DATABASE CREATION -

```
mysql> create database problemset00;
Query OK, 1 row affected (0.00 sec)

mysql> use problemset00;
Database changed
```

TABLE CREATION -

```
mysql> create tablemysql> CREATE TABLE employee(e_id VARCHAR(5),name
VARCHAR(20),dep_id VARCHAR(5),salary INT,manager_id varchar(10));
Query OK, 0 rows affected (0.01 sec)

mysql> CREATE TABLE dept(dep_id VARCHAR(5),dep_name
VARCHAR(20),dep_manager VARCHAR(20));
Query OK, 0 rows affected (0.01 sec)
```

VALUE INSERTION -

```
mysql> INSERT INTO employee VALUES('A114','Martin Tredeau','D01',
54497,'A120');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO employee VALUES('A116','Robin Wayne','D02',
20196,'A187');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO employee VALUES('A178','Bruce Wills','D03',
66861,'A298');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO employee VALUES('A132','Paul Vincent','D01',
94791,'A120');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO employee VALUES('A198','Tom Hanks','D02',
16879,'A187');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO employee VALUES('A120','Tim Archer','D01',
48834,'A298');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO employee VALUES('A143','Brad Michael','D01',
24488,'A120');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO employee VALUES('A187','Adam Justin','D02',
80543,'A298');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO employee VALUES('A121','Stuart William','D02',
78629,'A187');
```

```
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO employee VALUES('A187','Robert Swift','D04',
27700,'A298');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO employee VALUES('A176','Edward Cane','D01',
89176,'A120');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO employee VALUES('A142','Tara Cummings','D04',
99475,'A187');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO employee VALUES('A130','Vanessa Pary','D04',
28565,'A187');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO employee VALUES('A128','Adam Wayne','D05',
94324,'A165');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO employee VALUES('A129','Joseph Angelin','D05',
44280,'A165');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO employee VALUES('A165','Natasha Stevens','D05',
31377,'A298');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO employee VALUES('A165','Natasha Stevens','D05',
31377,'A298');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO employee VALUES('A194','Harolld Stevens','D02',
32166,'A187');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO employee VALUES('A133','Steve Michelos','D02',
61215,'A187');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO employee VALUES('A156','Nick Martin','D03',
50174,'A178');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO dept VALUES('D01','Health','Tim Archer');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO dept VALUES('D02','Communications','Adam
Justin');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO dept VALUES('D03','Product','Bruce Wills');
```

```
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO dept VALUES('D04','Insurance','Robert Swift');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO dept VALUES('D05','Finance','Natasha Stevens');
Query OK, 1 row affected (0.00 sec)

mysql> SELECT * FROM employee;
+------+-----------------+--------+--------+------------+
| e_id | name            | dep_id | salary | manager_id |
+------+-----------------+--------+--------+------------+
| A114 | Martin Tredeau  | D01    |  54497 | A120       |
| A116 | Robin Wayne     | D02    |  20196 | A187       |
| A178 | Bruce Wills     | D03    |  66861 | A298       |
| A132 | Paul Vincent    | D01    |  94791 | A120       |
| A198 | Tom Hanks       | D02    |  16879 | A187       |
| A120 | Tim Archer      | D01    |  48834 | A298       |
| A143 | Brad Michael    | D01    |  24488 | A120       |
| A187 | Adam Justin     | D02    |  80543 | A298       |
| A121 | Stuart William  | D02    |  78629 | A187       |
| A187 | Robert Swift    | D04    |  27700 | A298       |
| A176 | Edward Cane     | D01    |  89176 | A120       |
| A142 | Tara Cummings   | D04    |  99475 | A187       |
| A130 | Vanessa Pary    | D04    |  28565 | A187       |
| A128 | Adam Wayne      | D05    |  94324 | A165       |
| A129 | Joseph Angelin  | D05    |  44280 | A165       |
| A165 | Natasha Stevens | D05    |  31377 | A298       |
| A165 | Natasha Stevens | D05    |  31377 | A298       |
| A194 | Harolld Stevens | D02    |  32166 | A187       |
| A133 | Steve Michelos  | D02    |  61215 | A187       |
| A156 | Nick Martin     | D03    |  50174 | A178       |
+------+-----------------+--------+--------+------------+
20 rows in set (0.00 sec)

mysql> SELECT * FROM dept;
+--------+----------------+-----------------+
| dep_id | dep_name       | dep_manager     |
+--------+----------------+-----------------+
| D01    | Health         | Tim Archer      |
| D02    | Communications | Adam Justin     |
| D03    | Product        | Bruce Wills     |
| D04    | Insurance      | Robert Swift    |
| D05    | Finance        | Natasha Stevens |
+--------+----------------+-----------------+
5 rows in set (0.00 sec)

QUERIES -

1. Select the Employee with the top three salaries

mysql> select name, salary from employee order by salary desc limit
3;
+--------------+--------+
```

```
| name          | salary |
+---------------+--------+
| Tara Cummings |  99475 |
| Paul Vincent  |  94791 |
| Adam Wayne    |  94324 |
+---------------+--------+
3 rows in set (0.00 sec)
```

