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Roll: 2019IMT-083

# DBMS LAB WORK:

Here is the DataBase Used for the purpose:

preview download

## DBMS Lab Work use Group in editor

- Supplier

| Supplier.sid | Supplier.sname | Supplier.address |
|---|---|---|
| 111 | 'Payesh' | '25 Karandih Street' |
| 112 | 'Karan' | '22 Sundernagar Street' |
| 113 | 'Gope' | '23 Parsudih Street' |
| 114 | 'Vijendra' | '24 Sarjamdah Street' |
| 115 | 'Rohan' | '21 George Street' |

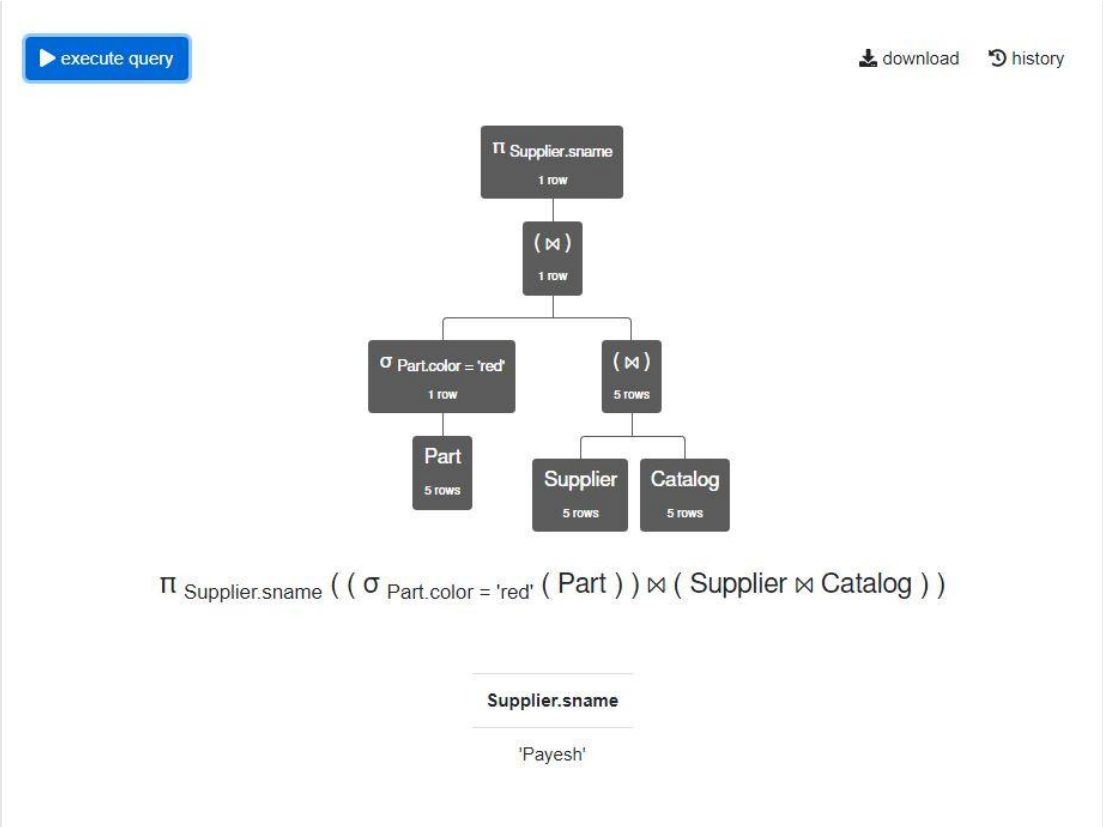
- Part

| Part.pid | Part.pname | Part.color |
|---|---|---|
| 1 | 'part1' | 'red' |
| 2 | 'part2' | 'green' |
| 3 | 'part3' | 'maroon' |
| 4 | 'part4' | 'black' |
| 5 | 'part5' | 'yellow' |

