--Question 1

SQL> COLUMN rentalno FORMAT A8

SQL> COLUMN start\_datetime FORMAT A20

SQL> COLUMN return\_datetime FORMAT A20

SQL> COLUMN licenseno FORMAT A9

SQL> COLUMN make FORMAT A10

SQL> COLUMN model FORMAT A10

SQL> COLUMN faultreport FORMAT A15

SQL>

SQL> SELECT rentalno, TO\_CHAR(startdate, 'DD-MON-YYYY hh:miam') AS start\_datetime,

2 NVL(TO\_CHAR(returndate, 'DD-MON-YYYY hh:miam'), 'Not Returned Yet') AS return\_datetime,

3 mileagebefore, mileageafter, licenseno, outno, make, model, year,

4 NVL(TO\_CHAR(datechecked, 'DD-MON-YYYY'), 'No fault report') AS datechecked

5 FROM ragreement JOIN vehicle USING (licenseno)

6 LEFT JOIN faultreport USING (rentalno, licenseno);

RENTALNO START\_DATETIME RETURN\_DATETIME MILEAGEBEFORE MILEAGEAFTER LICENSENO OUTNO MAKE MODEL YEAR DATECHECKED

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1025100 25-JAN-2017 03:23pm 20-FEB-2017 05:05pm 16602 24410 7AWF715 1207000 Nissan Altima 2015 20-FEB-2017

1025101 02-MAR-2017 10:58am 30-MAR-2017 04:10pm 7992 11801 NXX-4980 1207003 Nissan Altima 2016 30-MAR-2017

1025102 05-MAR-2017 03:42pm 03-APR-2017 12:20pm 31329 34134 AEK B97 1207002 Infiniti Q50 2015 03-APR-2017

1025103 07-APR-2017 09:33am 30-MAY-2017 11:05am 11090 18532 7APE647 1207000 Infiniti Q50 2017 30-MAY-2017

1025104 05-JUL-2017 01:49pm 03-AUG-2017 04:20pm 34893 39804 AEK B97 1207002 Infiniti Q50 2015 03-AUG-2017

1025106 20-AUG-2017 03:23pm 28-SEP-2017 06:05pm 24560 26792 7AWF715 1207000 Nissan Altima 2015 28-SEP-2017

1025109 07-OCT-2017 09:53am 30-NOV-2017 11:05am 20897 23800 7APE647 1207000 Infiniti Q50 2017 30-NOV-2017

1025110 15-NOV-2017 01:28pm 16-JAN-2018 11:25am 6858 10201 ASJ J44 1207001 Toyota RAV4 2017 16-JAN-2018

1025112 02-DEC-2017 10:58am 08-FEB-2018 04:20pm 12131 21030 NXX-4980 1207003 Nissan Altima 2016 08-FEB-2018

1025115 15-MAY-2018 01:08pm 16-AUG-2018 09:55am 10736 19595 ASJ J44 1207001 Toyota RAV4 2017 16-AUG-2018

1025118 10-JUL-2018 03:23pm 31-AUG-2018 04:17pm 29890 35008 7AWF715 1207000 Nissan Altima 2015 10-JUL-2018

1025121 16-AUG-2018 11:43pm 06-OCT-2018 05:36pm 20738 29061 UMF-5359 1207004 Honda CRV 2017 06-OCT-2018

1025123 19-OCT-2018 12:18pm 15-NOV-2018 09:34am 29118 31124 UMF-5359 1207004 Honda CRV 2017 15-NOV-2018

1025122 16-SEP-2018 11:18am 10-NOV-2018 10:34am 15256 24757 SLR-4081 1207003 Infiniti Q50 2018 No fault report

1025124 08-NOV-2018 04:18pm Not Returned Yet 6212 9379 ARR J83 1207002 Honda Civic 2018 No fault report