2. Select the employee with the least salary

```
mysql> select  min(salary) as min_sal from employee ;
+---------+
| min_sal |
+---------+
|   16879 |
+---------+
1 row in set (0.00 sec)
```

3. Select the employee who does not have a manager in the department table

```
mysql> SELECT name FROM employee WHERE dep_id NOT IN (SELECT dep_id
FROM dept);
Empty set (0.00 sec)
```

4. Select the employee who is also a manager

```
mysql> select name from employee , dept where name = dep_manager ;
+-----------------+
| name            |
+-----------------+
| Bruce Wills     |
| Tim Archer      |
| Adam Justin     |
| Robert Swift    |
| Natasha Stevens |
| Natasha Stevens |
+-----------------+
6 rows in set (0.00 sec)
```

5. Select the employee who is also a manager and has least salary

```
mysql> select min(salary) from employee where name in ( select
dep_manager from dept ) ;
+-------------+
| min(salary) |
+-------------+
|       27700 |
+-------------+
1 row in set (0.00 sec)
```

6. Select the total number of employees in the Communication department

```
mysql> select count(e_id) from employee where dep_id in(select
dep_id from dept where dep_name = 'Communications');
+--------------------+
| Communication_Dept |
+--------------------+
|                  6 |
+--------------------+
1 row in set (0.00 sec)
```

7. Select the employee in the Finance department who has the top salary

```
mysql> select max(salary) from employee where dep_id in(select
dep_id from dept where dep_name = ‘Finance’) ;
+-------------+
| max(salary) |
+-------------+
|       94324 |
+-------------+
1 row in set (0.00 sec)
```

8.select the employee in the Product department who has the least salary

```
mysql> select min(salary) from employee where dep_id in ( select
dep_id from dept where dep_name = ‘Product’ );
+-------------+
| min(salary) |
+-------------+
|       50174 |
+-------------+
1 row in set (0.00 sec)
```

9. Select the count of employees in health with maximum salary

```
select count(name) , salary from employee join dept on
employee.dep_id=dept.dep_id where salary = ( select max(salary) from
employee,dept where employee.dep_id=dept.dep_id and dept.dep_name =
'Health' ) ;
+-------------+--------+
| count(name) | salary |
+-------------+--------+
|           1 |  94791 |
+-------------+--------+
1 row in set (0.00 sec)
```

10. Select the employee who report to Natasha Stevens

```
mysql> select name from employee where dep_id in (select dep_id from
dept where dep_manager='Natasha Stevens') ;
+----------------+
| name           |
+----------------+
| Adam Wayne     |
```

```
| Joseph Angelin  |
| Natasha Stevens |
+-----------------+
3 rows in set (0.00 sec)
```

