TASK 1

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

2. $(\pi_{sid}(\pi_{pid}(\sigma_{color='red'Vcolor='green'}Parts) \bowtie Catalog))$

3. $\pi_{sid}(\sigma_{color='red'}Parts \bowtie Catalog)U\pi_{sid}(\sigma_{address='221PackerStreet'}Suppliers)$

4. $\pi_{sid}((\pi_{pid}\sigma_{color='red'}Parts) \bowtie Catalog)U\pi_{sid}((\pi_{p}id\sigma_{color='green'}Parts) \bowtie Catalog)$

5. $\pi_{sid,pid}Catalog/\pi_{pid}Parts$ Derive results from result table (1)

6. $\pi_{sid,pid}Catalog/(\pi_{pid}\sigma_{color='red'}Parts)$

7. $(\pi_{sid,pid}Catalog)/(\pi_{pid}\sigma_{color=redVcolor=green}Parts)$ From result table get 1

8. $((\pi_{sid,pid}Catalog)/(\pi_{pid}\sigma_{color=red}Parts))U((\pi_{sid,pid}Catalog)/(\pi_{pid}\sigma_{color=green}Parts))$ Obtain 1 and 2

9. Temp1 $\leftarrow Catalog$

$Temp2 \leftarrow Catalog$

$\pi_{Temp1.sid,Temp2.sid}(\sigma_{Temp1.pid=Temp2.pid^{T}emp1.sid!=Temp2.sid^{t}emp1.cost>temp2.cost}(Temp1xTemp2)$

10. Temp1 $\leftarrow Catalog$

$Temp2 \leftarrow Catalog$

$\pi_{Temp1.sid,Temp2.sid}(\sigma_{Temp1.pid=Temp2.pid^{T}emp1.sid!=Temp2.sid}(Temp1xTemp2)$

TASK 2

1. Find names of suppliers that supply any red parts that are cheaper than 100 dollars

2. Find names of suppliers that supply any green parts, and any red parts, such that both green and red parts are cheaper than 100 dollars

3. Find the sid of suppliers in the "Supplier" table that supply red parts and green parts, such that both types of parts are cheaper than 100 dollars.

4. Find name of suppliers that supply any red parts and any green parts, such that both types of parts are cheaper than 100 dollars