- Catalog

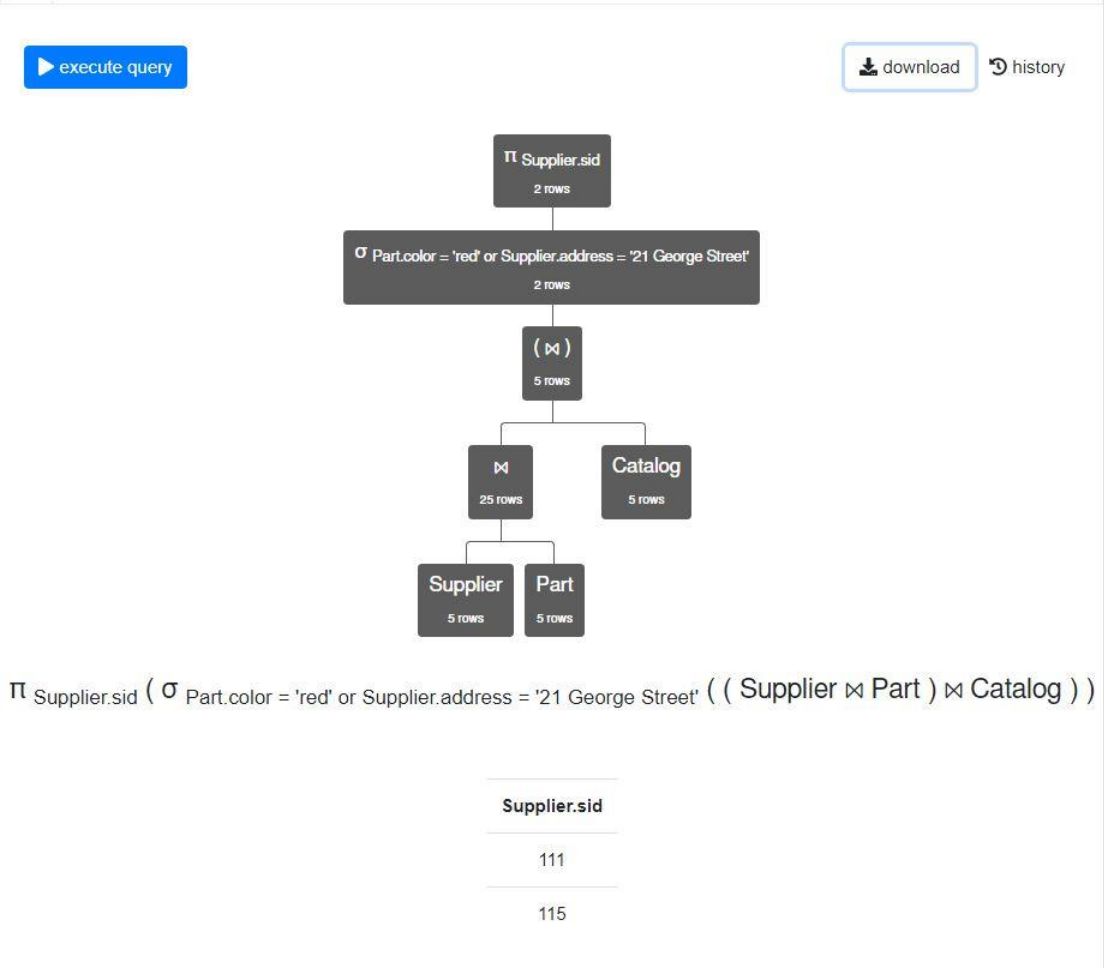
| Catalog.sid | Catalog.pid | Catalog.cost |
|---|---|---|
| 111 | 1 | 1000 |
| 112 | 2 | 2000 |
| 113 | 3 | 7000 |
| 114 | 4 | 7000 |
| 115 | 5 | 9000 |

Q1. π Supplier.sname (( σ Part.color = 'red' (Part)) ⋈(Supplier ⋈Catalog))




We get the names of suppliers who supply some red part.Take natural joint of Table:Part and Table:Catalog which have pid (primary key) , Then select Part.color from the Table:Part as ‘red’ and Print the name of respective suppliers from the Table:Supplier with color ‘red’.