11.Display the employee name ,count , dept name ,dept manager in the health department

```
select name , e_id , dep_name ,dep_manager from employee join dept
on employee.dep_id=dept.dep_id where dep_name='Health';
+---------------+------+----------+-------------+
| name          | e_id | dep_name | dep_manager |
+---------------+------+----------+-------------+
| Martin Tredeau | A114 | Health   | Tim Archer  |
| Paul Vincent   | A132 | Health   | Tim Archer  |
| Tim Archer     | A120 | Health   | Tim Archer  |
| Brad Michael   | A143 | Health   | Tim Archer  |
| Edward Cane    | A176 | Health   | Tim Archer  |
| John Hellen    | A111 | Health   | Tim Archer  |
+---------------+------+----------+-------------+
6 rows in set (0.00 sec)
```

12.Display the department id ,employee id and manager id for the communication department.

```
mysql> select employee.e_id, employee.dep_id, employee.manager_id
from employee, dept where dept.dep_name='Communications' and
employee.dep_id=dept.dep_id;
+------+--------+------------+
| e_id | dep_id | manager_id |
+------+--------+------------+
| A116 | D02    | A187       |
| A198 | D02    | A187       |
| A187 | D02    | A298       |
| A121 | D02    | A187       |
| A194 | D02    | A187       |
| A133 | D02    | A187       |
+------+--------+------------+
6 rows in set (0.00 sec)
```

13. Select the average expenses of each department with dept_id and dept_name .

```
mysql> select employee.dep_id , dept.dep_name , avg(employee.salary)
from employee , dept where employee.dep_id=dept.dep_id group by
dept.dep_name;
+--------+---------------+---------------------+
| dep_id | dep_name      | avg(employee.salary) |
+--------+---------------+---------------------+
| D01    | Health        |          54527.6667 |
| D02    | Communications |          48271.3333 |
| D03    | Product       |          58517.5000 |
| D04    | Insurance     |          51913.3333 |
| D05    | Finance       |          56660.3333 |
```

```
+--------+----------------+---------------------+
5 rows in set (0.00 sec)
```

14. Select the total expense for the department finance

```
mysql> select dept.dep_name , sum(employee.salary) from employee ,
dept where employee.dep_id=dept.dep_id and dept.dep_name='Finance' ;
+----------+----------------------+
| dep_name | sum(employee.salary) |
+----------+----------------------+
| Finance  |               169981 |
+----------+----------------------+
1 row in set (0.00 sec)
```

15. Select the department which spends the least with dept_id and department manager name

```
mysql> select employee.dep_id , dept.dep_manager , dept.dep_name
from employee , dept where salary in ( select min(employee.salary)
from employee) and employee.dep_id=dept.dep_id;
+--------+-------------+----------+
| dep_id | dep_manager | dep_name |
+--------+-------------+----------+
| D01    | Tim Archer  | Health   |
+--------+-------------+----------+
1 row in set (0.00 sec)
```

16. Select the count of employees in each department

```
mysql> select count(employee.e_id) , dept.dep_name from employee ,
dept where employee.dep_id=dept.dep_id group by dept.dep_name;
+---------------------+----------------+
| count(employee.e_id) | dep_name       |
+---------------------+----------------+
|                   6 | Health         |
|                   6 | Communications |
|                   2 | Product        |
|                   3 | Insurance      |
|                   3 | Finance        |
+---------------------+----------------+
5 rows in set (0.00 sec)
```

17. Select the count of employees in each department having salary < 10000

```
mysql> select count(employee.e_id) , dept.dep_name from employee ,
dept where employee.dep_id=dept.dep_id and employee.salary < 10000
group by dept.dep_name;
Empty set (0.00 sec)
```

18. Select the total number of employees in dept id D04

```
mysql> select count(e_id) from employee where dep_id='D04' ;
+-------------+
```

```
| count(e_id) |
+-------------+
|           3 |
+-------------+
1 row in set (0.00 sec)
```

19. Select all department details fo the department with maximum employees

```
mysql> select max(e_id),dep_name from (select count(e_id) e_id from
employee group by dep_id) as e,dept;
+-----------+----------+
| max(e_id) | dep_name |
+-----------+----------+
|         6 | Health   |
+-----------+----------+
1 row in set (0.00 sec)
```

20. Select the employees who has Tim Cook as the manager

```
mysql> select e_id from employee , dept where
employee.dep_id=dept.dep_id and dept.dep_manager='Tim Cook';
Empty set (0.00 sec)
```