MCAC104
DATABASE SYSTEM
ASSIGNMENT 2
SUBMITTED BY
GAURAV
MCA(1st SEM)

Query26. Write a query to display employee name and employee number along with their manager's name and manager's number.

```
mysql> SELECT e1.ename AS Employee, e1.empno AS EmployeeID,
e2.ename AS Manager, e2.empno AS ManagerID FROM emp AS e1, emp
AS e2 WHERE e1.mgr = e2.empno;
+----------+-----------+---------+-----------+
| Employee | EmployeeID | Manager | ManagerID |
+----------+-----------+---------+-----------+
| SMITH    |       7369 | FORD    |      7902 |
| ALLEN    |       7499 | BLAKE   |      7698 |
| ward     |       7521 | BLAKE   |      7698 |
| JONES    |       7566 | KING    |      7839 |
| MARTIN   |       7654 | BLAKE   |      7698 |
| BLAKE    |       7698 | KING    |      7839 |
| CLARK    |       7782 | KING    |      7839 |
| SCOTT    |       7788 | JONES   |      7566 |
| TURNER   |       7844 | BLAKE   |      7698 |
| ADAMS    |       7876 | SCOTT   |      7788 |
| JAMES    |       7900 | BLAKE   |      7698 |
| FORD     |       7902 | JONES   |      7566 |
| MILLER   |       7934 | CLARK   |      7782 |
+----------+-----------+---------+-----------+
```

Query27. Write a query to display employee name and employee number along with their

manager's name and manager's number along with the employees who do not have a manager.

```
mysql> SELECT e1.ename AS Employee, e1.empno AS EmployeeID,
e2.ename AS Manager, e2.empno AS ManagerID FROM emp AS e1 LEFT
JOIN emp AS e2 ON e1.mgr = e2.empno;
+----------+-----------+---------+-----------+
| Employee | EmployeeID | Manager | ManagerID |
```

```
+---------+-----------+--------+-----------+
| SMITH   |      7369 | FORD   |      7902 |
| ALLEN   |      7499 | BLAKE  |      7698 |
| ward    |      7521 | BLAKE  |      7698 |
| JONES   |      7566 | KING   |      7839 |
| MARTIN  |      7654 | BLAKE  |      7698 |
| BLAKE   |      7698 | KING   |      7839 |
| CLARK   |      7782 | KING   |      7839 |
| SCOTT   |      7788 | JONES  |      7566 |
| KING    |      7839 | NULL   |      NULL |
| TURNER  |      7844 | BLAKE  |      7698 |
| ADAMS   |      7876 | SCOTT  |      7788 |
| JAMES   |      7900 | BLAKE  |      7698 |
| FORD    |      7902 | JONES  |      7566 |
| MILLER  |      7934 | CLARK  |      7782 |
+---------+-----------+--------+-----------+
14 rows in set (0.00 sec)
```

Query28. Write a query to display employee name, department number and all the employees

that work in the same department as the given employee. Do this for all the employees.

```
mysql> SELECT e1.ename, e1.deptno FROM emp AS e1, emp AS e2
WHERE e1.deptno = e2.deptno AND e1.empno != e2.empno;
+--------+--------+
| ename  | deptno |
+--------+--------+
| FORD   |     20 |
| ADAMS  |     20 |
| SCOTT  |     20 |
```

JONES	20
JAMES	30
TURNER	30
BLAKE	30
MARTIN	30
ward	30
JAMES	30
TURNER	30
BLAKE	30
MARTIN	30
ALLEN	30
FORD	20
ADAMS	20
SCOTT	20
SMITH	20
JAMES	30
TURNER	30
BLAKE	30
ward	30
ALLEN	30
JAMES	30
TURNER	30
MARTIN	30
ward	30
ALLEN	30
MILLER	10
KING	10
FORD	20
ADAMS	20

```
| JONES  |     20 |
| SMITH  |     20 |
| MILLER |     10 |
| CLARK  |     10 |
| JAMES  |     30 |
| BLAKE  |     30 |
| MARTIN |     30 |
| ward   |     30 |
| ALLEN  |     30 |
| FORD   |     20 |
| SCOTT  |     20 |
| JONES  |     20 |
| SMITH  |     20 |
| TURNER |     30 |
| BLAKE  |     30 |
| MARTIN |     30 |
| ward   |     30 |
| ALLEN  |     30 |
| ADAMS  |     20 |
| SCOTT  |     20 |
| JONES  |     20 |
| SMITH  |     20 |
| KING   |     10 |
| CLARK  |     10 |
+--------+--------+
56 rows in set (0.00 sec)
```

