Lab04

Sunday, March 27, 2022 2:27 PM

Ex1

1

$$\pi_{sname}\left[\pi_{sid}\left[\pi_{pid}\left[\sigma_{color="Red"}(Parts)\right] \bowtie Catalog\right] \bowtie Suppliers\right]$$

2

$$\pi_{sid}\left[\pi_{pid}\left[\sigma_{color="Red" \wedge "green"}(Parts)\right]\right] \bowtie Catalog$$

3

$$\left[\pi_{sid}\left[\pi_{pid}\left[\sigma_{color="Red"}(Parts)\right] \bowtie Catalog\right]\right] \cup \pi_{sid}\left[\sigma_{address="22 \text{ Packer Street}"}(suppliers)\right]$$

4

$$\left[\pi_{sid}\left[\pi_{pid}\left[\sigma_{color="Red"}(Parts)\right] \bowtie Catalog\right]\right] \cap \left[\pi_{sid}\left[\pi_{pid}\left[\sigma_{color="green"}(Parts)\right] \bowtie Catalog\right]\right]$$

5

$$\left[\pi_{sid,pid}\, Catalog\right] - \left[\pi_{pid}(Parts)\right]$$

6

$$\left[\pi_{sid,pid}\, Catalog\right] - \left[\pi_{pid}\,\sigma_{color="Red"}(Parts)\right] = R_1$$

7

$$\left[\pi_{sid,pid}\, Catalog\right] - \left[\pi_{pid}\,\sigma_{color="Red" \vee "green"}(Parts)\right]$$

8

$$R_1 \cup \left[\left[\pi_{sid,pid}\, Catalog\right] - \left[\pi_{pid}\,\sigma_{color="green"}(Parts)\right]\right]$$

9

$R_1 \rightarrow Catalog \quad R_2 \rightarrow Catalog$

$$\pi_{R1.Sid,\, R2.Sid}\left[\sigma_{R1.pid=R2.pid \wedge R1.sid \neq R2.sid \wedge R1.cost > R2.cost}(R_1 \times R_2)\right]$$