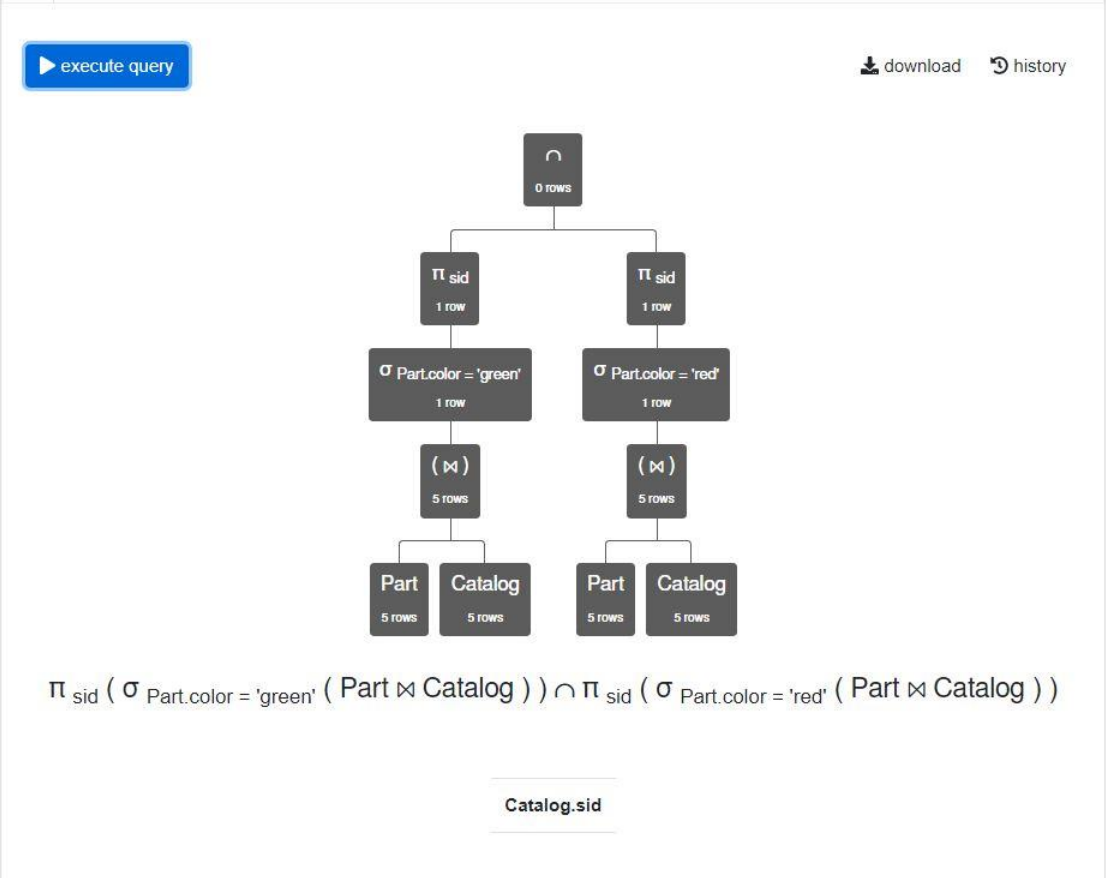
Q2. π Supplier.sid ( σ Part.color = 'red' ∨ Supplier.address = '21 George Street' (Supplier ⋈Part ⋈Catalog ) )




| Supplier.sid |
| --- |
| 111 |
| 115 |

We get IDs of suppliers who supply some red part or are based at ‘21 George Street’.Take the natural joint of Table:Supplier, Table:Part and Table:Catalog, Select color ‘red’ from Table:Part and address ‘21 George Street’ from Table:Supplier, Print the sid.

Q3. π sid ( σ Part.color = 'green' (Part ⋈Catalog) ) ∩ π sid ( σ Part.color = 'red' (Part ⋈Catalog) )



