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Question 2(Code and pictures of output will be posted for each question)

1)

Code:

```
CREATE TABLE FLUX
(YEAR NUMBER,
WEEK NUMBER,
FROMDATE DATE,
TODATE DATE,
  ILI_GOPC NUMBER,
  ILI_PMP NUMBER,
  H1 NUMBER,
H3 NUMBER,
  B NUMBER,
  AANDB NUMBER,
  H1_PROPORTION NUMBER,
  H3_PROPORTION NUMBER,
  B_PROPORTION NUMBER,
AandB_PROPORTION NUMBER,
  ILI_SCHOOL NUMBER,
  ILI_NONSCHOOL NUMBER,
  ADM_0_5 NUMBER,
  ADM_6_11 NUMBER,
  ADM_12_17 NUMBER,
  ADM_18_49 NUMBER,
  ADM_50_64 NUMBER,
  ADM_65_HIGHER NUMBER,
  ADM_ALL NUMBER,
  ILI_AED NUMBER,
  FEVER_CCCKG NUMBER,
  FEVER_RCHE NUMBER,
  ILI_CMP    NUMBER,
  SEVERECASE_0_17 NUMBER,
  SEVERECASE_18_49 NUMBER,
  SEVERECASE_50_64 NUMBER,
  SEVERECASE_65_HIGHER NUMBER);
```

```
SQL*PLUS:22101071d>DESCRIBE FLUX
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 YEAR                                               NUMBER
 WEEK                                               NUMBER
 FROMDATE                                           DATE
 TODATE                                             DATE
 ILI_GOPC                                           NUMBER
 ILI_PMP                                            NUMBER
 H1                                                 NUMBER
 H3                                                 NUMBER
 B                                                  NUMBER
 AANDB                                              NUMBER
 H1_PROPORTION                                      NUMBER
 H3_PROPORTION                                      NUMBER
 B_PROPORTION                                       NUMBER
 AANDB_PROPORTION                                   NUMBER
 ILI_SCHOOL                                         NUMBER
 ILI_NONSCHOOL                                      NUMBER
 ADM_0_5                                            NUMBER
 ADM_6_11                                           NUMBER
 ADM_12_17                                          NUMBER
 ADM_18_49                                          NUMBER
 ADM_50_64                                          NUMBER
 ADM_65_HIGHER                                      NUMBER
 ADM_ALL                                            NUMBER
 ILI_AED                                            NUMBER
 FEVER_CCCKG                                        NUMBER
 FEVER_RCHE                                         NUMBER
 ILI_CMP                                            NUMBER
 SEVERECASE_0_17                                    NUMBER
 SEVERECASE_18_49                                   NUMBER
 SEVERECASE_50_64                                   NUMBER
 SEVERECASE_65_HIGHER                               NUMBER
```

2)

Too much input so only few code and a result of rows created in table for this question

Code:

INSERT INTO FLUX VALUES (2014,1,TO_DATE('29/12/2013 00:00:00', 'dd/mm/yyyy hh24:mi:ss'),TO_DATE('04/01/2014 00:00:00', 'dd/mm/yyyy hh24:mi:ss'),NULL,45,93,111,64,268,0.043,0.0513,0.0296,0.1238,0,2,1.703,0.425,0.052,0.084,0.158,0.404,0.234,198,NULL,0.0009,3.86,0,1,3,1);

INSERT INTO FLUX VALUES (2014,2,TO_DATE('05/01/2014 00:00:00', 'dd/mm/yyyy hh24:mi:ss'),TO_DATE('11/01/2014 00:00:00', 'dd/mm/yyyy hh24:mi:ss'),NULL,43.8,230,140,109,479,0.0954,0.058,0.0452,0.1986,4,3,2.447,0.655,0.104,0.128,0.217,0.63,0.347,204.1,0.0088,0.0011,4.9,2,2,4,8);

