Database course Lab 4

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1 Exercise 1

1. $\Pi_{sname}((\Pi_{sid}(\sigma_{color=red}Parts) \bowtie Catalog) \bowtie Suppliers)$

2. $\Pi_{sid}((\sigma_{color=red}Parts \cup \sigma_{color=green}Parts) \bowtie Catalog)$

3. $\Pi_{sid}(\sigma_{color=red}Parts \bowtie Catalog) \cup \Pi_{sid}(\sigma_{address='221PackerStreet'}Supplier)$

4. $\Pi_{sid}((\sigma_{color=red}Parts \cap \sigma_{color=green}Parts) \bowtie Catalog)$

5. $\Pi_{sid}((Parts \div \Pi_{color}Parts) \bowtie Catalog)$

6. $\Pi_{sid}(Catalog \div \Pi_{pid}(\sigma_{color=red}Parts))$

7. $\Pi_{sid}(Catalog \div \Pi_{pid}(\sigma_{(color=red)or(color=green)}Parts))$

8. $\Pi_{sid}(Catalog \div \Pi_{pid}(\sigma_{color=red}Parts)) \cup \Pi_{sid}(Catalog \div \Pi_{pid}(\sigma_{color=green}Parts))$

9. $\Pi_{sid1,sid2}(\sigma_{(cos1>cost2)and(sid1==sid2)and(pid1\neq pid2)}(Catalog \times Catalog))$

10. $\Pi_{pid1}(\sigma_{(pid1==pid2)and(sid1\neq sid2)}(Catalog \times Catalog))$

2 Exercise 2

1. Find the names of suppliers who supply some red parts for less than 100 price units.

2. Find the names of suppliers who supply some red parts for less than 100 price units and supply some green parts for less than 100 price units.

3. Find the sids of suppliers who supply some red parts for less than 100 price units and supply some green parts for less than 100 price units.

4. Find the names of suppliers supplying some red part for less than 100 price units and some green part for less than 100 price units.