1025113 05-FEB-2018 01:42pm 03-MAY-2018 12:20pm 41329 49134 AEK B97 1207002 Infiniti Q50 2015 No fault report

1025119 05-AUG-2018 09:20am 09-NOV-2018 10:46am 19635 25672 ASJ J44 1207001 Toyota RAV4 2017 No fault report

1025114 07-APR-2018 09:33am 30-APR-2018 11:05am 23827 31329 7APE647 1207000 Infiniti Q50 2017 No fault report

1025105 07-AUG-2017 10:33am 20-SEP-2017 10:05am 18560 20810 7APE647 1207000 Infiniti Q50 2017 No fault report

1025107 03-SEP-2017 10:58am 08-OCT-2017 10:20am 11892 12120 NXX-4980 1207003 Nissan Altima 2016 No fault report

1025116 07-JUN-2018 02:15pm 19-JUN-2018 03:39pm 31822 35341 7APE647 1207000 Infiniti Q50 2017 No fault report

1025111 25-NOV-2017 03:23pm 28-DEC-2017 06:05pm 26889 29798 7AWF715 1207000 Nissan Altima 2015 No fault report

1025120 10-AUG-2018 03:55pm 29-SEP-2018 02:17pm 8231 10843 6VJD691 1207000 Nissan Frontier 2016 No fault report

1025117 10-JUN-2018 09:52am 02-AUG-2018 11:45am 68658 77916 AUW V73 1207001 Toyota Camry 2015 No fault report

1025108 25-SEP-2017 01:42pm 29-OCT-2017 12:20pm 39835 41305 AEK B97 1207002 Infiniti Q50 2015 No fault report

25 rows selected.

--Question 2

SQL> --Cover 12 months in 2017

SQL> COLUMN avg\_distance FORMAT A12

SQL>

SQL> SELECT outno, COUNT(DISTINCT licenseno) AS "#CARS", COUNT(rentalno) AS "#RENTALS",

2 NVL(TO\_CHAR(AVG(mileageafter - mileagebefore),'9,990'), 'N/A') AS avg\_distance, x as "#EMPLOYEES",

3 ROUND(COUNT(rentalno)/x) AS rentals\_per\_employee

4 FROM outlet JOIN vehicle USING (outno)

5 LEFT JOIN (SELECT \* FROM ragreement WHERE EXTRACT(YEAR FROM startdate) = 2017) USING (licenseno)

6 LEFT JOIN (SELECT outno, COUNT(empno) AS x FROM employee WHERE EXTRACT(YEAR FROM hiredate) <= 2017 GROUP BY outno) USING (outno)

7 GROUP BY outno, x;

OUTNO #CARS #RENTALS AVG\_DISTANCE #EMPLOYEES RENTALS\_PER\_EMPLOYEE

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1207004 2 0 N/A 2 0

1207001 2 1 3,343 3 0

1207000 3 6 4,257 3 2

1207003 2 3 4,312 2 2

1207002 2 3 3,062 3 1

5 rows selected.

--Question 3

SQL> --Cover 12 months in 2017

SQL> --Only returned rentals are considered for revenue

SQL> COLUMN rev\_per\_rental FORMAT A14

SQL> COLUMN total\_revenue FORMAT A13

SQL>

SQL> SELECT DECODE(TO\_CHAR(y, 'MON YYYY'), NULL, 'Outlet Total', TO\_CHAR(y, 'MON YYYY')) AS Month,