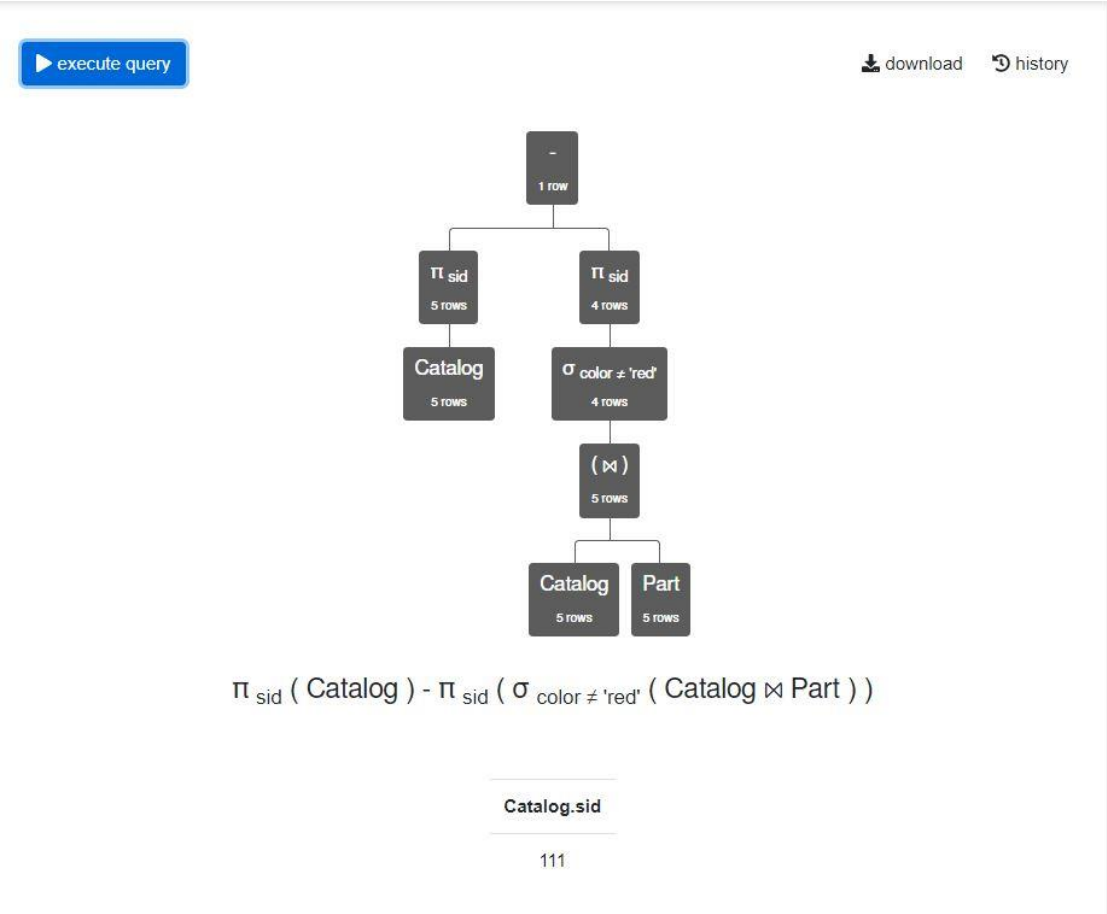

We get the IDs of suppliers who supply some red part and some green part.

Intersection of:

->Select color ‘green’ from the joint of Table:Part and table:Catalog , Print the sids.

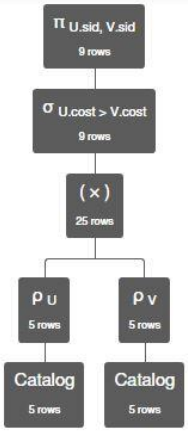
->Select color ‘red’ from Table:Part natural joint Table:Catalog , Print the sids.

Q4. π sid ( Catalog ) - π sid ( σ color <> 'red' (Catalog ⋈Part) )




We get the IDs of suppliers who supply only red parts. Print the sids , remove the sids which doesnt have the color ‘red’ from the natural joint of Table:Catalog and Table:Part.

Q5. π U.sid,V.sid ( σ U.cost > V.cost ( ρ U (Catalog) ×( ρ V ( Catalog ))))




$$\pi_{\text{U.sid, V.sid}} ( \sigma_{\text{U.cost > V.cost}} ( \rho_{\text{U}} ( \text{Catalog} ) \times ( \rho_{\text{V}} ( \text{Catalog} ) ) ) )$$

| U.sid | V.sid |
|---|---|
| 112 | 111 |
| 113 | 111 |
| 113 | 112 |
| 114 | 111 |
| 114 | 112 |
| 115 | 111 |
| 115 | 112 |
| 115 | 113 |
| 115 | 114 |

We get pairs of sids such that the supplier with the first sid charges more for some part than the supplier with the second sid. Find the cross product of Table:Catalog ( U and V ) , Select the U.sid and V. sid, if U.cost is greater than V.cost