MODERN DATABASE SYSTEM LAB 3
INDIAN WEATHER ANALYTICS USING HISTORICAL DATA PART-1

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```
[SQL> desc weather_india

Name          Null?      Type
_____    _____   _____
C_TEMP                   NUMBER(38)
MONTH                    NUMBER(38)
DAY                      NUMBER(38)
YEAR                     NUMBER(38)
TEMP                     NUMBER(38,1)
CITY                     VARCHAR2(26)
```

QUESTION 1:

SELECT MIN(TEMP) AS LOWEST_TEMP,

MAX(TEMP) AS HIGHEST_TEMP,

AVG(TEMP) AS AVG_TEMP FROM WEATHER_INDIA;

```
SQL> select min(temp) as lowest_temp, max(temp) as highest_temp, avg(temp) as avg_temp from weather_india;

  LOWEST_TEMP    HIGHEST_TEMP                                 AVG_TEMP
 _____   _____   _____
          -99           103.7   79.7413781841933376877857609405617243631b
```

QUESTION 2:

SELECT AVG(TEMP) AS AVG_OF_MAY_2019_IN_CHENNAI

FROM WEATHER_INDIA

WHERE YEAR = 2019 AND

  MONTH = 5 AND CITY = 'CHENNAI';

```
SQL> select avg(temp) as avg_of_may_2019_in_chennai from weather_india where year = 2019 and month = 5 and city = 'chennai';

         AVG_OF_MAY_2019_IN_CHENNAI
         _____
  73.6064516129032258064516129032258064516161
```

QUESTION 3:

SELECT DAY AS HOTTEST_DAY_IN_2019_DELHI

FROM WEATHER_INDIA

WHERE TEMP = (SELECT MAX(TEMP) FROM WEATHER_INDIA WHERE YEAR = 2019 AND CITY = 'DELHI') AND YEAR = 2019 AND CITY = 'DELHI';

```
[SQL> select day as hottest_day_in_2019_delhi from weather_india
[  2    where
[  3    temp = (select max(temp) from weather_india where year = 2019 and city = 'delhi')
[  4*   and year = 2019 and city = 'delhi';

    HOTTEST_DAY_IN_2019_DELHI
    -----------------------------
                            10
```

QUESTION 4:

SELECT DAY AS COLDEST_DAY_IN_2018_CHENNAI

FROM WEATHER_INDIA

WHERE TEMP = (SELECT MIN(TEMP) FROM WEATHER_INDIA

WHERE YEAR = 2018 AND CITY = 'CHENNAI')

AND YEAR = 2018 AND CITY = 'CHENNAI';

```
SQL> select day as coldest_day_in_2018_chennai
  2  from weather_india
  3  where temp = (select min(temp) from weather_india where year = 2018 and city = 'chennai')
  4* and year = 2018 and city = 'chennai';

    COLDEST_DAY_IN_2018_CHENNAI
    -----------------------------
                            14
                            17
```

QUESTION 5:

SELECT YEAR AS COLDEST_YEAR

FROM WEATHER_INDIA

WHERE MONTH = 12 ORDER BY TEMP ASC

FETCH FIRST 1 ROWS ONLY;

```
SQL> Select year as coldest_year from weather_india where month = 12 order by temp asc
[  2* Fetch first 1 rows only;

    COLDEST_YEAR
    ---------------
              1998
```

QUESTION 6:

SELECT CITY AS HOTTEST_CITY_IN_INDIA_2017

FROM WEATHER_INDIA

WHERE YEAR = 2017

ORDER BY TEMP ASC

FETCH FIRST 1 ROWS ONLY;

```
[SQL> Select city as hottest_city_in_india_2017
   2  from weather_india
   3  where year = 2017
   4  order by temp asc
[  5* fetch first 1 rows only;

 HOTTEST_CITY_IN_INDIA_2017

 _____
 delhi
```

QUESTION 7:

SELECT CITY, AVG(TEMP) AS AVERAGE_TEMPERATURE

FROM WEATHER_INDIA

WHERE CITY IN ('MUMBAI', 'DELHI') AND MONTH = 1

AND YEAR = 2017

GROUP BYCITY;

```
SQL> Select city, avg(temp) AS AVERAGE_TEMPERATURE
   2  from weather_india
   3  where city in ('mumbai', 'delhi') and month = 1
   4  and year = 2017
[  5* group by city;

 CITY                                AVERAGE_TEMPERATURE

 _____ _____
 delhi          59.4258064516129032258064516129032258064 5
 mumbai         78.7870967741935483870967741935483870967 7
```

QUESTION 8:

SELECT DAY, MONTH, YEAR, CITY

FROM WEATHER_INDIA

WHERE TEMP = (SELECT MIN(TEMP) FROM WEATHER_INDIA)

FETCH FIRST 1 ROWS ONLY;

```
SQL> SELECT DAY, MONTH, YEAR, CITY
  2  FROM weather_india
  3  WHERE TEMP = (SELECT MIN(TEMP) FROM weather_india)
  4* FETCH FIRST 1 ROWS ONLY;

   DAY     MONTH     YEAR CITY
_____ _____ _____ _____
    29         3    1995 chennai
```