2 TO\_CHAR(SUM(DECODE(outno, '1207000', CEIL(returndate - startdate) \* dailyrate, 0)), '$99,990.99') AS rev\_1207000,

3 TO\_CHAR(SUM(DECODE(outno, '1207001', CEIL(returndate - startdate) \* dailyrate, 0)), '$99,990.99') AS rev\_1207001,

4 TO\_CHAR(SUM(DECODE(outno, '1207002', CEIL(returndate - startdate) \* dailyrate, 0)), '$99,990.99') AS rev\_1207002,

5 TO\_CHAR(SUM(DECODE(outno, '1207003', CEIL(returndate - startdate) \* dailyrate, 0)), '$99,990.99') AS rev\_1207003,

6 TO\_CHAR(SUM(DECODE(outno, '1207004', CEIL(returndate - startdate) \* dailyrate, 0)), '$99,990.99') AS rev\_1207004,

7 TO\_CHAR(NVL(SUM(CEIL(returndate - startdate) \* dailyrate), 0), '$999,990.99') AS total\_revenue,

8 COUNT(rentalno) AS "#RENTALS",

9 NVL(TO\_CHAR(SUM(CEIL(returndate - startdate) \* dailyrate) / COUNT(rentalno), '$99,990.99'), 'N/A') AS rev\_per\_rental

10 FROM outlet JOIN vehicle USING (outno)

11 JOIN ragreement USING (licenseno)

12 RIGHT JOIN (SELECT EXTRACT(MONTH FROM ADD\_MONTHS(TO\_DATE('01-JAN-2018', 'DD-MON-YYYY'), -level)) AS sys\_month,

13 TO\_DATE(TO\_CHAR(ADD\_MONTHS(TO\_DATE('01-JAN-2018', 'DD-MON-YYYY'), -level), 'MON YYYY'), 'MON YYYY') AS y

14 FROM dual

15 CONNECT BY level <= 12

16 ORDER BY 1)

17 ON EXTRACT(YEAR FROM returndate) = 2017 AND EXTRACT(MONTH FROM returndate) = sys\_month

18 GROUP BY ROLLUP (y)

19 ORDER BY y;

MONTH REV\_1207000 REV\_1207001 REV\_1207002 REV\_1207003 REV\_1207004 TOTAL\_REVENUE #RENTALS REV\_PER\_RENTAL

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JAN 2017 $0.00 $0.00 $0.00 $0.00 $0.00 $0.00 0 N/A

FEB 2017 $1,355.40 $0.00 $0.00 $0.00 $0.00 $1,355.40 1 $1,355.40

MAR 2017 $0.00 $0.00 $0.00 $1,623.71 $0.00 $1,623.71 1 $1,623.71

APR 2017 $0.00 $0.00 $1,693.60 $0.00 $0.00 $1,693.60 1 $1,693.60

MAY 2017 $3,282.66 $0.00 $0.00 $0.00 $0.00 $3,282.66 1 $3,282.66

JUN 2017 $0.00 $0.00 $0.00 $0.00 $0.00 $0.00 0 N/A

JUL 2017 $0.00 $0.00 $0.00 $0.00 $0.00 $0.00 0 N/A

AUG 2017 $0.00 $0.00 $1,752.00 $0.00 $0.00 $1,752.00 1 $1,752.00

SEP 2017 $4,682.76 $0.00 $0.00 $0.00 $0.00 $4,682.76 2 $2,341.38

OCT 2017 $0.00 $0.00 $1,985.60 $1,959.65 $0.00 $3,945.25 2 $1,972.63

NOV 2017 $3,343.45 $0.00 $0.00 $0.00 $0.00 $3,343.45 1 $3,343.45

DEC 2017 $1,706.80 $0.00 $0.00 $0.00 $0.00 $1,706.80 1 $1,706.80

Outlet Total $14,371.07 $0.00 $5,431.20 $3,583.36 $0.00 $23,385.63 11 $2,125.97

13 rows selected.

