

TRC queries

Problem 14: ➔

$$\{p.pid, p.name \mid Person(p) \wedge worksfor(w) \wedge hasmanager(hm) \wedge p.city = 'Bloomington' \wedge p.pid = w.pid \wedge hm.eid = p.pid \wedge w.salary > 30000\}$$

Problem 15: ➔

$$\{p.pid, p.name \mid Person(p) \wedge hasmanager(hm) \wedge hm.eid = p.pid \wedge \sim (\exists m \in Person, \exists hm1 \in hasmanager(hm1.eid = p.pid \wedge m.city = p.city \wedge hm1.mid = m.pid))\}$$

Problem 16: ➔

$$\{p.pid, p.name, w.salary \mid Person(p) \wedge worksfor(w) \wedge w.pid = p.pid \wedge (\exists hm1 \in hasmanager, \exists hm2 \in hasmanager(hm1.eid = hm2.eid \wedge p.pid = hm1.eid \wedge hm1.mid \neq hm2.mid \wedge (\exists ps1 \in personskill, \exists ps2 \in personskill(ps1.skill \neq 'Networks' \wedge ps1.skill = ps2.skill \wedge ps1.pid = hm1.mid \wedge ps2.pid = hm2.mid))))\}$$

Problem 17: ➔

$$\{w.cname, w.salary \mid worksfor(w) \wedge (\exists wf \in worksfor(wf.cname = w.cname \wedge w.salary > wf.salary \wedge \sim (\exists w2 \in worksfor(w2.salary > wf.salary \wedge wf.cname = w2.cname))))\}$$

Problem 18: ➔

$$\sim \exists w(worksfor(w) \wedge \sim (\exists ps1 \in personskill, \exists ps2 \in personskill (ps1.pid = ps2.pid \wedge ps1.pid = w.pid \wedge ps1.skill \neq ps2.skill)))$$

Problem 19: ➔

$$\exists hm(hasmanager(hm) \wedge (\exists w1 \in worksfor, \exists w2 \in worksfor(w1.pid = hm.eid \wedge w2.pid = hm.mid \wedge w1.salary > w2.salary)))$$

Problem 20: ➔

$$\sim \exists hm(hasmanager(hm) \wedge \sim (\exists w1 \in worksfor, \exists w2 \in worksfor(w1.pid = hm.eid \wedge w2.pid = hm.mid \wedge w1.cname = w2.cname)))$$