INSERT INTO FLUX VALUES (2014,3,TO_DATE('12/01/2014 00:00:00', 'dd/mm/yyyy hh24:mi:ss'),TO_DATE('18/01/2014 00:00:00', 'dd/mm/yyyy hh24:mi:ss'),NULL,52.9,249,144,104,497,0.1079,0.0624,0.0451,0.2154,23,2,2.787,1.244,0.078,0.096,0.24,0.78,0.398,205,0.0104,0.0012,4.27,2,3,3,5);

INSERT INTO FLUX VALUES (2014,4,TO_DATE('19/01/2014 00:00:00', 'dd/mm/yyyy hh24:mi:ss'),TO_DATE('25/01/2014 00:00:00', 'dd/mm/yyyy hh24:mi:ss'),NULL,50.6,305,169,127,601,0.1178,0.0653,0.0491,0.2321,16,3,3.283,0.884,0.129,0.105,0.205,0.743,0.398,218.1,0.0127,0.0009,4.6,4,7,9,5);

INSERT INTO FLUX VALUES (2014,5,TO_DATE('26/01/2014 00:00:00', 'dd/mm/yyyy

hh24:mi:ss'),TO_DATE('01/02/2014 00:00:00', 'dd/mm/yyyy hh24:mi:ss'),NULL,48.3,321,171,179,671,0.12,0.0639,0.0669,0.2507,7,3,3.314,0.687,0.311,0.174,0.334,1.062,0.512,254.1,NULL,0.0011,0.17,1,3,5,17);

INSERT INTO FLUX VALUES (2014,6,TO_DATE('02/02/2014 00:00:00', 'dd/mm/yyyy hh24:mi:ss'),TO_DATE('08/02/2014 00:00:00', 'dd/mm/yyyy hh24:mi:ss'),NULL,59.5,394,177,202,773,0.1295,0.0582,0.0664,0.2541,0,4,3.159,0.393,0.155,0.166,0.339,1.09,0.487,238.1,NULL,0.001,3.92,2,8,5,15);

INSERT INTO FLUX VALUES (2014,7,TO_DATE('09/02/2014 00:00:00', 'dd/mm/yyyy hh24:mi:ss'),TO_DATE('15/02/2014 00:00:00', 'dd/mm/yyyy hh24:mi:ss'),NULL,35.5,405,168,181,754,0.1565,0.0649,0.0699,0.2913,2,3,2.416,0.36,0.104,0.137,0.222,0.912,0.38,186.1,0.0071,0.0006,3.39,2,8,11,11);

INSERT INTO FLUX VALUES (2014,8,TO_DATE('16/02/2014 00:00:00', 'dd/mm/yyyy hh24:mi:ss'),TO_DATE('22/02/2014 00:00:00', 'dd/mm/yyyy hh24:mi:ss'),NULL,47.2,431,206,267,904,0.1497,0.0716,0.0927,0.314,19,10,3.314,1.276,0.233,0.102,0.257,1.062,0.48,200.3,0.0114,0.0011,2.58,3,6,8,8);

INSERT INTO FLUX VALUES (2014,9,TO_DATE('23/02/2014 00:00:00', 'dd/mm/yyyy hh24:mi:ss'),TO_DATE('01/03/2014 00:00:00', 'dd/mm/yyyy hh24:mi:ss'),NULL,47.9,411,178,291,880,0.1426,0.0618,0.101,0.3053,28,5,2.725,1.276,0.311,0.148,0.281,0.987,0.474,207.7,0.0128,0.0011,3.04,2,3,6,15);