Query29. Write a query to display the name, job, department name, salary and grade for all

employees.

```
mysql> SELECT emp.ename, emp.job, dept.dname, emp.sal,
salgrade.grade FROM emp, dept, salgrade WHERE emp.deptno =
dept.deptno AND (emp.sal >= salgrade.losal AND emp.sal <=
salgrade.hisal);
```

ename	job	dname	sal	grade
SMITH	CLERK	RESEARCH	800.00	1
ALLEN	SALESMAN	SALES	1600.00	3
ward	SALESMAN	SALES	1250.00	2
JONES	MANAGER	RESEARCH	2975.00	4
MARTIN	SALESMAN	SALES	1250.00	2
BLAKE	MANAGER	SALES	2850.00	4
CLARK	MANAGER	ACCOUNTING	2450.00	4
SCOTT	ANALYST	RESEARCH	3000.00	4
KING	PRESIDENT	ACCOUNTING	5000.00	5
TURNER	SALESMAN	SALES	1500.00	3
ADAMS	CLERK	RESEARCH	1100.00	1
JAMES	CLERK	SALES	950.00	1
FORD	ANALYST	RESEARCH	3000.00	4
MILLER	CLERK	ACCOUNTING	1300.00	2

Query30. Write a query to display all names and hire dates of all employees along with their

manager's name and hire date for all employees who were hired before their managers.

```
.mysql> SELECT e1.ename AS Employee, e1.hiredate AS eHiredate,
e2.ename AS Manager, e2.hiredate AS mHireDate FROM emp AS e1,
emp AS e2 WHERE e1.mgr = e2.empno AND e1.hiredate < e2.hiredate;
```

Employee	eHiredate	Manager	mHireDate

```
+---------+-----------+--------+-----------+
| SMITH   | 1980-12-17 | FORD   | 1981-12-03 |
| ALLEN   | 1981-02-20 | BLAKE  | 1981-05-01 |
| ward    | 1981-02-22 | BLAKE  | 1981-05-01 |
| JONES   | 1981-04-02 | KING   | 1981-11-17 |
| BLAKE   | 1981-05-01 | KING   | 1981-11-17 |
| CLARK   | 1981-06-09 | KING   | 1981-11-17 |
+---------+-----------+--------+-----------+
6 rows in set (0.00 sec)
```

Query31. Write a query to display the highest, lowest, sum and average salary of all employees.

```
mysql> SELECT MIN(sal) AS MIN, MAX(sal) AS MAX, SUM(sal) AS SUM,
AVG(sal) AS AVG FROM emp;
+--------+--------+---------+-------------+
| MIN    | MAX    | SUM     | AVG         |
+--------+--------+---------+-------------+
| 800.00 | 5000.00 | 29025.00 | 2073.214286 |
+--------+--------+---------+-------------+
```

Query32. Write a query to display minimum, maximum, sum and average salary for each job

type.

```
mysql> SELECT job, MIN(sal) AS MIN, MAX(sal) AS MAX, SUM(sal) AS
SUM, AVG(sal) AS AVG FROM emp GROUP BY job;
+----------+--------+--------+--------+-------------+
| job      | MIN    | MAX    | SUM    | AVG         |
+----------+--------+--------+--------+-------------+
| CLERK    |  800.00 | 1300.00 | 4150.00 | 1037.500000 |
| SALESMAN | 1250.00 | 1600.00 | 5600.00 | 1400.000000 |
| MANAGER  | 2450.00 | 2975.00 | 8275.00 | 2758.333333 |
```

```
| ANALYST   | 3000.00 | 3000.00 | 6000.00 | 3000.000000 |
| PRESIDENT | 5000.00 | 5000.00 | 5000.00 | 5000.000000 |
+-----------+---------+---------+---------+-------------+
5 rows in set (0.00 sec)
```

Query33. Write a query to display the number of people with the same job.

```
mysql> SELECT job, COUNT(*) AS numberOfPeople FROM emp GROUP BY job;
+-----------+----------------+
| job       | numberOfPeople |
+-----------+----------------+
| CLERK     |              4 |
| SALESMAN  |              4 |
| MANAGER   |              3 |
| ANALYST   |              2 |
| PRESIDENT |              1 |
+-----------+----------------+
5 rows in set (0.00 sec)
```

Query34. Write a query to display the difference between the highest and lowest salaries.

```
mysql> SELECT MAX(sal) - MIN(sal) AS difference FROM emp;
+------------+
| difference |
+------------+
|    4200.00 |
+------------+
1 row in set (0.00 sec)
```

Query35. Write a query to display the manager number and the salary of the lowest paid

employee for that manager. Exclude any groups where the manager id is not known. Exclude

any groups where the minimum salary is less than $1000.

```
SELECT MGR, COUNT(*), MIN(SAL)
FROM emp
WHERE MGR IS NOT NULL
GROUP BY MGR
HAVING MIN(SAL) >= 1000;
+------+----------+----------+
| MGR  | COUNT(*) | MIN(SAL) |
+------+----------+----------+
| 7839 |        3 |  2450.00 |
| 7566 |        2 |  3000.00 |
| 7788 |        1 |  1100.00 |
| 7782 |        1 |  1300.00 |
+------+----------+----------+
4 rows in set (0.00 sec)
```