--Question 4

SQL> --Values in each column represent number of rentals started and number of fault reports created on that weekday, concatenated by '+'

SQL> COLUMN monday FORMAT A10

SQL> COLUMN tuesday FORMAT A10

SQL> COLUMN wednesday FORMAT A10

SQL> COLUMN thursday FORMAT A10

SQL> COLUMN friday FORMAT A10

SQL> COLUMN saturday FORMAT A10

SQL> COLUMN sunday FORMAT A10

SQL> COLUMN "Outlet Total (Rentals+Faults)" FORMAT A29

SQL>

SQL> SELECT DECODE(outno, NULL, 'WeekDay Total', outno) AS outno,

2 SUM(DECODE(rentday, 'Monday', 1, 0)) || ' + ' || SUM(DECODE(faultday, 'Monday', 1, 0)) AS monday,

3 SUM(DECODE(rentday, 'Tuesday', 1, 0)) || ' + ' || SUM(DECODE(faultday, 'Tuesday', 1, 0)) AS tuesday,

4 SUM(DECODE(rentday, 'Wednesday', 1, 0)) || ' + ' || SUM(DECODE(faultday, 'Wednesday', 1, 0)) AS wednesday,

5 SUM(DECODE(rentday, 'Thursday', 1, 0)) || ' + ' || SUM(DECODE(faultday, 'Thursday', 1, 0)) AS thursday,

6 SUM(DECODE(rentday, 'Friday', 1, 0)) || ' + ' || SUM(DECODE(faultday, 'Friday', 1, 0)) AS friday,

7 SUM(DECODE(rentday, 'Saturday', 1, 0)) || ' + ' || SUM(DECODE(faultday, 'Saturday', 1, 0)) AS saturday,

8 SUM(DECODE(rentday, 'Sunday', 1, 0)) || ' + ' || SUM(DECODE(faultday, 'Sunday', 1, 0)) AS sunday,

9 COUNT(rentalno) || ' + ' || COUNT(reportnum) AS "Outlet Total (Rentals+Faults)"

10 FROM (SELECT outno, CASE WHEN startdate > ADD\_MONTHS(SYSDATE, -6) THEN rentalno ELSE NULL END AS rentalno,

11 TRIM(TO\_CHAR(CASE WHEN startdate > ADD\_MONTHS(SYSDATE, -6) THEN startdate ELSE NULL END, 'Day')) AS rentday,

12 reportnum, TRIM(TO\_CHAR(datechecked, 'Day')) AS faultday, startdate, datechecked

13 FROM outlet JOIN vehicle USING (outno)

14 LEFT OUTER JOIN (SELECT \* FROM ragreement) USING (licenseno)

15 LEFT OUTER JOIN (SELECT \* FROM faultreport) USING (licenseno, rentalno)

16 WHERE rentalno IS NOT NULL AND (startdate > ADD\_MONTHS(SYSDATE, -6) OR datechecked > ADD\_MONTHS(SYSDATE, -6))

17 )

18 GROUP BY ROLLUP (outno);

OUTNO MONDAY TUESDAY WEDNESDAY THURSDAY FRIDAY SATURDAY SUNDAY Outlet Total (Rentals+Faults)

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1207000 0 + 0 1 + 1 0 + 0 1 + 0 1 + 0 0 + 0 0 + 0 3 + 1

1207001 0 + 0 0 + 0 0 + 0 0 + 1 0 + 0 0 + 0 2 + 0 2 + 1

1207002 0 + 0 0 + 0 0 + 0 1 + 0 0 + 0 0 + 0 0 + 0 1 + 0

1207003 0 + 0 0 + 0 0 + 0 0 + 0 0 + 0 0 + 0 1 + 0 1 + 0

1207004 0 + 0 0 + 0 0 + 0 1 + 1 1 + 0 0 + 1 0 + 0 2 + 2

WeekDay Total 0 + 0 1 + 1 0 + 0 3 + 2 2 + 0 0 + 1 3 + 0 9 + 4

6 rows selected.