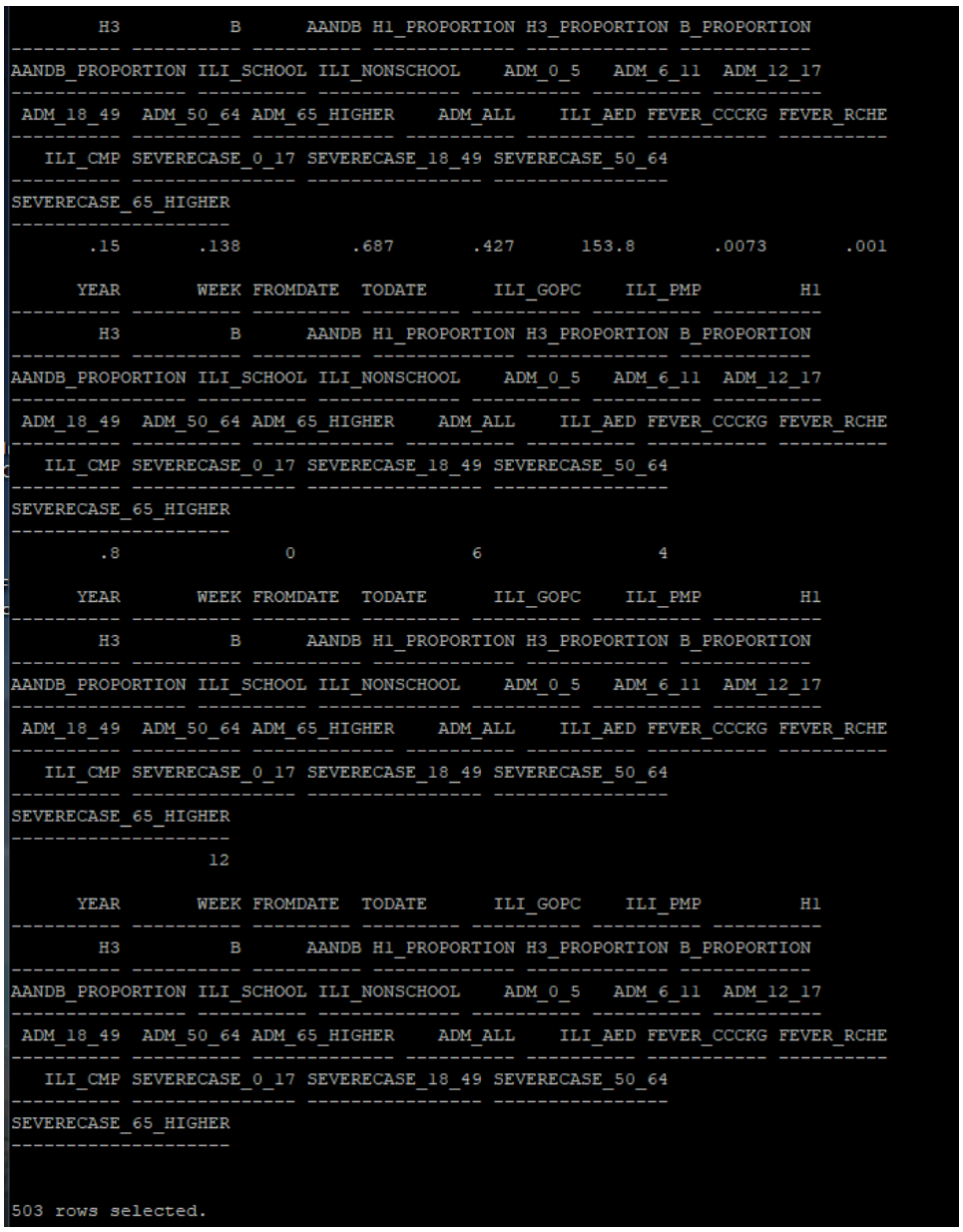
INSERT INTO FLUX VALUES (2014,10,TO_DATE('02/03/2014 00:00:00', 'dd/mm/yyyy hh24:mi:ss'),TO_DATE('08/03/2014 00:00:00', 'dd/mm/yyyy hh24:mi:ss'),NULL,37.5,229,131,291,651,0.091,0.0521,0.1157,0.2587,17,9,2.23,0.785,0.155,0.154,0.252,0.837,0.397,195.2,0.0088,0.0011,2.87,0,4,9,9);

INSERT INTO FLUX VALUES (2014,11,TO_DATE('09/03/2014 00:00:00', 'dd/mm/yyyy hh24:mi:ss'),TO_DATE('15/03/2014 00:00:00', 'dd/mm/yyyy hh24:mi:ss'),NULL,55.3,122,78,288,488,0.0501,0.0321,0.1184,0.2006,11,3,1.518,0.556,0.259,0.061,0.181,0.649,0.273,200.5,0.0095,0.0009,2.87,1,3,3,7);

