# PL/SQL and SQL

STERLING SOFTWARE

Table Name: EMPLOYEE

| Emp_id(PK) | Emp_name | Dept_id | Location | Salary | Dob | Sex | Dept_name |
|---|---|---|---|---|---|---|---|
| 400 | Mythili Ram | 01 | Chennai | 35000 | 12-Oct-1973 | F | |
| 401 | Adam Joseph | 01 | Chennai | 60000 | 25-Jun-1971 | M | |
| 402 | Sunitha Pillai | 03 | Chennai | 55000 | 15-Sep-1980 | F | |
| 403 | Deepthi Girish | 02 | Bengaluru | 32000 | 12-apr-1979 | F | |
| 404 | Rajesh K R | 02 | Delhi | 65000 | 07-jan-1969 | M | |
| 405 | Manoj Menon | 04 | Bengaluru | 55000 | 09-jan-1965 | M | |
| 406 | Ajith Murali | 04 | Bengaluru | 50000 | 12-Dec-1964 | M | |
| 407 | Vishnupriya | 03 | Delhi | 20000 | 22-Jul-1982 | F | |
| 408 | Sarada V | 01 | Chennai | 60000 | 30-Jun-1977 | F | |
| 409 | Anirudh Balan | 02 | Bengaluru | 30000 | 11-Jan-1976 | M | |
| 410 | Karan Arjun | 04 | Delhi | 65000 | 19-Sep-1971 | M | |

Table Name: DEPARTMENT

| Dept_id (PK) | Name |
|---|---|
| 01 | Software |
| 02 | Quality |
| 03 | HR |
| 04 | Sales & Marketing |

**1. Write SQLs for the below:**

1. Find the Employee name and Employee ID who is getting the highest salary in Location Bengaluru
2. Write a Select statement which prints the following columns for all rows in employee table.

   emp_name, salary, and max salary in his department
3. Find out the number of employees in each department.
4. Rank the employees based on Salary in each department
5. Write an update statement to increase 10% of salary for the department HR.
6. Write output for the following select statements:

```
SELECT add_months(SYSDATE, 10), last_day(SYSDATE),
months_between('01-Dec-2018' , '01-Jan-2018')
FROM dual;
```

```
Select replace(translate(ltrim(rtrim('!!ATHEN!!','!'),'!'),'AN','**'),'*','TROUBLE') From dual;
```

Answer the below questions

1. How many context switches will happen for the below given PL/SQL block:

```
DECLARE
    ll_row_count NUMBER := 0;
BEGIN
    FOR i IN (SELECT *
              FROM employee) LOOP
        ll_row_count := ll_row_count + 1;
        UPDATE employee
          SET emp_name = upper(emp_name)
        WHERE emp_id = i.emp_id;
        COMMIT;
    END LOOP;
    dbms_output.put_line('Total rows update : ' || ll_row_count);
END;
```

2. Write a PL/SQL procedure to accept a date as its input and print the respective Financial Year start d
and Financial Year end date.
Hints:
Calendar year is from January to December, e.g. 01-Jan-2011 to 31-Dec-2011
Financial Year is from Apr to Mar, e.g. 01-Apr-2011 to 31-Mar-2012.
If 10th Jan 2019 is given as input, your procedure should print 01-Apr-2018 31-Mar-2019.

3. Write a trigger on EMPLOYEE which will update the location in UPPER CASE when a row is insert

4. Write a function to accept dept id as input, and return maximum salary paid in that dep_id.

5. Convert the below given PL/SQL block using bulk collect.

```
DECLARE
    ll_row_count NUMBER := 0;
BEGIN
    FOR i IN (SELECT *
              FROM employee) LOOP
        ll_row_count := ll_row_count + 1;
        UPDATE employee
          SET emp_name = upper(emp_name)
        WHERE emp_id = i.emp_id;
        COMMIT;
    END LOOP;
END;
```