DBMS - Set - B2

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Q.1

E

Eid	Employee-name	Salary
E_1	X	18000
E_2	X	16500
E_3	Y	17000
E_4	Z	20000

P

Pid	Supervisor
P_1	D_0. Anushree
P_2	D_0. Anushree
P_3	D_8. Odelu

W

Eid	Pid
E_1	P_1
E_1	P_2
E_1	P_3
E_2	P_1
E_2	P_3
E_3	P_3
E_2	P_2
E_4	P_2
E_4	P_1

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P ⋈ W

1a

Pid	eid	Supervision
P_1	E_1	P_0. Annushree
P_1	E_2	P_2. Annushree
P_1	E_4	P_2. Annushree
P_2	E_1	P_0. Annushree
P_2	E_2	P_2. Annushree
P_2	E_4	P_2. Annushree
P_3	E_1	P_0. Odelu
P_3	E_2	P_2. Odelu
P_3	E_3	P_2. Odelu

E ⋈ (P ⋈ W)

eid	Emp-name	Salary	Pid	Supervision
E_1	X	18000	P_1	P_0. Annushree
E_1	X	18000	P_2	P_0. Annushree
E_1	X	18000	P_3	P_2. Odelu
E_2	X	16000	P_1	P_2. Annushree
E_2	X	16000	P_2	P_2. Annushree
E_2	X	16000	P_3	P_2. Odelu
E_3	Y	17000	P_1	P_2. Annushree
E_3	Y	17000	P_2	P_2. Annushree
E_3	Y	17000	P_3	P_2. Odelu
E_4	Z	20000	P_1	P_2. Annushree
E_4	Z	20000	P_2	P_2. Annushree
E_4	Z	20000	P_3	P_2. Odelu

Emp_name	Salary
X	18000
X	16000
Y	17000
Z	22000

$\Pi_{emp\_name,\ salary}(E \bowtie (P \bowtie W))$

1.(2) W|P

EmpId	
E1	
E2	

$E \bowtie (W|P)$

EmpId	Emp_name	Salary
E1	X	18000
E2	X	16000

Emp_name	Salary
X	18000
X	16000

$\Pi_{emp\_name,\ salary}(E \bowtie (W|P))$

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1.3

W/P

Emp Id
E_1
E_2

E - (W/P)

Emp Id	Emp name	Salary
E_3	Y	17000
E_4	2	20000

$\Pi_{emp\text{-}name,\ salary}$ E-(W/P)

Emp name	Salary
E_3	17000
E_4	20000

~~Q.3~~

Π E. salary (σ E. salary)

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Q-3

$$\Pi_{Employee.salary}\left(\sigma_{Employee.salary < Emp.salary}\left(\rho_{Employee \times \rho_{Emp}(Employee)}\right)\right)$$

$$\Pi_{\substack{\rho_{Emp} \\ Salary}}(Employee) - \Pi_{Employee.salary}\left(\sigma_{Employee.salary < Emp.salary}\left(Employee \times \rho_{Emp}(Employee)\right)\right)$$

↓

Required Query