--Question 5

SQL> BREAK ON manager

SQL> COLUMN manager FORMAT A25

SQL> COLUMN rev\_per\_rental FORMAT A14

SQL> COLUMN report\_per\_rental FORMAT A17

SQL>

SQL> SELECT TRIM(managerno) || ': ' || fname || ' ' || lname AS manager, NVL(outno, 'All Managed Outlets') AS outno, COUNT(rentalno) AS "#RENTALS",

2 TO\_CHAR(SUM(CEIL(returndate - startdate) \* dailyrate) / COUNT(rentalno), '$99,990.99') AS rev\_per\_rental,

3 TO\_CHAR(COUNT(reportnum) / COUNT(rentalno), '90.99') AS report\_per\_rental

4 FROM outlet JOIN employee ON managerno = empno

5 JOIN vehicle ON outlet.outno = vehicle.outno

6 JOIN ragreement USING (licenseno)

7 LEFT JOIN faultreport USING (rentalno, licenseno)

8 GROUP BY GROUPING SETS ((managerno, fname, lname, outno), (managerno, fname, lname));

MANAGER OUTNO #RENTALS REV\_PER\_RENTAL REPORT\_PER\_RENTAL

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00001: Ayah Norris 1207000 10 $2,138.09 0.50

All Managed Outlets 10 $2,138.09 0.50

00002: Lilly Johnson 1207001 4 $5,239.98 0.50

1207002 5 $2,102.40 0.40

All Managed Outlets 9 $3,496.88 0.44

00003: Nellie Hart 1207003 4 $2,780.86 0.50

1207004 2 $2,661.75 1.00

All Managed Outlets 6 $2,741.15 0.67

8 rows selected.

SQL>

SQL> CLEAR BREAKS

-- Question 6

SQL> SELECT outno, TO\_CHAR(revenue, '$99,990.99') AS revenue,

2 CASE WHEN rank\_asce = 1 AND rank\_desc = 1 THEN 'Minimum/Maximum'

3 WHEN rank\_desc = 1 THEN 'Maximum'

4 WHEN rank\_asce = 1 THEN 'Minimum'

5 END AS rank

6 FROM

7 (SELECT outno, revenue,

8 RANK() OVER (ORDER BY revenue) AS rank\_asce,

9 RANK() OVER (ORDER BY revenue DESC) AS rank\_desc

10 FROM (

11 SELECT outno, SUM(CEIL(returndate - startdate) \* dailyrate) AS revenue

12 FROM outlet JOIN vehicle USING (outno)

13 JOIN ragreement USING (licenseno)

14 WHERE EXTRACT(YEAR FROM returndate) || ' ' || CEIL(EXTRACT(MONTH FROM returndate)/3) IN ('2017 4', '2018 1')

15 GROUP BY outno

16 )

17 )

18 WHERE rank\_asce = 1 OR rank\_desc = 1;

OUTNO REVENUE RANK

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

1207003 $5,822.96 Maximum

1207002 $1,985.60 Minimum

2 rows selected.

--Question 7

SQL> COLUMN make\_model FORMAT A20

SQL> COLUMN car\_avg\_age FORMAT A11

SQL> COLUMN rent\_days\_2018 FORMAT A14

SQL>

SQL> SELECT CASE WHEN make IS NULL THEN 'Grand Total'