INSERT INTO FLUX VALUES (2014,12,TO_DATE('16/03/2014 00:00:00', 'dd/mm/yyyy hh24:mi:ss'),TO_DATE('22/03/2014 00:00:00', 'dd/mm/yyyy hh24:mi:ss'),NULL,51.4,110,60,299,469,0.0431,0.0235,0.1171,0.1837,9,3,1.332,0.655,0.104,0.076,0.14,0.63,0.255,208.4,0.0106,0.0015,3.04,0,1,2,13);….

Rest of the inserting same as data provided by Dr.Vincent

PICTURE:



```
       H3          B      AANDB H1_PROPORTION H3_PROPORTION B_PROPORTION
---------- ---------- ---------- ------------- ------------- ------------
AANDB_PROPORTION ILI_SCHOOL ILI_NONSCHOOL    ADM_0_5   ADM_6_11  ADM_12_17
---------------- ---------- ------------- ---------- ---------- ----------
 ADM_18_49  ADM_50_64 ADM_65_HIGHER    ADM_ALL    ILI_AED FEVER_CCCKG FEVER_RCHE
---------- ---------- ------------- ---------- ---------- ----------- ----------
   ILI_CMP SEVERECASE_0_17 SEVERECASE_18_49 SEVERECASE_50_64
---------- --------------- ---------------- ----------------
SEVERECASE_65_HIGHER
--------------------
       .15       .138          .687       .427      153.8       .0073       .001

      YEAR       WEEK FROMDATE  TODATE      ILI_GOPC    ILI_PMP         H1
---------- ---------- --------- --------- ---------- ---------- ----------
       H3          B      AANDB H1_PROPORTION H3_PROPORTION B_PROPORTION
---------- ---------- ---------- ------------- ------------- ------------
AANDB_PROPORTION ILI_SCHOOL ILI_NONSCHOOL    ADM_0_5   ADM_6_11  ADM_12_17
---------------- ---------- ------------- ---------- ---------- ----------
 ADM_18_49  ADM_50_64 ADM_65_HIGHER    ADM_ALL    ILI_AED FEVER_CCCKG FEVER_RCHE
---------- ---------- ------------- ---------- ---------- ----------- ----------
   ILI_CMP SEVERECASE_0_17 SEVERECASE_18_49 SEVERECASE_50_64
---------- --------------- ---------------- ----------------
SEVERECASE_65_HIGHER
--------------------
       .8              0               6               4

      YEAR       WEEK FROMDATE  TODATE      ILI_GOPC    ILI_PMP         H1
---------- ---------- --------- --------- ---------- ---------- ----------
       H3          B      AANDB H1_PROPORTION H3_PROPORTION B_PROPORTION
---------- ---------- ---------- ------------- ------------- ------------
AANDB_PROPORTION ILI_SCHOOL ILI_NONSCHOOL    ADM_0_5   ADM_6_11  ADM_12_17
---------------- ---------- ------------- ---------- ---------- ----------
 ADM_18_49  ADM_50_64 ADM_65_HIGHER    ADM_ALL    ILI_AED FEVER_CCCKG FEVER_RCHE
---------- ---------- ------------- ---------- ---------- ----------- ----------
   ILI_CMP SEVERECASE_0_17 SEVERECASE_18_49 SEVERECASE_50_64
---------- --------------- ---------------- ----------------
SEVERECASE_65_HIGHER
--------------------
                 12

      YEAR       WEEK FROMDATE  TODATE      ILI_GOPC    ILI_PMP         H1
---------- ---------- --------- --------- ---------- ---------- ----------
       H3          B      AANDB H1_PROPORTION H3_PROPORTION B_PROPORTION
---------- ---------- ---------- ------------- ------------- ------------
AANDB_PROPORTION ILI_SCHOOL ILI_NONSCHOOL    ADM_0_5   ADM_6_11  ADM_12_17
---------------- ---------- ------------- ---------- ---------- ----------
 ADM_18_49  ADM_50_64 ADM_65_HIGHER    ADM_ALL    ILI_AED FEVER_CCCKG FEVER_RCHE
---------- ---------- ------------- ---------- ---------- ----------- ----------
   ILI_CMP SEVERECASE_0_17 SEVERECASE_18_49 SEVERECASE_50_64
---------- --------------- ---------------- ----------------
SEVERECASE_65_HIGHER
--------------------


503 rows selected.
```

