

EXPERIMENT - 6

Title: Use of Inbuilt functions and relational algebra operation

Objective: To understand the use of inbuilt function and relational algebra with sql query.

1. EMP TABLE

```
CREATE TABLE EMP (  
    EMPNO INT PRIMARY KEY,  
    ENAME VARCHAR(20),  
    JOB VARCHAR(20),  
    MGR INT,  
    HIREDATE DATE,  
    SAL DECIMAL(10, 2),  
    COMM DECIMAL(10, 2),  
    DEPTNO INT  
);  
  
INSERT INTO EMP (EMPNO, ENAME, JOB, MGR, HIREDATE, SAL, COMM, DEPTNO) VALUES  
(7369, 'SMITH', 'CLERK', 7902, '1980-12-17', 500, 800, 20),  
(7499, 'ALLEN', 'SALESMAN', 7698, '1981-02-20', 1600, 300, 30),  
(7521, 'WARD', 'SALESMAN', 7698, '1981-02-22', 1250, 500, 30),  
(7566, 'JONES', 'MANAGER', 7839, '1981-04-02', 2975, NULL, 20),  
(7654, 'MARTIN', 'SALESMAN', 7698, '1981-09-28', 1250, 1400, 30),  
--Vinayak Srivastava - 500119362  
(7698, 'BLAKE', 'MANAGER', 7839, '1981-05-01', 2850, NULL, 30),  
(7782, 'CLARK', 'MANAGER', 7839, '1981-06-09', 2450, NULL, 10),  
  
(7788, 'SCOTT', 'ANALYST', 7566, '1982-12-09', 3000, NULL, 20),  
(7839, 'KING', 'PRESIDENT', NULL, '1981-11-17', 5000, NULL, 10),  
(7844, 'TURNER', 'SALESMAN', 7698, '1981-09-08', 1500, 0, 30),  
(7876, 'ADAMS', 'CLERK', 7788, '1983-01-12', 1100, NULL, 20),  
(7900, 'JAMES', 'CLERK', 7698, '1981-12-03', 950, NULL, 30),  
(7902, 'FORD', 'ANALYST', 7566, '1981-12-03', 3000, NULL, 20),  
(7934, 'MILLER', 'CLERK', 7782, '1982-01-23', 1300, NULL, 10);
```

2. DEPT TABLE

```
CREATE TABLE DEPT (  
    DEPTNO INT PRIMARY KEY,  
    DNAME VARCHAR(20),  
    LOC VARCHAR(20)  
);  
  
INSERT INTO DEPT (DEPTNO, DNAME, LOC) VALUES  
(10, 'ACCOUNTING', 'NEW YORK'),  
(20, 'RESEARCH', 'DALLAS'),  
(30, 'SALES', 'CHICAGO'),  
(40, 'OPERATIONS', 'BOSTON');
```

Ans.1 SELECT AVG(SAL) FROM EMP;

Ans.2 SELECT COUNT(*) FROM EMP;

Ans.3 SELECT *, COUNT(DISTINCT, ENAME) FROM EMP;

Ans. 4 SELECT SUM(SAL) FROM EMP GROUP BY JOB;

Ans. 5 SELECT * FROM EMP WHERE SAL = (SELECT MAX(SAL) FROM EMP);

Ans. 6 SELECT * FROM EMP WHERE DEPTNO = 10 AND SAL = (SELECT MAX(SAL)
FROM EMP WHERE DEPTNO = 10);

Ans. 7 SELECT * FROM EMP WHERE SAL = (SELECT (MAX(SAL) + MIN(SAL)) / 2 FROM
EMP);

Ans. 8 SELECT ENAME, HIREDATE FROM EMP GROUP BY HIREDATE, ENAME
HAVING

COUNT(HIREDATE) > 1;

Ans. 9 SELECT UPPER(ENAME), LOWER(ENAME) FROM EMP;

Ans. 10 SELECT ENAME, HIREDATE, HIREDATE + INTERVAL '3' DAY FROM EMP;