2 WHEN model IS NULL THEN make || ': Subtotal'

3 ELSE make || ': ' || model END AS make\_model,

4 COUNT(DISTINCT licenseno) AS "#CARS", TO\_CHAR(AVG(2018 - year), '90.9') AS car\_avg\_age,

5 COUNT(rentalno) AS "#RENTALS\_2018",

6 TO\_CHAR(SUM(TRUNC(NVL(returndate, SYSDATE)) - (CASE WHEN TO\_DATE('01-JAN-18', 'dd-MON-yy') < TRUNC(startdate)

7 THEN TO\_DATE('01-JAN-18', 'dd-MON-yy')

8 ELSE TRUNC(startdate) END) + 1), '99,990') AS rent\_days\_2018,

9 COUNT(reportnum) AS "#FAULT\_REPORTS\_2018"

10 FROM vehicle LEFT JOIN (SELECT \* FROM ragreement

11 WHERE EXTRACT(YEAR FROM startdate) = 2018 OR EXTRACT(YEAR FROM returndate) = 2018)

12 USING (licenseno)

13 LEFT JOIN (SELECT \* FROM faultreport

14 WHERE EXTRACT(YEAR FROM datechecked) = 2018)

15 USING (rentalno, licenseno)

16 GROUP BY ROLLUP (make, model);

MAKE\_MODEL #CARS CAR\_AVG\_AGE #RENTALS\_2018 RENT\_DAYS\_2018 #FAULT\_REPORTS\_2018

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Honda: CRV 2 0.7 2 598 2

Honda: Civic 1 0.0 1 335 0

Infiniti: Q50 3 1.3 4 727 0

Nissan: Altima 2 2.5 2 312 2

Nissan: Frontier 1 2.0 1 272 0

Toyota: Camry 1 3.0 1 214 0

Toyota: RAV4 1 1.0 3 604 2

Honda: Subtotal 3 0.5 3 933 2

Infiniti: Subtotal 3 1.3 4 727 0

Nissan: Subtotal 3 2.3 3 584 2

Toyota: Subtotal 2 1.5 4 818 2

Grand Total 11 1.3 14 3,062 6

12 rows selected.

--Question 8 (Version 1: pivot table)

SQL> COLUMN Qua1\_Num FORMAT 99999999

SQL> COLUMN Qua2\_Num FORMAT 99999999

SQL> COLUMN Qua3\_Num FORMAT 99999999

SQL> COLUMN Qua4\_Num FORMAT 99999999

SQL> COLUMN Qua1\_Pro FORMAT A8

SQL> COLUMN Qua2\_Pro FORMAT A8

SQL> COLUMN Qua3\_Pro FORMAT A8

SQL> COLUMN Qua4\_Pro FORMAT A8

SQL> COLUMN Qua1\_rank FORMAT 999999999

SQL> COLUMN Qua2\_rank FORMAT 999999999

SQL> COLUMN Qua3\_rank FORMAT 999999999

SQL> COLUMN Qua4\_rank FORMAT 999999999

SQL>

SQL> SELECT make,

2 Qua1\_Num, TO\_CHAR(Qua1\_Pro, '0.99') AS Qua1\_Pro, (Case when Qua1\_Pro is null then null else Qua1\_rank end) as Qua1\_rank,

3 Qua2\_Num, TO\_CHAR(Qua2\_Pro, '0.99') AS Qua2\_Pro, (Case when Qua2\_Pro is null then null else Qua2\_rank end) as Qua2\_rank,

4 Qua3\_Num, TO\_CHAR(Qua3\_Pro, '0.99') AS Qua3\_Pro, (Case when Qua3\_Pro is null then null else Qua3\_rank end) as Qua3\_rank,

5 Qua4\_Num, TO\_CHAR(Qua4\_Pro, '0.99') AS Qua4\_Pro, (Case when Qua4\_Pro is null then null else Qua4\_rank end) as Qua4\_rank

6 FROM

7 (SELECT make,

8 Qua1\_Num, Qua1\_Pro, RANK() OVER (ORDER BY Qua1\_Pro DESC NULLS LAST) AS Qua1\_rank,

9 Qua2\_Num, Qua2\_Pro, RANK() OVER (ORDER BY Qua2\_Pro DESC NULLS LAST) AS Qua2\_rank,

10 Qua3\_Num, Qua3\_Pro, RANK() OVER (ORDER BY Qua3\_Pro DESC NULLS LAST) AS Qua3\_rank,

11 Qua4\_Num, Qua4\_Pro, RANK() OVER (ORDER BY Qua4\_Pro DESC NULLS LAST) AS Qua4\_rank

12 FROM

13 (((SELECT make, COUNT(rentalNo) AS Qua1\_Num, COUNT(reportNum)/COUNT(rentalNo) AS Qua1\_Pro

