Queries:

**JOIN #1**

#Select ssns of all suspects who have status arrested

SELECT DISTINCT S.ssn, P.name, S.soName

FROM Status\_HasStatus\_HasOption S, Person P

WHERE S.soName = 'Arrested' AND S.ssn = P.ssn

**JOIN #2**

#Select names of all officers who worked on a report in 2014

SELECT DISTINCT P.name

FROM Person P, Officer\_EmployedBy O, WorksOn W, Report\_ReportsOn\_Files R

WHERE P.ssn = O.ssn

AND O.badgeNum = W.badgeNum

AND W.reportNum = R.reportNum

AND R.cDatetime LIKE '%2014%'

**GROUP BY and Aggregation #1**

#Select ranks of all officers who have worked on at least 10 reports, grouping by cName of report

SELECT DISTINCT O.rank

FROM Officer\_EmployedBy O, Report\_ReportsOn\_Files R, WorksOn W

WHERE O.badgeNum = W.badgeNum AND W.reportNum = R.reportNum

GROUP BY R.cName

HAVING COUNT(DISTINCT R.reportNum) >= 10

**GROUP BY and Aggregation #2**

# Select name of precincts with at least 5 investigations associated with them

SELECT DISTINCT P.pName

FROM Precinct P, Officer\_EmployedBy O, WorksOn W, Report\_ReportsOn\_Files R, Investigation\_RelatesTo I, Suspect\_IsOn S

WHERE P.pName = O.pName AND O.badgeNum = W.badgeNum AND W.reportNum = R.reportNum AND R.reportNum = I.reportNum

GROUP BY P.pName

HAVING COUNT(DISTINCT I.iNumber) >= 5

**Correlated Nested**

#Select reports where it shares both clerk and crime type with at least one other report

SELECT DISTINCT reportNum

FROM Report\_ReportsOn\_Files AS R

WHERE reportNum IN (

SELECT reportNum

FROM Report\_ReportsOn\_Files

WHERE cName = R.cName AND clerkSsn = R.clerkSsn AND reportNum <> R.reportNum)

**INSERT or UPDATE**

#multiply all reportNums by 10 (update query) or query to insert some tuple

UPDATE reportReportOnFiles

SET reportNum = reportNum \* 10;

#Actually- the foreign key constraints should cause the update to CASCADE!

#UPDATE worksOn

#SET reportNum = reportNum \* 10;

#UPDATE investigationRelatesTo

#SET reportNum = reportNum \* 10;

**OTHER 1**

#Select iNumber of investigation(s) for which number of suspects being investigated for it is minimum

CREATE VIEW numberPerInvestigation AS

SELECT S.iNumber, COUNT(S.ssn) AS ssnCount  
 FROM Suspect\_IsOn S

GROUP BY S.iNumber

SELECT N1.iNumber

FROM numberPerInvestigation N1

WHERE N1.ssnCount = (

SELECT MIN(N2.ssnCount)

FROM numberPerInvestigation N2)

**OTHER 2**

# Select names of all clerks who have never filed report for investigation with suspect under investigation

SELECT DISTINCT P.name

FROM Person P, Clerk C, Investigation\_RelatesTo I, Suspect\_IsOn S, Report\_ReportsOn\_Files R, Status\_HasStatus\_HasOption O

WHERE P.ssn = C.ssn

AND C.ssn = R.clerkSsn

AND R.reportNum = I.reportNum

AND I.iNumber = S.iNumber

AND S.ssn = O.ssn

AND P.name <> ANY (

SELECT P.name

FROM Person P, Clerk C, Investigation\_RelatesTo I, Suspect\_IsOn S,

Report\_ReportsOn\_Files R, Status\_HasStatus\_HasOption O

WHERE P.ssn = C.ssn

AND C.ssn = R.clerkSsn

AND R.reportNum = I.reportNum

AND I.iNumber = S.iNumber

AND S.ssn = O.ssn

AND O.soName = 'Under Investigation');

**OTHER 3**

#Select name, status, date for each suspect order by date

SELECT P.name, S.soName, S.date

FROM Person P, Status\_HasStatus\_HasOption S

WHERE P.ssn = S.ssn

GROUP BY P.ssn

ORDER BY S.date

For each precinct with at least 5 investigations associated with it, list the ssns of suspects involved in investigations in that precinct, order by number of investigations

Select the max number of investigations assigned to any detective

// Each inumber has their own detective working on it, maybe we can change table

SELECT DISTINCT x.ssn, COUNT(y.iNumber) as num\_of\_investigations

FROM detective x, assignedto y

WHERE x.ssn = y.ssn

GROUP BY ssn

HAVING MAX(num\_of\_investigations)

Return reportNums of all reports for which the investigation has multiple detectives working on it

# get the clerk names of whoever wrote a report in <year> 2017 for this example

# year-mo-day

SELECT distinct a.name

FROM person a, clerk b, reportreportonfiles c

WHERE a.ssn = b.ssn

AND b.ssn = c.clerkSsn

AND c.cDatetime LIKE '2017%'

# return the crime frequency in given month (June for this example)

# year-mo-day

SELECT a.cName, count(a.cname) AS crime\_count

FROM reportreportonfiles a

WHERE a.cDatetime LIKE '6-%'

GROUP BY a.cName DESC

ORDER BY crime\_count DESC

INSERT INTO Person VALUES(999999999, ‘1980-12-20’, ‘Aaaron’);