3)

Code:

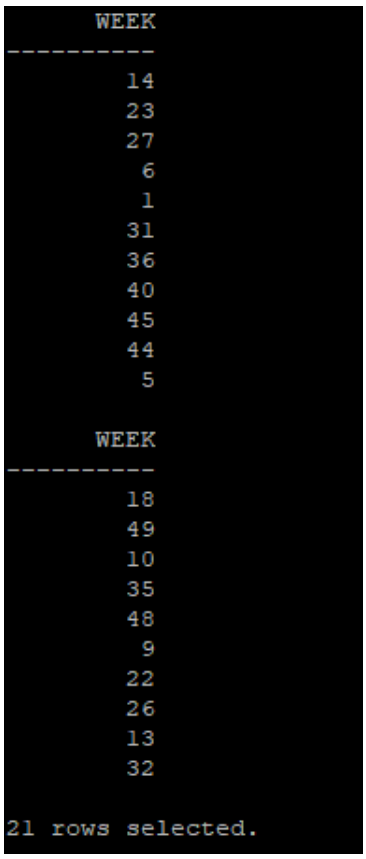
```
SELECT DISTINCT WEEK

FROM FLUX

WHERE EXTRACT(MONTH FROM FROMDATE)!=EXTRACT(MONTH FROM

TODATE);
```

Picture:



```
      WEEK
----------
        14
        23
        27
         6
         1
        31
        36
        40
        45
        44
         5

      WEEK
----------
        18
        49
        10
        35
        48
         9
        22
        26
        13
        32

21 rows selected.
```

4)

Code:

```
SELECT YEAR,WEEK

FROM FLUX

WHERE H1>50 AND B>50;
```

Picture:

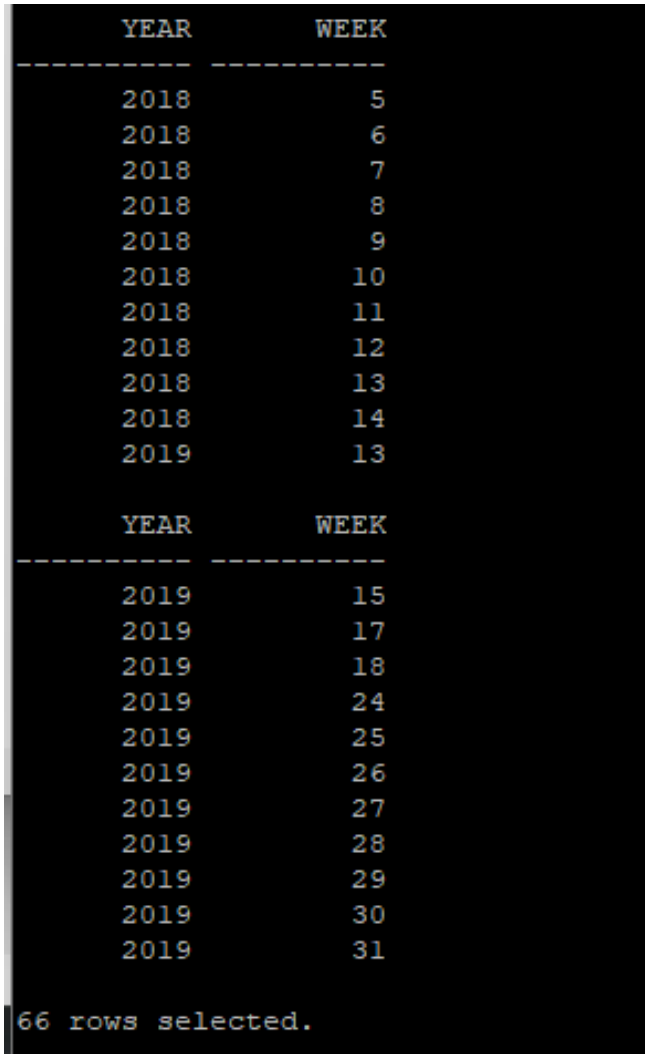
```
SQL> SELECT YEAR,WEEK
  2  FROM FLUX
  3  WHERE H1>50 AND B>50;

      YEAR       WEEK
---------- ----------
      2014          1
      2014          2
      2014          3
      2014          4
      2014          5
      2014          6
      2014          7
      2014          8
      2014          9
      2014         10
      2014         11

      YEAR       WEEK
---------- ----------
      2014         12
      2014         13
      2016          3
      2016          4
      2016          5
      2016          6
      2016          7
      2016          8
      2016          9
      2016         10
      2016         11

      YEAR       WEEK
---------- ----------
      2016         12
      2016         13
      2016         14
      2016         15
      2016         16
      2016         17
      2016         18
      2016         19
      2016         20
      2016         21
      2017         16

      YEAR       WEEK
---------- ----------
      2017         18
      2017         19
      2017         21
      2017         22
      2017         27
      2017         28
      2017         29
      2018          1
      2018          2
      2018          3
      2018          4
```