14 FROM RAGREEMENT JOIN VEHICLE USING (LicenseNo)

15 LEFT JOIN FAULTREPORT USING (LicenseNo, rentalNo)

16 WHERE StartDate>='01-JAN-17' AND StartDate<'01-APR-17'

17 GROUP BY make)

18 Full OUTER JOIN

19 (SELECT make, COUNT(rentalNo) AS Qua2\_Num, COUNT(reportNum)/COUNT(rentalNo) AS Qua2\_Pro

20 FROM RAGREEMENT JOIN VEHICLE USING (LicenseNo)

21 LEFT JOIN FAULTREPORT USING (LicenseNo, rentalNo)

22 WHERE StartDate>='01-APR-17' AND StartDate<'01-JUL-17'

23 GROUP BY make)

24 USING (make))

25 Full OUTER JOIN

26 ((SELECT make, COUNT(rentalNo) AS Qua3\_Num, COUNT(reportNum)/COUNT(rentalNo) AS Qua3\_Pro

27 FROM RAGREEMENT JOIN VEHICLE USING (LicenseNo)

28 LEFT JOIN FAULTREPORT USING (LicenseNo, rentalNo)

29 WHERE StartDate>='01-JUL-17' AND StartDate<'01-OCT-17'

30 GROUP BY make)

31 Full OUTER JOIN

32 (SELECT make, COUNT(rentalNo) AS Qua4\_Num, COUNT(reportNum)/COUNT(rentalNo) AS Qua4\_Pro

33 FROM RAGREEMENT JOIN VEHICLE USING (LicenseNo)

34 LEFT JOIN FAULTREPORT USING (LicenseNo, rentalNo)

35 WHERE StartDate>='01-OCT-17' AND StartDate<'01-JAN-18'

36 GROUP BY make)

37 USING (make))

38 USING (make)));

MAKE QUA1\_NUM QUA1\_PRO QUA1\_RANK QUA2\_NUM QUA2\_PRO QUA2\_RANK QUA3\_NUM QUA3\_PRO QUA3\_RANK QUA4\_NUM QUA4\_PRO QUA4\_RANK

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Infiniti 1 1.00 1 1 1.00 1 3 0.33 2 1 1.00 1

Toyota 1 1.00 1

Nissan 2 1.00 1 2 0.50 1 2 0.50 3

3 rows selected.

--Question 8 (Version 2: non-pivot table)

SQL> COLUMN "#FAULT\_REPORTS" FORMAT 9999999999

SQL> COLUMN likelihood FORMAT A10

SQL> BREAK ON quarter

SQL>

SQL> SELECT quarter, make, COUNT(rentalno) AS "#RENTALS", COUNT(reportnum) AS "#FAULT\_REPORTS",

2 TO\_CHAR(COUNT(reportnum) / COUNT(rentalno), '0.99') AS likelihood,

3 RANK() OVER (PARTITION BY quarter ORDER BY COUNT(reportnum) / COUNT(rentalno) DESC) AS rank

4 FROM (

5 SELECT make, rentalno, reportnum, CEIL(EXTRACT(MONTH FROM startdate)/3) AS quarter

6 FROM vehicle LEFT JOIN ragreement USING (licenseno)

7 LEFT JOIN faultreport USING (rentalno, licenseno)

8 WHERE EXTRACT(YEAR FROM startdate) = 2017

9 )

10 GROUP BY make, quarter;

QUARTER MAKE #RENTALS #FAULT\_REPORTS LIKELIHOOD RANK

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

1 Nissan 2 2 1.00 1

Infiniti 1 1 1.00 1

2 Infiniti 1 1 1.00 1

3 Nissan 2 1 0.50 1

Infiniti 3 1 0.33 2

4 Toyota 1 1 1.00 1

Infiniti 1 1 1.00 1

Nissan 2 1 0.50 3

8 rows selected.

