University of Engineering & Management, Kolkata

Course: B.Tech in CSE

Semester: 5ᵗʰ

Paper Name: Data Base Management System Lab

Paper Code: PCCCS591

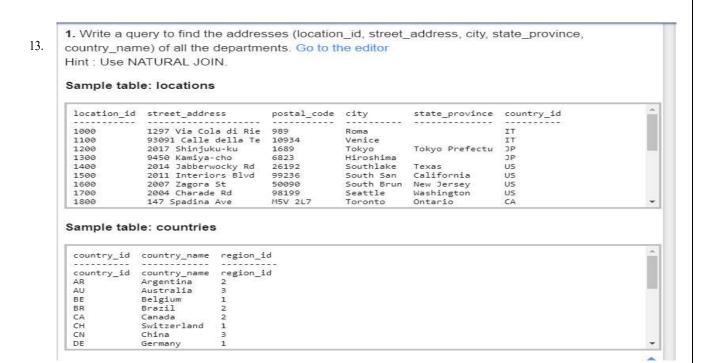**Assignment No 4**

1. Show the use of upper and lower function.

2. Show the use of concat, instr and length function

3. Show the use of the following functions on numeric values:

   a. Sqrt()

   b. Power()

   c. Ceil()

   d. Substr()

   e. Max()

   f. min()

   g. Round()

   h. avg()

   i. count()

   j. Exp()

   k. mod()

4. Solve the following queries

    a. Find the ceiling and floor value of 14.887.

    b. Find out the round-off 17.49989.

    c. Calculate 8^7.

5. Show the current date

6. Find the total experience of the employees in weeks who works in Sales department

7. Display the use of the following functions on date

    a. Months_between

    b. Add_months

    c. Next_day

    d. Last_day

    e. Round

    f. Trunc

    g. To_char

8. Show the employee details with a revised salary. The salary is incremented in the following way:

    a. 10% for sales department

    b. 20% for marketing department

    c. No increment for others

9. Determine the tax for each employee in production department based on the monthly salary. The tax rate are as per the following data:

Monthly Salary Range	Rate
0 – 19,999	0%
20,000 – 39,999	9%
40,000 – 59,999	20%
60,000 – 79,999	30%
80,000 or more	45%

10. Find the Cartesian product between Employee and Department table.

11. Show the employee names and the respective department location.

12. Give an example of the following joins considering employee and department tables.

    k. Natural join

    l. Inner join

    m. Left outer join

    n. Right outer join

    o. Full outer join

13.

1. Write a query to find the addresses (location_id, street_address, city, state_province, country_name) of all the departments. Go to the editor
Hint : Use NATURAL JOIN.

Sample table: locations

location_id	street_address	postal_code	city	state_province	country_id
1000	1297 Via Cola di Rie	989	Roma		IT
1100	93091 Calle della Te	10934	Venice		IT
1200	2017 Shinjuku-ku	1689	Tokyo	Tokyo Prefectu	JP
1300	9450 Kamiya-cho	6823	Hiroshima		JP
1400	2014 Jabberwocky Rd	26192	Southlake	Texas	US
1500	2011 Interiors Blvd	99236	South San	California	US
1600	2007 Zagora St	50090	South Brun	New Jersey	US
1700	2004 Charade Rd	98199	Seattle	Washington	US
1800	147 Spadina Ave	M5V 2L7	Toronto	Ontario	CA

Sample table: countries

country_id	country_name	region_id
country_id	country_name	region_id
AR	Argentina	2
AU	Australia	3
BE	Belgium	1
BR	Brazil	2
CA	Canada	2
CH	Switzerland	1
CN	China	3
DE	Germany	1

14.

2. Write a query to find the name (first_name, last name), department ID and name of all the employees. Go to the editor

Sample table: employees

```
+-------------+------------+------------+----------+----------------+------------+----------+
| EMPLOYEE_ID | FIRST_NAME | LAST_NAME  | EMAIL    | PHONE_NUMBER   | HIRE_DATE  | JOB_ID   |
+-------------+------------+------------+----------+----------------+------------+----------+
|         100 | Steven     | King       | SKING    | 515.123.4567   | 1987-06-17 | AD_PRES  |
|         101 | Neena      | Kochhar    | NKOCHHAR | 515.123.4568   | 1987-06-18 | AD_VP    |
|         102 | Lex        | De Haan    | LDEHAAN  | 515.123.4569   | 1987-06-19 | AD_VP    |
|         103 | Alexander  | Hunold     | AHUNOLD  | 590.423.4567   | 1987-06-20 | IT_PROG  |
|         104 | Bruce      | Ernst      | BERNST   | 590.423.4568   | 1987-06-21 | IT_PROG  |
|         105 | David      | Austin     | DAUSTIN  | 590.423.4569   | 1987-06-22 | IT_PROG  |
|         106 | Valli      | Pataballa  | VPATABAL | 590.423.4560   | 1987-06-23 | IT_PROG  |
```

Sample table: departments

```
+---------------+------------------------+------------+-------------+
| DEPARTMENT_ID | DEPARTMENT_NAME        | MANAGER_ID | LOCATION_ID |
+---------------+------------------------+------------+-------------+
|            10 | Administration         |        200 |        1700 |
|            20 | Marketing              |        201 |        1800 |
|            30 | Purchasing             |        114 |        1700 |
|            40 | Human Resources        |        203 |        2400 |
|            50 | Shipping               |        121 |        1500 |
|            60 | IT                     |        103 |        1400 |
|            70 | Public Relations       |        204 |        2700 |
|            80 | Sales                  |        145 |        2500 |
```