**Institute of Engineering & Management**

**Department of Computer Science & Engineering**

**Data-Base Management System Lab for 3rd year 6th semester 2019**

**Code: CS 691**

**Date:** 21/02/19

**WEEK-2**

**Problem Statement-1:** write query to select all the columns of emp table

**SQL :**

SQL> select \* from emp;

EMPNO ENAME JOB MGR HIREDATE SAL COMM DEPTNO

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

7369 SMITH CLERK 7902 17-DEC-80 800 20

7499 ALLEN SALESMAN 7698 20-FEB-81 1600 300 30

7521 WARD SALESMAN 7698 22-FEB-81 1250 500 30

7566 JONES MANAGER 7839 02-APR-81 2975 20

7654 MARTIN SALESMAN 7698 28-SEP-81 1250 1400 30

7698 BLAKE MANAGER 7839 01-MAY-81 2850 30

7782 CLARK MANAGER 7839 09-JUN-81 2450 10

7788 SCOTT ANALYST 7566 19-APR-87 3000 20

7839 KING PRESIDENT 17-NOV-81 5000 10

7844 TURNER SALESMAN 7698 08-SEP-81 1500 0 30

7876 ADAMS CLERK 7788 23-MAY-87 1100 20

7900 JAMES CLERK 7698 03-DEC-81 950 30

7902 FORD ANALYST 7566 03-DEC-81 3000 20

7934 MILLER CLERK 7782 23-JAN-82 1300 10

14 rows selected.

**Problem Statement-2:** write query to select unique Jobs.

**SQL :**

SQL> select distinct job from rana\_emp;

JOB

---------

CLERK

SALESMAN

PRESIDENT

MANAGER

ANALYST

**Problem Statement-3:** write query to select only those employees who are salesman

**SQL :**

SQL> select ename from rana\_emp where job='SALESMAN';

ENAME

----------

ALLEN

WARD

MARTIN

TURNER

**Problem Statement-4:** select employee name , grade and salary , in the order of their salary

**SQL :**

SQL> select ename, sal from rana\_emp order by sal;

ENAME SAL

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

SMITH 800

JAMES 950

ADAMS 1100

WARD 1250

MARTIN 1250

MILLER 1300

TURNER 1500

ALLEN 1600

CLARK 2450

BLAKE 2850

JONES 2975

SCOTT 3000

FORD 3000

KING 5000

14 rows selected.

**Problem Statement-5:** Mgmt. is considering a pay raise, however they want to find out, if they give a flat 200/- increment to all, then what % each person is getting. So in your result display, ename , salary and pctincr

**SQL :**

SQL> select ename,sal,(200\*100/sal) pctincr from rana\_emp;

ENAME SAL PCTINCR

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

SMITH 800 25

ALLEN 1600 12.5

WARD 1250 16

JONES 2975 6.72268908

MARTIN 1250 16

BLAKE 2850 7.01754386

CLARK 2450 8.16326531

SCOTT 3000 6.66666667

KING 5000 4

TURNER 1500 13.3333333

ADAMS 1100 18.1818182

JAMES 950 21.0526316

FORD 3000 6.66666667

MILLER 1300 15.3846154

14 rows selected.

**Problem Statement-6:** Express work experience of each of the employees by using sysdate and hiredate in terms of no of years. Hints : you would need to use cast

**SQL :**

SQL> select trunc(months\_between(sysdate, hiredate)/12, 0) Experience

2 from rana\_emp;

EXPERIENCE

----------

38

38

37

37

37

37

37

31

37

37

31

37

37

37

14 rows selected.

**Problem Statement-7:** Select only those employees who are a clerk and a manager. Use all of ‘or’ condition , ‘IN’ and ‘NOT IN’ clause Comment on the case sensitivity of the string literal within single quote

**SQL :**

SQL> select ename from rana\_emp where job='CLERK' or job='MANAGER';

ENAME

----------

SMITH

JONES

BLAKE

CLARK

ADAMS

JAMES

MILLER

7 rows selected.

SQL> select ename from rana\_emp where job in ('CLERK','MANAGER');

ENAME

----------

SMITH

JONES

BLAKE

CLARK

ADAMS

JAMES

MILLER

7 rows selected.

SQL> select ename from rana\_emp where job not in ('SALESMAN', 'ANALYST', 'PRESID

ENT');

ENAME

----------

SMITH

JONES

BLAKE

CLARK

ADAMS

JAMES

MILLER

7 rows selected.

**Problem Statement-8:** Use emp table and use different columns and string concatenation to display a message like below for each of the employees Output Example: JAMES is a CLERK and is working in the company for last 32 Years

**SQL :**

SQL> select ename || ' is a ' || job || ' and is working in the company for last ' || round(months\_between(sysdate, hiredate)/12, 0 ) || ' years.' details from rana\_emp;

DETAILS

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

SMITH is a CLERK and is working in the company for last 38 years.

ALLEN is a SALESMAN and is working in the company for last 38 years.

WARD is a SALESMAN and is working in the company for last 38 years.

JONES is a MANAGER and is working in the company for last 38 years.

MARTIN is a SALESMAN and is working in the company for last 37 years.

BLAKE is a MANAGER and is working in the company for last 38 years.

CLARK is a MANAGER and is working in the company for last 38 years.

SCOTT is a ANALYST and is working in the company for last 32 years.

KING is a PRESIDENT and is working in the company for last 37 years.

TURNER is a SALESMAN and is working in the company for last 37 years.

