Tutorial 4

HMIS:

First created HMIS db from file

```
sqlite> .tables
sqlite> .read CreateDBHMIS.sql
.mode list
.separator " | "
.output HMIS_out2.txt
.echo OFF
sqlite>
```

Subquery 1:

```
SELECT State | | " --- " | | Application | | "---" | | Status AS "New_England_App_Status", COUNT(*) FROM ( SELECT Name, Application, Status, City, State FROM ( SELECT Name, Application, Status, City, State FROM LEADS

WHERE State = "ME" OR State = "NH" OR State = "VT" OR

State = "NY" OR State = "MA" OR State = "NJ" OR State = "CT" OR

State = "RI")

WHERE Status = "Not Automated" )

GROUP BY New_England_App_Status

ORDER BY New_England_App_Status, COUNT(*);
```

```
sqlite> SELECT State || " --- " || Application || "---" || Status AS "New_England_App_Status", COUNT(*)
...> FROM ( SELECT Name, Application, Status, City, State
...> FROM ( SELECT Name, Application, Status, City, State
     ...> FROM LEADS
     ...> WHERE State = "ME" OR State = "NH" OR State = "VT" OR
     ...> State = "NY" OR State = "MA" OR State = "NJ" OR State = "CT" OR
     ...> State = "RI")
     ...> WHERE Status = "Not Automated" )
     ...> GROUP BY New_England_App_Status
...> GROUP BY New_England_App_Status
...> ORDER BY New_England_App_Status, COUNT(*);
CT --- Computerized Practitioner Order Entry (CPOE)---Not Automated | 12
CT --- Electronic Data Interchange (EDI) - Clearing House Vendor---Not Automated | 14
CT --- Enterprise EMR---Not Automated | 16
CT --- Enterprise Resource Planning---Not Automated | 27
CT --- Executive Information System---Not Automated | 10
MA --- Computerized Practitioner Order Entry (CPOE)---Not Automated | 37
MA --- Electronic Data Interchange (EDI) - Clearing House Vendor---Not Automated | 54 MA --- Enterprise EMR---Not Automated | 22
MA --- Enterprise Resource Planning---Not Automated
MA --- Executive Information System---Not Automated
ME --- Computerized Practitioner Order Entry (CPOE)---Not Automated | 9
ME --- Electronic Data Interchange (EDI) - Clearing House Vendor---Not Automated | 17
ME --- Enterprise EMR---Not Automated | 12
    --- Enterprise Resource Planning---Not Automated
--- Executive Information System---Not Automated
                                                                                   18
    --- Computerized Practitioner Order Entry (CPOE)---Not Automated | 10
```

Subquery 2:

```
SELECT City || "---" || Application || " --- " AS "App_Stat_Top_Urban_TX", Status, COUNT(*) FROM ( SELECT Name, Application, Status, City, State FROM ( SELECT Name, Application, Status, City, State FROM LEADS
WHERE State = "TX")
WHERE City IN ("Houston", "Dallas", "Austin", "Fort Worth", "El Paso", "San Antonio", "McCallen"))
GROUP BY App_Stat_Top_Urban_TX, Status
HAVING Status = "Not Automated"
ORDER BY App_Stat_Top_Urban_TX, COUNT(*);
```

```
sqlite> SELECT City | "---" | Application | " --- " AS "App_Stat_Top_Urban_TX", Status, COUNT(*)
...> FROM ( SELECT Name, Application, Status, City, State
...> FROM ( SELECT Name, Application, Status, City, State
...> FROM ( SELECT Name, Application, Status, City, State
...> FROM LEADS
...> WHERE City IN "Houston", "Dallas", "Austin", "Fort Worth", "El Paso",
...> "San Antonio", "McCallen"))
...> "Sour By App_Stat_Top_Urban_TX, Status
...> MAVING Status = "Not Automated"
...> ORDER BY App_Stat_Top_Urban_TX, COUNT(*);
Austin---Computerized Practitioner Order Entry (CPOE) --- | Not Automated | 4
Austin---Enterprise EMR --- | Not Automated | 5
Austin---Enterprise EMR --- | Not Automated | 3
Austin---Enterprise EMR --- | Not Automated | 3
Dallas---Computerized Practitioner Order Entry (CPOE) --- | Not Automated | 9
Dallas---Enterprise EMR --- | Not Automated | 7
El Paso---Electronic Data Interchange (EDI) - Clearing House Vendor --- | Not Automated | 1
El Paso---Electronic Data Interchange (EDI) - Clearing House Vendor --- | Not Automated | 1
El Paso---Electronic Data Interchange (EDI) - Clearing House Vendor --- | Not Automated | 1
El Paso---Enterprise EMR --- | Not Automated | 4
El Paso---Enterprise EMR --- | Not Automated | 4
El Paso---Enterprise EMR --- | Not Automated | 4
El Paso---Enterprise EMR --- | Not Automated | 4
El Paso---Enterprise EMR --- | Not Automated | 4
El Paso---Enterprise EMR --- | Not Automated | 4
El Paso---Enterprise EMR --- | Not Automated | 4
El Paso---Enterprise EMR --- | Not Automated | 4
El Paso---Enterprise EMR --- | Not Automated | 6
Fort Worth---Enterprise EMR --- | Not Automated | 4
Fort Worth---Enterprise EMR --- | Not Automated | 4
Fort Worth---Enterprise EMR --- | Not Automated | 4
Fort Worth---E
```

Subquery 3:

```
SELECT City || "---" || Application || " --- " || Status AS "App_Stat_Rural_TX", COUNT(*) FROM LEADS
WHERE State = "TX" and City IN ( SELECT CITY FROM LEADS
WHERE State = "TX" AND City NOT IN ("Houston", "Dallas", "Austin", "Fort Worth", "El Paso", "San Antonio", "McCallen"))
GROUP BY App_Stat_Rural_TX
HAVING Status = "Not Automated"
ORDER BY App_Stat_Rural_TX, COUNT(*)
LIMIT 50;
```

```
sqlite> SELECT City | "---" || Application || "---" || Status AS "App_Stat_Rural_TX", COUNT(*)
...> FROM LEADS
...> WHERE State = "TX" and City IN ( SELECT CITY
...> FROM LEADS
...> WHERE State = "TX" AND City NOT IN ("Houston", "Dallas", "Austin",
...> "Fort Worth", "El Paso", "San Antonio", "McCallen"))
...> GROUP BY App_Stat_Rural_TX
...> HAVING Status = "Mot Automated"
...> ORDER BY App_Stat_Rural_TX, COUNT(*)
...> LIMIT 50;
Abilene---Computerized Practitioner Order Entry (CPOE) --- Not Automated | 2
Abilene---Enterprise ERR --- Not Automated | 2
Abilene---Enterprise Resource Planning --- Not Automated | 1
Alice---Computerized Practitioner Order Entry (CPOE) --- Not Automated | 1
Alice---Computerized Practitioner Order Entry (CPOE) --- Not Automated | 1
Alice---Computerized Practitioner Order Entry (CPOE) --- Not Automated | 1
Allen---Enterprise Resource Planning --- Not Automated | 1
Allen---Enterprise Resource Planning --- Not Automated | 1
Alpine---Computerized Practitioner Order Entry (CPOE) --- Not Automated | 1
Alpine---Computerized Practitioner Order Entry (CPOE) --- Not Automated | 1
Alpine---Computerized Practitioner Order Entry (CPOE) --- Not Automated | 1
Alpine---Computerized Practitioner Order Entry (CPOE) --- Not Automated | 1
Amarillo---Electronic Data Interchange (EDI) - Clearing House Vendor --- Not Automated | 2
Amarillo---Electronic Data Interchange (EDI) - Clearing House Vendor --- Not Automated | 1
Aransas Pass---Electronic Data Interchange (EDI) - Clearing House Vendor --- Not Automated | 1
Aransas Pass---Electronic Data Interchange (EDI) - Clearing House Vendor --- Not Automated | 1
Aransas Pass---Electronic Data Interchange (EDI) - Clearing House Vendor --- Not Automated | 1
Aransas Pass---Electronic Data Interchange (EDI) - Clearing House Vendor --- Not Automated | 1
Aransas Pass---Electronic Data Interchange (EDI) - Clearing House Vendor --- Not Automated | 1
Aransas Pass---Electronic Data Interchange (EDI) - Clearing House Vendor --- Not Automated | 1
Arlington---Enterprise Resour
```

Select projection:

```
CREATE TABLE TX_DALLAS_HOSPITALS AS

SELECT *

FROM LEADS

WHERE State = "TX" AND City = "Dallas";

SELECT Entity_No, Name, Zip, Application || "---" || Status As AppStat

FROM TX_DALLAS_HOSPITALS

WHERE Status = "Live and Operational"

ORDER BY ZIP

LIMIT 10;
```

```
sqlite> CREATE TABLE TX_DALLAS_HOSPITALS AS
...> SELECT *
...> FROM LEADS
...> WHERE State = "TX" AND City = "Dallas";
sqlite> SELECT Entity_No, Name, Zip, Application || "---" || Status As AppStat
...> FROM TX_DALLAS_HOSPITALS
...> WHERE Status = "Live and Operational"
...> ORDER BY ZIP
...> LIMIT 10;
1223 | Methodist Dallas Medical Center | 75203 | Enterprise EMR---Live and Operational
1223 | Methodist Dallas Medical Center | 75203 | Executive Information System---Live and Operational
10483 | Doctors Hospital of Dallas | 75218 | Enterprise EMR---Live and Operational
10483 | Doctors Hospital of Dallas | 75218 | Executive Information System---Live and Operational
10483 | Doctors Hospital of Dallas | 75218 | Executive Information System---Live and Operational
10483 | Doctors Hospital - White Rock | 75218 | Executive Information System---Live and Operational
10483 | Doctors Hospital - White Rock | 75218 | Electronic Data Interchange (EDI) - Clearing House Vendor----Live and Operational
10492599 | Kindred Hospital - White Rock | 75218 | Enterprise Resource Planning----Live and Operational
1049292 | Medical City Dallas Hospital | 75230 | Enterprise EMR----Live and Operational
1049292 | Medical City Dallas Hospital | 75230 | Enterprise Resource Planning----Live and Operational
1049292 | Medical City Dallas Hospital | 75230 | Enterprise Resource Planning----Live and Operational
1059292 | Medical City Dallas Hospital | 75230 | Enterprise Resource Planning----Live and Operational
1059292 | Medical City Dallas Hospital | 75230 | Enterprise Resource Planning----Live and Operational
1059292 | Medical City Dallas Hospital | 75230 | Enterprise Resource Planning----Live and Operational
1059293 | Medical City Dallas Hospital | 75230 | Enterprise Resource Planning----Live and Operational
1059294 | Medical City Dallas Hospital | 75230 | Enterprise Resource Planning----Live and Operational
```

Select projection to create csv file:

```
.headers on
.mode csv
.output file_one.csv
SELECT Entity_No, Name, Zip, Application || "---" || Status As AppStat
FROM TX_DALLAS_HOSPITALS
WHERE Status = "Live and Operational"
ORDER BY ZIP;
```

Sales_Co_DW:

Created db from reading file:

```
C:\SQLite\SQL\sqlite3.exe
SQLite version 3.40.1 2022-12-28 14:03:47
Enter ".help" for usage hints.
Connected to a transient in-memory database.
Use ".open FILENAME" to reopen on a persistent database.
sqlite> .tables
sqlite> .read Create_Sale_Co_DW.sql
.mode list
.separator " | "
.output Sales_out.txt
.echo OFF
sqlite> .tables
DWCUSTOMER DWPRODUCT
                          DWREGION
                                       DWSALESFACT DWTIME
                                                                  DWVENDOR
sqlite>
```

Subquery 1:

```
SELECT V_STATE | | '--' | | TRIM(V_NAME) | | '--' | | TRIM(P_DESCRIPT) AS 'State-Vendor-Product', V_STATE, SUM(DWSALESFACT.SALE_UNITS), COUNT(DWSALESFACT.SALE_UNITS)
FROM DWVENDOR, DWPRODUCT, DWSALESFACT
WHERE DWVENDOR.V_CODE = DWPRODUCT.V_CODE AND DWPRODUCT.P_CODE =
DWSALESFACT.P_CODE AND DWVENDOR.V_CODE IN (SELECT V_CODE
FROM DWVENDOR WHERE V_STATE IN
(SELECT V_STATE FROM DWREGION, DWCUSTOMER, DWVENDOR, DWPRODUCT,
DWSALESFACT
WHERE DWREGION.REG_NAME = 'SE' AND
DWREGION.REG_ID = DWCUSTOMER.REG_ID AND
DWCUSTOMER.CUS_CODE = DWSALESFACT.CUS_CODE AND
DWSALESFACT.P_CODE = DWPRODUCT.P_CODE))
GROUP BY V_STATE, 'State-Vendor-Product'
ORDER BY V_STATE;
```

Subquery 2:

```
SELECT V_STATE | | '--' | | TRIM(V_NAME) | | '--' | |

TRIM(P_DESCRIPT) AS 'State-Vendor-Product', V_STATE, SUM(DWSALESFACT.SALE_UNITS),

COUNT(DWSALESFACT.SALE_UNITS)

FROM DWVENDOR, DWPRODUCT, DWSALESFACT

WHERE DWVENDOR.V_CODE = DWPRODUCT.V_CODE AND

DWPRODUCT.P_CODE = DWSALESFACT.P_CODE AND

DWVENDOR.V_CODE = (SELECT V_CODE FROM DWVENDOR

WHERE V_STATE = (SELECT V_STATE FROM DWREGION, DWCUSTOMER,

DWVENDOR, DWPRODUCT, DWSALESFACT

WHERE DWREGION.REG_NAME = 'SE' AND

DWREGION.REG_ID = DWCUSTOMER.REG_ID AND

DWCUSTOMER.CUS_CODE = DWSALESFACT.CUS_CODE AND

DWSALESFACT.P_CODE = DWPRODUCT.P_CODE))

GROUP BY V_STATE, 'State-Vendor-Product'

ORDER BY V_STATE;
```

```
sqlite> SELECT V_STATE | | '--' | | TRIM(V_NAME) | | '--' | |
    ...> TRIM(P_DESCRIPT) AS 'State-Vendor-Product', V_STATE, SUM(DWSALESFACT.SALE_UNITS),
    ...> COUNT(DWSALESFACT.SALE_UNITS)
    ...> FROM DWVENDOR, DWPRODUCT, DWSALESFACT
    ...> WHERE DWVENDOR.V_CODE = DWPRODUCT.V_CODE AND
    ...> DWPRODUCT.P_CODE = DWSALESFACT.P_CODE AND
    ...> DWVENDOR.V_CODE = (SELECT V_CODE FROM DWVENDOR
    ...> DWVENDOR, DWPRODUCT, DWSALESFACT
    ...> DWVENDOR, DWPRODUCT, DWSALESFACT
    ...> WHERE V_STATE = (SELECT V_STATE FROM DWREGION, DWCUSTOMER,
    ...> DWREGION.REG_ID = DWCUSTOMER.REG_ID AND
    ...> DWREGION.REG_ID = DWCUSTOMER.REG_ID AND
    ...> DWCUSTOMER.CUS_CODE = DWSALESFACT.CUS_CODE AND
    ...> DWSALESFACT.P_CODE = DWPRODUCT.P_CODE))
    ...> GROUP BY V_STATE, 'State-Vendor-Product'
    ...> ORDER BY V_STATE;
TN-Bryson, Inc.--Claw hammer | TN | 50 | 14
sqlite>
```

