Assignment 4

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1. $\Pi_{W.cname}(worksfor\ W \bowtie_{p.pid=w.pid \wedge p.city='Bloomington' \vee p.city='Indianapolis'}\ person\ P)$

2. $\Pi_{p.pid,p.name}(person\ p \bowtie_{p.pid=w.pid}\ workfor\ w \bowtie_{c.city='Bloomington'}\ company\ c)$
$\cap\ \Pi_{p1.pid,p1.name}(person\ p1 \bowtie_{p1.pid=k.pid1}\ knowsk \bowtie_{p2.pid=k.pid2 \wedge p2.city='Chicago'}\ person\ p2)$

3. $\Pi_{j.skill}(jobskill\ j - (\sigma_{s.skill,w.cname='Yahoo'}(personskill\ s \bowtie_{s.pid=w.pid}\ worksfor\ w) \cup (\sigma_{s.skill,w.cname='Netflix'}(personskill\ s \bowtie_{s.pid=w.pid}\ worksfor\ v$

4. $\Pi_{p.pid,p.name,p.pid \neq p2.pid}(person\ p \bowtie_{p.pid=k.kid}\ knows\ k \bowtie person\ p2_{p2.pid=k.pid2 \wedge p2.birthYear>1985}$
$worksfor\ w \bowtie_{p2.pid=w.pid \wedge w.salary \geq 55000 \wedge w.cname=c.cname \wedge c.cname='Netflix'}\ company\ c)$

5. $\Pi_{c1.cname,c2.cname}(company\ c1 \bowtie_{c1.cname \neq c2.cname\ \wedge\ c1.cname \notin (\sigma_{c.cname}(company\ c - \Pi_{c3.cname,w.salary>(\sigma_{w2.salary,w2.cname=c2.cname}(worksfor\ w2))}(company\ c3 \bowtie_{c3.cname=w.cname} worksfor\ w)))}$

6. $\Pi_{p.pid,p.name}(person\ p \bowtie_{p.pid=k.pid1}\ knows\ k \bowtie_{p2.pid=k.pid2}\ person\ p2) -$
$\Pi_{p.pid,p.name}(person\ p \bowtie_{p.pid=k.pid1}\ knows\ k \bowtie_{p2.pid=k.pid2}\ person\ p2 \bowtie_{p2.pid=w.pid \wedge w.salary>55000}\ worksfor\ w)$

7. $\Pi_{p.pid,w.salary < \Pi_{w.salary}(person\ p \bowtie_{p.pid=w.pid} worksfor\ w \bowtie_{p.pid=s.pid \wedge s.skill='Accounting'})}(person\ p \bowtie_{p.pid=w.wid}\ worksfor\ w)$

8. $\Pi_{c.cname \in (\sigma_{c2.cname}(company\ c2 \bowtie_{c2.cname=w2.cname\ \wedge\ w2.salary>50000\ \wedge\ c2.cname='IBM'} worksfor\ w2)), p.pid \in (\sigma_{p2.pid}(person\ p2 \bowtie_{p2.pid=k.pid2} knows\ k \bowtie_{p2.pid=w.pid} worksfor\ w))}$
$(company\ c \bowtie_{c.cname=w.cname}\ worksfor\ w \bowtie_{w.pid=p.pid\ \wedge\ w.cname='IBM'\ \wedge\ w.salary>50000}\ person\ p)$