John	В	Smith	123456789	1965-01-09	731 Fondren, Houston,TX	М	30000	333445555	5
Franklin	Т	Wong	333445555	1955-12-08	638 Voss, Houston,TX	М	40000	888665555	5
Ramesh	K	Narayan	666884444	1962-09-15	975 Fire Oak, Humble,TX	М	38000	333445555	5
Joyce	Α	English	453453453	1972-07-31	5631 Rice, Houston, TX	F	25000	333445555	5

First_name	Last_name	Salary	
John	Smith	30000	
Franklin	Wong	40000	
Ramesh	Narayan	38000	
Joyce	English	25000	

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