ADAMS is a CLERK and is working in the company for last 32 years.

JAMES is a CLERK and is working in the company for last 37 years.

FORD is a ANALYST and is working in the company for last 37 years.

MILLER is a CLERK and is working in the company for last 37 years.

14 rows selected.

**Problem Statement-9:** Use emp table to display only those employees who have joined in the year 80 and 81. Comment on if between clauses is inclusive or exclusive

**SQL :**

SQL> select ename from rana\_emp where hiredate between '31-DEC-1979' and '01-JAN-1982';

ENAME

----------

SMITH

ALLEN

WARD

JONES

MARTIN

BLAKE

CLARK

KING

TURNER

JAMES

FORD

11 rows selected.

**Problem Statement-10:** Use like statement to display name of the employees which start with ‘A’ Write your remarks on use of wildcards with like statement

**SQL :**

SQL> select ename from rana\_emp where ename like 'A%';

ENAME

----------

ALLEN

ADAMS

**Problem Statement-11:** Select those employees , who has joined on or before 31st December 1982 and is either a clerk or having a salary greater than 2500

**SQL :**

SQL> select ename from rana\_emp where hiredate<='31-DEC-1982'and job='CLERK' or

sal>2500;

ENAME

----------

SMITH

JONES

BLAKE

SCOTT

KING

JAMES

FORD

MILLER

8 rows selected.

**Problem Statement-12:** List down no of employees, minimum salary , maximum salary for each department

**SQL :**

SQL> select deptno, count(\*), min(sal), max(sal) from rana\_emp group by deptno;

DEPTNO COUNT(\*) MIN(SAL) MAX(SAL)

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

30 6 950 2850

20 5 800 3000

10 3 1300 5000

**Problem Statement-13:** Update Email\_id , if department id is a) < 1000 update the EMAIL field by appending @oracle.com b) < 5000 update the EMAIL field by appending @oracle.co.uk c) Else update it as oracle.co.in

**SQL :**

SQL> update emp

2 set email=

3 case

4 when department\_id<1000 then concat(email,'@oracle.com')

5 when department\_id<5000 then concat(email,'@oracle.co.uk')

6 else concat(email,'@oracle.co.in')

7 end;

107 rows updated.

**Problem Statement-14:** Display a department id wise count of employees getting salary more than 5000

**SQL :**

SQL> select department\_id, count(\*) from emp where salary>5000 group by department\_id 2 ;

DEPARTMENT\_ID COUNT(\*)

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

100 6

30 1

1

90 3

20 2

70 1

110 2

50 5

80 34

40 1

60 2

11 rows selected.

**Problem Statement-15:** Apart from the above condition, select only those departments which has an average salary in excess of 6500

**SQL :**

SQL> select department\_id, count(\*) from emp group by department\_id

2 having avg(salary)>6500 3 ;

DEPARTMENT\_ID COUNT(\*)

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

100 6

1

90 3

20 2

70 1

110 2

80 34

7 rows selected.

**Problem Statement-16:** You want to add a new row in the employees table with employee id 10000, First Name = ‘Scott’ , Last Name = ‘Tiger’ , Email = Stiger, Hire Date , 01/02/2014, Job id PR\_Prsdnt ( Title ‘Company President’ ) Department\_id 280 ( Department\_Name ‘Database’ ) Salary 50000

**SQL :**

SQL> insert into emp values (10000, 'Scott', 'Tiger', 'Stiger', '01-feb-2014', 'PR\_Prsdnt', 50000, 10000, 280);

1 row created.

**Problem Statement-17:** After the update is over in the email column, use instr and substr to display email id and domain information separately.

**SQL :**

SQL> select email, substr(email, 1, instr(email, '@')-1) as email\_id,

2 substr(email, instr(email, '@')+1, length(email)) as domain

3 from rana\_emp;

EMAIL EMAIL\_ID DOMAIN

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

AHUNOLD@oracle.com AHUNOLD oracle.com

BERNST@oracle.com BERNST oracle.com

DAUSTIN@oracle.com DAUSTIN oracle.com

VPATABAL@oracle.com VPATABAL oracle.com

DLORENTZ@oracle.com DLORENTZ oracle.com

NGREENBE@oracle.com NGREENBE oracle.com

HBAER@oracle.com HBAER oracle.com

SHIGGINS@oracle.com SHIGGINS oracle.com

8 rows selected.

**Problem Statement-18:** Display day , month and year of the hire date of the employees

**SQL :**

SQL> select employee\_id, extract(day from hire\_date) as day,

2 extract(month from hire\_date) as month,

3 extract(year from hire\_date) as year from rana\_emp;

EMPLOYEE\_ID DAY MONTH YEAR

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

103 3 1 1990

104 21 5 1991

105 25 6 1997

106 5 2 1998

107 7 2 1999

108 17 8 1994

204 7 6 1994

205 7 6 1994

8 rows selected.

**Problem Statement-19:** Display the last name of the employees in a manner, so that they are right aligned. However please make sure the last name is displayed in a manner , so that they are sorted in descending order by the no. of character in each name

**SQL :**

SQL> select employee\_id,

2 lpad(last\_name, 20, ' ') as Lname from rana\_emp

3 order by length(last\_name) desc;

EMPLOYEE\_ID LNAME

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

106 Pataballa

108 Greenberg

205 Higgins

107 Lorentz

105 Austin

103 Hunold

104 Ernst

204 Baer

8 rows selected.