Subquery 3:

```
SELECT DWVENDOR.V_STATE | | '--' | | TRIM(DWVENDOR.V_NAME) | | '--' | |
TRIM(P_DESCRIPT) AS StateVendorProduct, DWVENDOR.V_STATE,
SUM(DWSALESFACT.SALE_UNITS), COUNT(DWSALESFACT.SALE_UNITS)
FROM DWVENDOR, DWPRODUCT, DWSALESFACT
WHERE DWVENDOR.V_CODE = DWPRODUCT.V_CODE AND
DWPRODUCT.P_CODE = DWSALESFACT.P_CODE AND
DWPRODUCT.V_CODE IN
( SELECT DWPRODUCT.V_CODE FROM DWREGION, DWVENDOR,
DWCUSTOMER, DWVENDOR, DWPRODUCT, DWSALESFACT
WHERE DWREGION.REG_NAME = 'SE' AND
DWREGION.REG_ID = DWCUSTOMER.REG_ID AND
DWCUSTOMER.CUS_CODE = DWSALESFACT.CUS_CODE AND
DWSALESFACT.P_CODE = DWPRODUCT.P_CODE)
GROUP BY V_STATE;
```

```
sqlite> SELECT DWVENDOR.V_STATE || '--' || TRIM(DWVENDOR.V_NAME) || '--' ||
   ...> TRIM(P_DESCRIPT) AS StateVendorProduct, DWVENDOR.V_STATE,
   ...> SUM(DWSALESFACT.SALE_UNITS), COUNT(DWSALESFACT.SALE_UNITS)
   ...> FROM DWVENDOR, DWPRODUCT, DWSALESFACT
   ...> WHERE DWVENDOR.V_CODE = DWPRODUCT.V_CODE AND
   ...> DWPRODUCT.P_CODE = DWSALESFACT.P_CODE AND
   ...> DWPRODUCT.V_CODE IN
   ...> ( SELECT DWPRODUCT.V_CODE FROM DWREGION, DWVENDOR,
   ...> DWCUSTOMER, DWVENDOR, DWPRODUCT, DWSALESFACT
   ...> WHERE DWREGION.REG_NAME = 'SE' AND
   ...> DWREGION.REG_ID = DWCUSTOMER.REG_ID AND
   ...> DWCUSTOMER.CUS_CODE = DWSALESFACT.CUS_CODE AND
   ...> DWSALESFACT.P_CODE = DWPRODUCT.P_CODE)
   ...> GROUP BY V_STATE, StateVendorProduct
   ... > ORDER BY V_STATE;
FL--Rubicon Systems--B\&D cordless drill, 1/2-in. | FL
FL--Rubicon Systems--Steel matting, 4'x8'x1/6", .5" mesh | FL GA--Randsets Ltd.--Hrd. cloth, 1/4-in., 2x50 | GA | 2 | 2
KY--Gomez Bros.--7.25-in. pwr. saw blade | KY | 16 |
KY--Gomez Bros.--Rat-tail file, 1/8-in. fine | KY | 12
TN--Bryson, Inc.--1.25-in. metal screw, 25 | TN | 6
TN--Bryson, Inc.--Claw hammer | TN | 10 | 8
TN--Bryson, Inc.--PVC pipe, 3.5-in., 8-ft | TN | 34
TN--ORDVA, Inc.--B\&D jigsaw, 12-in. blade | TN | 2
TN--ORDVA, Inc.--Hicut chain saw, 16 in. | TN | 2 |
sqlite>
```

Select projection:

SELECT DISTINCT DWPRODUCT.P_CODE AS P_CODE, DWPRODUCT.P_DESCRIPT AS P_DESC, DWPRODUCT.P_CATEGORY AS P_CAT, DWPRODUCT.V_CODE AS V_CODE, DWVENDOR.V_Name AS P_Vendor, DWSALESFACT.SALE_UNITS AS UNITS, DWSALESFACT.SALE_PRICE AS PRICE FROM DWVENDOR, DWPRODUCT, DWSALESFACT WHERE DWVENDOR.V_CODE = DWPRODUCT.V_CODE AND DWPRODUCT.P_CODE = DWSALESFACT.P_CODE;

```
lite> SELECT DISTINCT DWPRODUCT.P_CODE AS P_CODE, DWPRODUCT.P_DESCRIPT AS P_DESC, DWPRODUCT.P_CATEGORY AS P_CAT, DWPRO
DUCT.V_CODE AS V_CODE
   ...> DWVENDOR.V_Name AS P_Vendor, DWSALESFACT.SALE_UNITS AS UNITS, DWSALESFACT.SALE_PRICE AS PRICE
...> FROM DWVENDOR, DWPRODUCT, DWSALESFACT
...> WHERE DWVENDOR.V_CODE = DWPRODUCT.V_CODE AND
   13-02/P2
23109-HB
54778-2T
2238/QPD
1546-QQ2
13-Q2/P2
54778-2T
23109-HB
PVC23DRT
SM-18277
2232/QTY
13-Q2/P2
54778-2T
```

