SQL> --1--

SQL> COLUMN CLIENTNAME FORMAT A40

SQL> SELECT clientNo,rentalNo, ClientName,

2 (ReturnDate-StartDate)\*24 AS "Duration",

3 CEIL((ReturnDate-StartDate))\*DailyRate AS "Cost"

4 FROM Client JOIN Ragreement USING (clientNo) JOIN Vehicle USING(LicenseNo)

5 WHERE State = 'PA'

6 ORDER BY ClientName;

CLIENTNO RENTALNO CLIENTNAME Duration Cost

---------- ---------- ---------------------------------------- ---------- ----------

8765474265 367354871 Alex 1838.47694 9240

8765474265 256324576 Alex 2053.02806 10320

4532016128 9036892903 Chiwetel Ejiofor 312.994722 1680

4532016128 9674433000 Chiwetel Ejiofor 139.506944 660

2998787484 5696741198 Christian Bale 301.260556 1560

5431225125 2143214132 Cillian Murphy 209.591389 1080

9654423553 196453526 Dwan 1911.11694 10400

9654423553 576345243 Dwan 2530.85028 11660

9654423553 224562678 Dwan 1702.79139 8520

2345436214 298346486 Lin 2234.8125 12220

2345436214 317987234 Lin 1917.715 10400

1092615453 468923673 Mike 2730.78583 15960

1092615453 177663452 Mike 2399.19361 14000

13 rows selected.

SQL> --2--

SQL> COLUMN "Name" FORMAT A20

SQL> SELECT EmpNo, Fname||' '||Lname AS "Name", COUNT(ReportNum) AS "# of fault reports", RANK() OVER(ORDER BY COUNT(ReportNum) DESC) AS rank

2 FROM Employee LEFT OUTER JOIN Faultreport USING (EmpNo)

3 GROUP BY (EmpNo,Fname,Lname);

EMPNO Name # of fault reports RANK

---------- -------------------- ------------------ ----------

5 Mario Brown 4 1

9 Jacob Baker 3 2

2 John Smith 3 2

559 Isaias Gatson 3 2

362 Wallace Fernandes 3 2

786 Robert Meinhardt 2 6

20 Michele Marcum 2 6

863 Carl Landwehr 1 8

505 Georgia Murray 1 8

7 Luke White 0 10

4 David Parker 0 10

263 Stephen Bentley 0 10

1 Molly Taylor 0 10

8 Erica King 0 10

6834 Hillary Dennis 0 10

285 Martha Jones 0 10

3 Micheal Jones 0 10

193 Brian Smith 0 10

56 Delbert Quintero 0 10

1939 Kelly Jackson 0 10

237 Helen Lewis 0 10

6 Larry Davis 0 10

341 Kevin Mares 0 10

23 rows selected.

SQL> --3--

SQL> SELECT OutNo, NVL(SUM((DateChecked-ReturnDate)\*24),0) AS "RPT\_GEN\_TIME"

2 FROM RAGREEMENT JOIN FAULTREPORT USING(RentalNo) JOIN VEHICLE ON(RAGREEMENT.LicenseNo = VEHICLE.LicenseNo) JOIN OUTLET USING (outNo)

3 GROUP BY (OutNo)

4 ORDER BY (OutNo);

OUTNO RPT\_GEN\_TIME

---------- ------------

134523 21.8097222

243868 27.4138889

348931 8.775

386703 2012.64417

476412 603.042222

677386 119.869444

926360 1144.6625

939863 253.425278

942762 446.954444

9 rows selected.

SQL> --4--

SQL> COLUMN CLIENTNAME FORMAT A25

SQL> COLUMN Contact FORMAT A20

SQL> COLUMN Email FORMAT A20

SQL> SELECT clientNo, ClientName, Contact\_FName ||' '||Contact\_LName AS "Contact", Email, Phone

2 FROM(SELECT DISTINCT clientNo FROM RAGREEMENT

3 MINUS SELECT DISTINCT clientNo FROM FAULTREPORT JOIN RAGREEMENT USING (RentalNo))

4 JOIN CLIENT USING(clientNo);

CLIENTNO CLIENTNAME Contact EMAIL PHONE

---------- ------------------------- -------------------- -------------------- --------------------

4568323734 Kobe Wax Uid ies912w@gmail.com 2167719236

5431225125 Cillian Murphy Chin Han cmurphy@gmail.com 3242626534

6657435424 Dirk Mark Yalk 8e3s2@gmail.com 2342082245

SQL> --5--

SQL> SELECT OutNo,Total\_Count,Total\_Rev

2 FROM

3 (SELECT OutNo, COUNT(RentalNo) Total\_Count,

4 SUM(CEIL(ReturnDate-StartDate)\*DailyRate) Total\_Rev,

5 RANK() OVER (ORDER BY SUM(CEIL(ReturnDate-StartDate)\*DailyRate) DESC) Rank

6 FROM Ragreement JOIN Vehicle USING(LicenseNo)

7 GROUP BY (OutNo))

8 WHERE Rank <= 2;

OUTNO TOTAL\_COUNT TOTAL\_REV

---------- ----------- ----------

134523 6 77020

348931 6 61210

SQL> --6--

SQL> SELECT RentalNo, OutNo, OUTLET.Street, StartDate, ReturnDate, clientNo, ClientName

2 FROM OUTLET

3 JOIN

4 (SELECT OutNo

5 FROM Ragreement JOIN Vehicle USING(LicenseNo)

6 HAVING (COUNT(RentalNo) = (SELECT MAX(COUNT(RentalNo))

7 FROM Ragreement JOIN Vehicle USING(LicenseNo)

8 GROUP BY (OutNo)))

9 GROUP BY (OutNo)) USING(OutNo)

10 JOIN Vehicle USING(OutNo)

11 JOIN RAGREEMENT USING(LicenseNo)

12 JOIN Client USING(clientNo);

RENTALNO OUTNO STREET STARTDATE RETURNDAT CLIENTNO CLIENTNAME

---------- ---------- -------------------- --------- --------- ---------- -------------------

114567845 134523 756 S Millvale Ave 10-NOV-15 22-FEB-16 5765567583 Shang

776842375 134523 756 S Millvale Ave 18-FEB-15 21-MAY-15 3342342521 Michael

298346486 134523 756 S Millvale Ave 20-MAY-16 21-AUG-16 2345436214 Lin

317987234 134523 756 S Millvale Ave 23-OCT-16 11-JAN-17 2345436214 Lin

468923673 134523 756 S Millvale Ave 16-NOV-16 10-MAR-17 1092615453 Mike

177663452 134523 756 S Millvale Ave 05-OCT-16 13-JAN-17 1092615453 Mike

224562678 348931 5634 Baum Blvd 09-MAR-18 19-MAY-18 9654423553 Dwan

256324576 348931 5634 Baum Blvd 15-JUN-16 08-SEP-16 8765474265 Alex

367354871 348931 5634 Baum Blvd 12-NOV-16 28-JAN-17 8765474265 Alex

169987057 348931 5634 Baum Blvd 16-JAN-18 02-MAY-18 6657435424 Dirk

182389054 348931 5634 Baum Blvd 05-APR-17 08-JUL-17 6657435424 Dirk

687934144 348931 5634 Baum Blvd 16-JUL-16 08-OCT-16 3342342521 Michael

12 rows selected.

SQL> --7--

SQL> SELECT clientNo, ClientName, COUNT(rentalNo), COUNT(ReportNum), NVL(AVG(ReturnDate-StartDate),0) AVG\_RENTAL\_DAYS

2 FROM CLIENT

3 LEFT OUTER JOIN RAGREEMENT USING(clientNo)

4 LEFT OUTER JOIN FAULTREPORT USING (rentalNo)

5 WHERE state = 'WV'

6 GROUP BY(clientNo, ClientName);

CLIENTNO CLIENTNAME COUNT(RENTALNO) COUNT(REPORTNUM) AVG\_RENTAL\_DAYS

---------- ---------------------------------------- --------------- ---------------- ---------------