Query36. Write a query to display the department name, location name, number of employees

and the average salary for all employees in that department.

```
mysql> SELECT DISTINCT(dept.dname), dept.loc, (SELECT
COUNT(emp.empno) FROM emp WHERE emp.deptno = dept.deptno) AS
noOfEmployees, (SELECT COALESCE(AVG(sal), 0) FROM emp WHERE
emp.deptno = dept.deptno) AS avg FROM dept;
+------------+----------+---------------+-------------+
| dname      | loc      | noOfEmployees | avg         |
+------------+----------+---------------+-------------+
| ACCOUNTING | NEW YORK |             3 | 2916.666667 |
| RESEARCH   | DALLAS   |             5 | 2175.000000 |
| SALES      | CHICAGO  |             6 | 1566.666667 |
```

```
| OPERATIONS | BOSTON   |             0 |    0.000000 |
+------------+----------+---------------+-------------+
4 rows in set (0.00 sec)
```

Query37. Write a query to display the employee name and hire date for all employees in the

same department as Blake.

```
mysql> SELECT emp.ename, emp.hiredate FROM emp JOIN dept ON
emp.deptno = dept.deptno WHERE dept.deptno = (SELECT deptno FROM
emp WHERE ename = "Blake");
+--------+------------+
| ename  | hiredate   |
+--------+------------+
| ALLEN  | 1981-02-20 |
| ward   | 1981-02-22 |
| MARTIN | 1981-09-28 |
| BLAKE  | 1981-05-01 |
| TURNER | 1981-09-08 |
| JAMES  | 1981-12-03 |
+--------+------------+
6 rows in set (0.00 sec)
```

Query38. Write a query to display the employee number and employee name for all employees

who earn more than the average salary.

```
mysql> SELECT empno, ename FROM emp WHERE sal > (SELECT AVG(sal)
FROM emp);
+-------+-------+
| empno | ename |
+-------+-------+
|  7566 | JONES |
|  7698 | BLAKE |
```

```
|  7782 | CLARK |
|  7788 | SCOTT |
|  7839 | KING  |
|  7902 | FORD  |
+-------+-------+
6 rows in set (0.00 sec)
```

Query39. Write a query to display the employee number and name for all employees who work

in a department with any employee whose name contains a T.

```
mysql> SELECT emp.empno, emp.ename FROM emp, dept WHERE
emp.deptno = dept.deptno AND emp.deptno IN (SELECT deptno FROM
emp WHERE ename LIKE '%T%');
+-------+--------+
| empno | ename  |
+-------+--------+
|  7369 | SMITH  |
|  7499 | ALLEN  |
|  7521 | ward   |
|  7566 | JONES  |
|  7654 | MARTIN |
|  7698 | BLAKE  |
|  7788 | SCOTT  |
|  7844 | TURNER |
|  7876 | ADAMS  |
|  7900 | JAMES  |
|  7902 | FORD   |
+-------+--------+
11 rows in set (0.00 sec)
```

Query40. Write a query to display the employee name and salary of all employees who report

to King.

```
mysql> SELECT e1.ename AS Employee, e1.sal AS salary FROM emp AS
e1, emp AS e2 WHERE e1.mgr = e2.empno AND e2.ename = "KING";
+----------+---------+
| Employee | salary  |
+----------+---------+
| JONES    | 2975.00 |
| BLAKE    | 2850.00 |
| CLARK    | 2450.00 |
+----------+---------+
3 rows in set (0.00 sec)
```

Query41. Write a query to display the department number, name and job for all employees in

the Sales department.

```
mysql> SELECT emp.ename, dept.deptno, dept.dname, emp.job FROM
emp, dept WHERE emp.deptno = dept.deptno AND dept.dname =
"SALES";
+--------+--------+-------+----------+
| ename  | deptno | dname | job      |
+--------+--------+-------+----------+
| ALLEN  |     30 | SALES | SALESMAN |
| ward   |     30 | SALES | SALESMAN |
| MARTIN |     30 | SALES | SALESMAN |
| BLAKE  |     30 | SALES | MANAGER  |
| TURNER |     30 | SALES | SALESMAN |
| JAMES  |     30 | SALES | CLERK    |
+--------+--------+-------+----------+
6 rows in set (0.00 sec)
```

Query42.Write a query to display the employee number, name and salary for all employees

who earn more than the average salary and who work in a department with any employee with

a T in their name.

```
mysql> SELECT emp.empno, emp.ename, emp.sal FROM emp, dept WHERE
emp.deptno = dept.deptno AND emp.sal > (SELECT AVG(sal) FROM
emp) AND emp.deptno IN (SELECT deptno FROM emp WHERE ename LIKE
'%T%');
+-------+-------+---------+
| empno | ename | sal     |
+-------+-------+---------+
|  7566 | JONES | 2975.00 |
|  7698 | BLAKE | 2850.00 |
|  7788 | SCOTT | 3000.00 |
|  7902 | FORD  | 3000.00 |
+-------+-------+---------+
4 rows in set (0.00 sec)
```