Select projection to create .csv file :

```
.headers on
.mode csv
.output file_two.csv
SELECT *
FROM DWPRODUCT
ORDER BY DWPRODUCT.P_CODE, DWPRODUCT.P_DESCRIPT;
```

```
sqlite> .headers on sqlite> .mode csv
sqlite> .output file_two.csv
sqlite> SELECT *
     ...> FROM DWPRODUCT
      ...> ORDER BY DWPRODUCT.P_CODE, DWPRODUCT.P_DESCRIPT;
sqlite>
        file two
            Edit
                                                                                                                                                (ģ)
                     View
    P_CODE,P_DESCRIPT,P_CATEGORY,V_CODE
    11QER/31, "Power painter, 15 psi., 3-nozzle", CAT1, 25595
    13-Q2/P2,"7.25-in. pwr. saw blade",CAT1,21344
14-Q1/L3,"9.00-in. pwr. saw blade",CAT1,21344
    1546-QQ2, "Hrd. cloth, 1/4-in., 2x50", CAT2,23119
1558-QW1, "Hrd. cloth, 1/2-in., 3x50", CAT2,23119
2232/QTY, "B\&D jigsaw, 12-in. blade", CAT2,24288
2232/QWE, "B\&D jigsaw, 8-in. blade", CAT3,24288
    2238/QPD,"B\&D cordless drill, 1/2-in.",CAT3,25595
    23109-HB, "Claw hammer", CAT4, 21225
    23114-AA, "Sledge hammer, 12 lb.", CAT4,21225
54778-2T, "Rat-tail file, 1/8-in. fine", CAT1,21344
    89-WRE-Q,"Hicut chain saw, 16 in.",CAT2,24288
PVC23DRT,"PVC pipe, 3.5-in., 8-ft",CAT3,21225
    SM-18277, "1.25-in. metal screw, 25", CAT4, 21225
    SW-23116,"2.5-in. wd. screw, 50",CAT2,21231
    WR3/TT3, "Steel matting, 4'x8'x1/6"", .5"" mesh", CAT3, 25595
```

QC_Checks_db:

```
.open QC_Checks.db
.headers on
.separator " | "
```

```
sqlite> .open QC_Checks.db
sqlite> .headers on
sqlite> .separator "|"
```

Subquery 1:

```
SELECT Check_ID | | " --- " | | Staff | | "—"AS ERR, COUNT(*) FROM ERRORS
WHERE Staff IN (SELECT Staff FROM ERRORS
WHERE Check_ID IN (SELECT Check_ID FROM ERRORS
GROUP BY Check_ID
ORDER BY COUNT(*) DESC
Limit 5)
GROUP BY Staff
ORDER BY COUNT(*) DESC
LIMIT 5)
GROUP BY ERR
ORDER BY ERR, COUNT(*);
```

```
^--- error here
sqlite> SELECT Check_ID || " --- " || Staff || "-"AS ERR, COUNT(*) FROM ERRORS
   ...> WHERE Staff IN (SELECT Staff FROM ERRORS
   ...> WHERE Check_ID IN (SELECT Check_ID FROM ERRORS
   ...> GROUP BY Check_ID
   ...> ORDER BY COUNT(*) DESC
   ...> Limit 5)
   ...> GROUP BY Staff
   ...> ORDER BY COUNT(*) DESC
   ...> LIMIT 5)
   ...> GROUP BY ERR
   ... > ORDER BY ERR, COUNT(*);
ERR COUNT(*)
101 --- - 5
102 --- -|1
105 --- - | 2
106 --- -|1
2001 --- -|1
2001 --- RN-42-|1
2002 --- - 1
2006 --- - 1
2008 --- - 6
3001 --- - | 17
3002 --- RN-120-|1
3002 --- RN-42-|1
3003 --- RN-120-|8
3003 --- RN-136-|12
3003 --- RN-42-|9
3003 --- RN-6-|9
3005 --- RN-6-|1
```

Subquery2:

```
SELECT Check_ID || " — " || SUBSTR(QC_Note,1,70) || " --> "AS ERR, COUNT(*) FROM ERRORS WHERE Check_ID IN (SELECT Check_ID FROM ERRORS WHERE Staff == (SELECT Staff FROM ERRORS
```

GROUP BY Staff

ORDER BY COUNT(*) DESC

Limit 1)

GROUP BY Check_ID

ORDER BY COUNT(*) DESC)

GROUP BY ERR

HAVING COUNT(*) > 2

ORDER BY COUNT(*) DESC, ERR ASC;

```
sqlite> SELECT Check_ID || " - " || SUBSTR(QC_Note,1,70) || " --> "AS ERR, COUNT(*) FROM ERRORS
    ...> WHERE Check_ID IN (SELECT Check_ID FROM ERRORS
    ...> WHERE Staff == (SELECT Staff FROM ERRORS ...> GROUP BY Staff
    ...> ORDER BY COUNT(*) DESC
    ...> Limit 1)
    ...> GROUP BY Check_ID
    ...> ORDER BY COUNT(*) DESC)
    ...> GROUP BY ERR
    ...> HAVING COUNT(*) > 2
    ...> ORDER BY COUNT(*) DESC , ERR ASC;
ERR COUNT(*)
106 - If the PACU In time () is not complete then the location the patient i --> |40
2008 - The total surgery minutes (1) must be greater than or equal to one min --> |16
101 - The Surgery Complete Indicator is set to 0 and must be set to 1 to pas --> |5
102 - If the Prep Hold In time is not null then the Nurse Assigned - Nurse --> |5
2008 - The total surgery minutes (0) must be greater than or equal to one min --> |5
3001 - The PACU Surgeon(Partington - Erin Jayne MD) must be the same as the --> |4
sqlite>
```

Subquery 3:

SELECT Check_ID || " —> " AS ERR, COUNT(*) FROM ERRORS
WHERE Check_ID NOT IN (SELECT Check_ID FROM ERRORS
WHERE Staff == (SELECT Staff FROM ERRORS
GROUP BY Staff
ORDER BY COUNT(*) DESC
Limit 1)
GROUP BY Check_ID
ORDER BY COUNT(*) DESC)
GROUP BY ERR
ORDER BY COUNT(*) DESC;

```
C:\SQLite\SQL\sqlite3.exe
sqlite> SELECT Check_ID || " -> " AS ERR, COUNT(*) FROM ERRORS
    ...> WHERE Check_ID NOT IN (SELECT Check_ID FROM ERRORS
     ...> WHERE Staff == (SELECT Staff FROM ERRORS
    ...> GROUP BY Staff
...> ORDER BY COUNT(*) DESC
     ...> Limit 1)
     ...> GROUP BY Check_ID
     ...> ORDER BY COUNT(*) DESC)
    ...> GROUP BY ERR
     ... > ORDER BY COUNT(*) DESC ;
ERR COUNT(*)
3003 -> |60
3005 -> |19
1003 -> |12
3002 -> |11
1001 -> |11
3006 -> |8
2004 -> |5
1002 -> |4
3004 -> |1
104 -> |1
103 -> |1
1004 -> |1
sqlite> |
```

Select projection:

CREATE TABLE QC_Check_Errs AS

SELECT Check_ID, Staff, COUNT(*) FROM ERRORS

GROUP BY Check_ID, Staff

HAVING COUNT(*) > 1

ORDER BY COUNT(*) DESC;

SELECT * FROM QC_Check_Errs;

```
1004 -> |1
sqlite> CREATE TABLE QC_Check_Errs AS
   ...> SELECT Check_ID, Staff, COUNT(*) FROM ERRORS
   ...> GROUP BY Check_ID, Staff
   ...> HAVING COUNT(*) > 1
   ... > ORDER BY COUNT(*) DESC ;
sqlite> SELECT * FROM QC_Check_Errs;
Check_ID|Staff|COUNT(*)
3001||17
3003 RN-136 12
3003 RN-42 9
3003 RN-6 9
5002 | 9
3003 RN-120 8
106 RN-119 7
106 RN-68 6
2008||6
101||5
3006|RN-87|5
106 RN-93 4
1003 | RN-118 | 4
3003 RN-108 4
5001||4
2001|RN-132|3
2008 RN-134 3
3005|RN-7|3
```

Select projection to create csv file:

```
.headers on
.mode csv
.output file_three.csv
SELECT Check_ID, COUNT(*)
FROM ERRORS
GROUP BY Check_ID
ORDER BY COUNT(*) DESC;
```

```
C:\SQLite\SQL\sqlite3.exe
sqlite> .headers on
sqlite> .mode csv
sqlite> .output file_three.csv
sqlite> SELECT Check_ID, COUNT(*)
   ...> FROM ERRORS
    ...> GROUP BY Check_ID
   ... > ORDER BY COUNT(*) DESC;
sqlite>
       file_three
                                   \times +
   File
        Edit View
   Check_ID,COUNT(*)
   3003,60
   2001,40
   106,40
   3001,29
   2008,21
   105,20
   3005,19
   5002,16
   5001,16
   1003,12
   3002,11
   1001,11
   3006,8
   2002,8
   2006,6
   2004,5
   102.5
```