5580424655 Eric Andre 1 1 12.0904398

9878511883 Alfre Woodard 2 2 18.4145255

3490125515 Jill Stuart 0 0 0

6657435424 Dirk 2 0 100.339207

3342342521 Michael 2 2 87.5123495

SQL> --8--

SQL> SELECT outNo, Make, COUNT(DISTINCT VEHICLE.LicenseNo) AS CAR#,

2 TO\_CHAR(SUM(CEIL(ReturnDate-StartDate)\*DailyRate)/COUNT(DISTINCT VEHICLE.LicenseNo),'99999990.99') AS Revenue\_Per\_Car,

3 TO\_CHAR(COUNT(REPORTNUM)/COUNT(DISTINCT VEHICLE.LicenseNo),'990.99') AS FaultReport\_Per\_Car

4 FROM VEHICLE JOIN outlet USING(outNo)

5 LEFT OUTER JOIN ragreement ON(VEHICLE.LicenseNo = ragreement.LicenseNo)

6 LEFT OUTER JOIN FAULTREPORT USING(RentalNo)

7 GROUP BY outNo, Make;

OUTNO MAKE CAR# REVENUE\_PER\_CAR FAULTREPORT\_PER\_CAR

---------- -------------------- ---------- ------------------------- -------------------------

677386 CHEVROLET 1 1610.00 1.00

476412 FORD 1 3003.00 1.00

476412 MERCEDES-BENZ 1 1680.00 1.00

386703 BMW 2 2310.00 1.00

348931 TOYOTA 3 17563.33 1.00

939863 CHEVROLET 1 4320.00 2.00

348931 FORD 1 8520.00 0.00

134523 HONDA 1 14000.00 0.00

243868 FORD 1 11660.00 1.00

134523 MITSUBISHI 1 12480.00 0.00

134523 TOYOTA 1 34580.00 3.00

476412 KIA 1 2002.00 1.00

243868 HONDA 2 18590.00 1.00

942762 AUDI 1 3120.00 1.00

926360 DODGE 1 6970.00 2.00

926360 SUBARU 1 1400.00 1.00

134523 CHEVROLET 1 15960.00 1.00

17 rows selected.

Explanation: the two measures we chose are the ‘average revenue’ and ‘fault report number per each car’ of each pair of (outlet, car make). Assume we are the managers of outlet 134523, we would notice that ‘Toyota’ cars have a high average revenue, also the TOYOTA cars in outlet 348931 have similar high revenue. Therefore, we may want to introduce more TOYOTA cars, as well as figure out a way to lower the fault rate of our TOYOTA cars.

SQL> --9--

SQL> COLUMN CAR\_INFO FORMAT A35

SQL> COLUMN Comments FORMAT A40

SQL> COLUMN EMP\_NAME FORMAT A20

SQL> SELECT ReportNum, DateChecked, ReturnDate, Comments, VEHICLE.LicenseNo ||','|| Make ||','|| Model ||','|| Color AS "CAR\_INFO",

2 Fname || ' ' || Lname AS "EMP\_NAME"

3 FROM FAULTREPORT

4 JOIN RAGREEMENT USING (rentalNo)

5 JOIN VEHICLE ON (FAULTREPORT.LicenseNo = VEHICLE.LicenseNo)

6 JOIN EMPLOYEE USING(EmpNo)

7 WHERE ReturnDate < trunc(sysdate, 'MM')

8 AND ReturnDate >= trunc(add\_months(sysdate,-1), 'MM');

REPORTNUM DATECHECK RETURNDAT COMMENTS CAR\_INFO EMP\_NAME

---------- --------- --------- ---------------------------------------- ----------------------------------- --------------------

2662355246 25-JUL-19 12-JUL-19 engine stalls/shuts off while driving 6TRJ244,FORD,ESCAPE,Red Isaias Gatson

7344158384 22-JUL-19 03-JUL-19 daytime led lights burning out 742982,AUDI,RS4,White Wallace Fernandes

3163038296 01-AUG-19 29-JUL-19 rear end slides easily WYF8231,CHEVROLET,W5500,Black Georgia Murray

SQL> --10--

SQL> SELECT m.EmpNo, m.Fname||' '||m.Lname,

2 COUNT(DISTINCT OUTLET.outNo) AS "OUTLETS",

3 COUNT(DISTINCT e.EmpNo) AS "EMPLOYEES",

4 COUNT(DISTINCT LicenseNo) AS "VEHICLES"

5 FROM EMPLOYEE m

6 JOIN OUTLET ON(OUTLET.ManagerNo = m.EmpNo)

7 JOIN EMPLOYEE e ON (e.outNo = OUTLET.outNo)

8 JOIN Vehicle ON (Vehicle.outNo = OUTLET.outNo)

9 GROUP BY (m.EmpNo, m.Fname, m.Lname);

EMPNO M.FNAME||''||M.LNAME OUTLETS EMPLOYEES VEHICLES

---------- ----------------------------------------- ---------- ---------- ----------

237 Helen Lewis 3 10 11

341 Kevin Mares 2 4 2

1939 Kelly Jackson 3 8 6

6834 Hillary Dennis 1 1 2

SQL> --11--

SQL> SELECT PERIOD, COUNT(\*) TOTAL\_EACH, TO\_CHAR(COUNT(\*)\*100/(SUM(COUNT(\*)) OVER()), '990.99')||'%' PERCENTAGE FROM(

2 SELECT

3 (CASE

4 WHEN TO\_CHAR(StartDate,'HH24') BETWEEN 6 AND 11 THEN 'MORNING'

5 WHEN TO\_CHAR(StartDate,'HH24') BETWEEN 12 AND 17 THEN 'AFTERNOON'

6 WHEN TO\_CHAR(StartDate,'HH24') BETWEEN 18 AND 22 THEN 'EVENING'

7 ELSE 'OUT OF WORK'

8 END) PERIOD FROM RAGREEMENT

9 UNION ALL

10 SELECT

11 (CASE

12 WHEN TO\_CHAR(ReturnDate,'HH24') BETWEEN 6 AND 11 THEN 'MORNING'

13 WHEN TO\_CHAR(ReturnDate,'HH24') BETWEEN 12 AND 17 THEN 'AFTERNOON'

14 WHEN TO\_CHAR(ReturnDate,'HH24') BETWEEN 18 AND 22 THEN 'EVENING'

15 ELSE 'OUT OF WORK'

16 END) PERIOD FROM RAGREEMENT)

17 GROUP BY (PERIOD);

PERIOD TOTAL\_EACH PERCENTA

----------- ---------- --------

MORNING 28 43.75%

AFTERNOON 15 23.44%

EVENING 21 32.81%

SQL> --12--

SQL> SELECT CLIENT\_TYPE, NVL(TOTAL\_EACH,0) COUNT FROM

2 (

3 SELECT DECODE(LEVEL,1, 'EDUCATION', 2,'GOVERNMENT AGENCY',3,'NON-FOR-PROFIT ORGANIZATION',4,'FOR-PROFIT COMPANY',5,'NOT AVAILABLE') CLIENT\_TYPE FROM DUAL

4 CONNECT BY LEVEL<=5

5 )

6 LEFT OUTER JOIN

7 (

8 SELECT CLIENT\_TYPE, COUNT(\*) TOTAL\_EACH FROM(

9 SELECT

10 (CASE

11 WHEN LOWER(WebAddress) LIKE '%.edu' THEN 'EDUCATION'

12 WHEN LOWER(WebAddress) LIKE '%.gov' THEN 'GOVERNMENT AGENCY'

13 WHEN LOWER(WebAddress) LIKE '%.org' THEN 'NON-FOR-PROFIT ORGANIZATION'

14 WHEN LOWER(WebAddress) LIKE '%.com' THEN 'FOR-PROFIT COMPANY'

15 WHEN WebAddress IS NULL THEN 'NOT AVAILABLE'

16 ELSE 'PERSONAL'

17 END) CLIENT\_TYPE FROM CLIENT)

18 GROUP BY (CLIENT\_TYPE)

19 )

20 USING (CLIENT\_TYPE)

21 ;

CLIENT\_TYPE COUNT

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FOR-PROFIT COMPANY 6

EDUCATION 4

GOVERNMENT AGENCY 2

NOT AVAILABLE 3

NON-FOR-PROFIT ORGANIZATION 4