SQL>

SQL> CLEAR BREAKS

--Question 9

SQL> COLUMN client\_pct FORMAT A10

SQL> COLUMN rental\_pct FORMAT A10

SQL> SELECT outno, clinum AS "#CLIENTS\_OUT\_STATE", rennum AS "#RENTALS",

2 TO\_CHAR(clinum/totalcli, '0.99') AS client\_pct, TO\_CHAR(rennum/totalren, '0.99') AS rental\_pct

3 FROM (

4 SELECT outno, COUNT(DISTINCT clientno) AS clinum, COUNT(rentalno) AS rennum

5 FROM outlet JOIN vehicle USING (outno)

6 JOIN ragreement USING (LicenseNo)

7 JOIN client USING (clientNo)

8 WHERE outlet.state=client.state

9 GROUP BY outno

10 )

11 JOIN (

12 SELECT outno, COUNT(DISTINCT clientno) AS totalcli, COUNT(rentalno) AS totalren

13 FROM outlet JOIN vehicle USING (outno)

14 JOIN ragreement USING (LicenseNo)

15 JOIN client USING (clientNo)

16 GROUP BY outno

17 )

18 USING (outno);

OUTNO #CLIENTS\_OUT\_STATE #RENTALS CLIENT\_PCT RENTAL\_PCT

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1207002 2 3 0.50 0.60

1207003 1 1 0.33 0.25

1207001 2 3 0.67 0.75

1207004 2 2 1.00 1.00

1207000 3 6 0.50 0.60

5 rows selected.

--Question 10

SQL> COLUMN employee FORMAT A37

SQL> COLUMN outlet FORMAT A37

SQL> COLUMN "#FAULT\_REPORTS" FORMAT A15

SQL>

SQL> SELECT emp\_level, employee, position, TRIM(outno || ': '|| street) AS outlet, TRIM(NVL(NUM, 0)) "#FAULT\_REPORTS"

2 FROM (

3 SELECT LEVEL AS emp\_level, LPAD(' ', 3\*(LEVEL-1)) || TRIM(empno) || ': ' || fname || ' ' || lname employee, position, outno, street, empno

4 FROM employee join outlet using (outno)

5 START WITH empno = '00001'

6 CONNECT BY PRIOR empno = supervisorno

7 )

8 LEFT JOIN (

9 SELECT empno, COUNT(reportnum) "NUM"

10 FROM faultreport

11 WHERE TRUNC(SYSDATE) - TRUNC(datechecked) <=90

12 GROUP BY empno)

13 USING (empno);

EMP\_LEVEL EMPLOYEE POSITION OUTLET #FAULT\_REPORTS

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

1 00001: Ayah Norris President 1207000: 2822 Meadowbrook Mall Road 0

2 00002: Lilly Johnson Area Managers 1207001: 2307 Red Hawk Road 0

3 00004: Lacey Owens Sales Rep 1207003: 4584 Losh Lane 0

4 00010: Madison Roberts Mechanics 1207004: 4303 Jacobs Street 1

4 00012: Laurie Thornton Administrative Assistants 1207001: 2307 Red Hawk Road 0

3 00005: Maci Love Sales Rep 1207004: 4303 Jacobs Street 0

4 00011: Delice Delice Administrative Assistants 1207000: 2822 Meadowbrook Mall Road 0

3 00008: Atlanta Nguyen Mechanics 1207002: 4164 Linden Avenue 1

2 00003: Nellie Hart Area Managers 1207002: 4164 Linden Avenue 0

3 00006: Teegan Hansen Sales Rep 1207000: 2822 Meadowbrook Mall Road 0

4 00013: Cecilia Robertson Administrative Assistants 1207002: 4164 Linden Avenue 0

3 00007: Miya Rees Sales Rep 1207001: 2307 Red Hawk Road 0

3 00009: Natalia Klein Mechanics 1207003: 4584 Losh Lane 0

13 rows selected.