YEAR	WEEK
2018	5
2018	6
2018	7
2018	8
2018	9
2018	10
2018	11
2018	12
2018	13
2018	14
2019	13

YEAR	WEEK
2019	15
2019	17
2019	18
2019	24
2019	25
2019	26
2019	27
2019	28
2019	29
2019	30
2019	31

66 rows selected.

5)

Code:

```
SELECT YEAR,AVG(H1) as avg_of_H1

FROM FLUX

WHERE WEEK!=5 AND WEEK!=12

GROUP BY YEAR

ORDER BY avg_of_H1 ASC;
```

Picture:

```
SQL> SELECT YEAR,AVG(H1) as avg_of_H1
  2  FROM FLUX
  3  WHERE WEEK!=5 AND WEEK!=12
  4  GROUP BY YEAR
  5  ORDER BY avg_of_H1 ASC;

      YEAR  AVG_OF_H1
---------- ----------
      2021         .22
      2022 .509803922
      2015        6.92
      2017        42.5
      2014       63.52
      2020       71.28
      2016 127.588235
      2018      130.74
      2023 240.258065
      2019      259.16

10 rows selected.
```

6)

Code:

SELECT WEEK,SUM(H1) as sum_of_H1

FROM FLUX

WHERE YEAR!=2016 AND YEAR!=2019

GROUP BY WEEK,YEAR

HAVING SUM(H1)>200

Picture:

```
SQL> SELECT WEEK,SUM(H1) AS SUM_OF_H1
  2  FROM FLUX
  3  WHERE YEAR!=2016 AND YEAR!=2019
  4  GROUP BY WEEK, YEAR
  5  HAVING SUM(H1)>200;

      WEEK  SUM_OF_H1
---------- ----------
        13        499
        51        478
         3        928
         4        984
        12        277
        15       1668
        19        411
         6        394
         7        221
        14        844
        18        613

      WEEK  SUM_OF_H1
---------- ----------
         4        305
         7        405
        16       1117
        20        237
         1        389
        17        982
         2        230
         5        321
        10        229
         8        418
        50        272

      WEEK  SUM_OF_H1
---------- ----------
         8        431
         6        270
         2        871
         5        846
         3        249
         9        411
         9        389
        10        328
        11        260
         6        266
        49        230

      WEEK  SUM_OF_H1
---------- ----------
        52        635

34 rows selected.
```

7)

Code:

SELECT WEEK

FROM FLUX

WHERE H1>ALL(SELECT H1 FROM FLUX WHERE YEAR=2016 AND YEAR=2019);

Picture: