MySQL class problem

UC1 :

Query to create database

```
mysql> create database payroll_service;
Query OK, 1 row affected (0.01 sec)
```

Query to show database

```
mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
| payroll_service    |
| performance_schema |
| sakila             |
| sys                |
| world              |
+--------------------+
```

Query to use payroll_service database

```
mysql> use payroll_service;
Database changed
```

Query to see current database

```
mysql> SELECT DATABASE();
+-----------------+
| DATABASE()      |
+-----------------+
| payroll_service |
+-----------------+
```

UC2 :

Query to create table in employee_service

```
mysql> CREATE TABLE employee_payroll
    -> (
    -> id INT unsigned NOT NULL AUTO_INCREMENT,
    -> name VARCHAR(150) NOT NULL,
    -> salary Double NOT NULL,
    -> start DATE NOT NULL,
```

```
    -> PRIMARY KEY (id)
    -> );
Query OK, 0 rows affected (0.05 sec)
```

UC3:

Query to insert data into database

```
mysql> INSERT INTO employee_payroll (name, salary, start) VALUES
    -> ( 'Bill', 1000000.00, '2018-01-03'),
    -> ( 'Terisa', 2000000.00, '2019-11-13'),
    -> ( 'Charlie', 3000000.00, '2020-05-21');
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0
```

UC4:

Query to retrieve all data from database payroll_service

```
mysql> SELECT * FROM employee_payroll;
+----+---------+---------+------------+
| id | name    | salary  | start      |
+----+---------+---------+------------+
|  1 | Bill    | 1000000 | 2018-01-03 |
|  2 | Terisa  | 2000000 | 2019-11-13 |
|  3 | Charlie | 3000000 | 2020-05-21 |
+----+---------+---------+------------+
3 rows in set (0.00 sec)
```

UC5:
Query to retrieve salary data for a particular employee

```
mysql> SELECT salary FROM employee_payroll WHERE name = 'Bill';
+---------+
| salary  |
+---------+
| 1000000 |
+---------+
1 row in set (0.00 sec)
```

```
mysql> SELECT * FROM employee_payroll WHERE start BETWEEN CAST('2018-01-01' AS
DATE) AND DATE(NOW());
+----+---------+---------+------------+
| id | name    | salary  | start      |
+----+---------+---------+------------+
|  1 | Bill    | 1000000 | 2018-01-03 |
|  2 | Terisa  | 2000000 | 2019-11-13 |
|  3 | Charlie | 3000000 | 2020-05-21 |
+----+---------+---------+------------+
3 rows in set (0.01 sec)
```

UC6:
Query to add gender to employee_payroll table

```
ALTER TABLE employee_payroll ADD gender CHAR(1) AFTER name;
Query OK, 0 rows affected (0.14 sec)
Records: 0  Duplicates: 0  Warnings: 0


mysql> update employee_payroll set gender = 'F' where name = 'Terisa';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> update employee_payroll set gender = 'M' where name = 'Bill' or name = 'Charlie';
Query OK, 2 rows affected (0.01 sec)
Rows matched: 2  Changed: 2  Warnings: 0

mysql> update employee_payroll set salary = 3000000.00 where name = 'Terisa';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT * FROM employee_payroll;
+----+---------+--------+---------+------------+
| id | name    | gender | salary  | start      |
+----+---------+--------+---------+------------+
|  1 | Bill    | M      | 1000000 | 2018-01-03 |
|  2 | Terisa  | F      | 3000000 | 2019-11-13 |
|  3 | Charlie | M      | 3000000 | 2020-05-21 |
+----+---------+--------+---------+------------+
3 rows in set (0.00 sec)
```

UC7:
Query to find sum, average, min, max and no. of male and female employees from employee_payroll table

```
mysql> SELECT SUM(salary) FROM employee_payroll WHERE gender = 'F' GROUP BY
gender;
+-------------+
| SUM(salary) |
+-------------+
|     3000000 |
+-------------+
1 row in set (0.01 sec)

mysql> SELECT SUM(salary) FROM employee_payroll WHERE gender = 'M' GROUP BY
gender;
+-------------+
| SUM(salary) |
+-------------+
|     4000000 |
+-------------+
1 row in set (0.00 sec)

mysql> SELECT AVG(salary) FROM employee_payroll WHERE gender = 'M' GROUP BY
gender;
+-------------+
| AVG(salary) |
+-------------+
|     2000000 |
+-------------+
1 row in set (0.00 sec)

mysql> SELECT AVG(salary) FROM employee_payroll WHERE gender = 'F' GROUP BY
gender;
+-------------+
| AVG(salary) |
+-------------+
|     3000000 |
+-------------+
1 row in set (0.00 sec)

mysql> SELECT MIN(salary) FROM employee_payroll WHERE gender = 'F' GROUP BY
gender;
+-------------+
| MIN(salary) |
```

```
+-------------+
|     3000000 |
+-------------+
1 row in set (0.00 sec)

mysql> SELECT MIN(salary) FROM employee_payroll WHERE gender = 'M' GROUP BY
gender;
+-------------+
| MIN(salary) |
+-------------+
|     1000000 |
+-------------+
1 row in set (0.00 sec)

mysql> SELECT MAX(salary) FROM employee_payroll WHERE gender = 'M' GROUP BY
gender;
+-------------+
| MAX(salary) |
+-------------+
|     3000000 |
+-------------+
1 row in set (0.00 sec)

mysql> SELECT MAX(salary) FROM employee_payroll WHERE gender = 'F' GROUP BY
gender;
+-------------+
| MAX(salary) |
+-------------+
|     3000000 |
+-------------+
1 row in set (0.00 sec)

mysql> SELECT COUNT(salary) FROM employee_payroll WHERE gender = 'M' GROUP BY
gender;
+---------------+
| COUNT(salary) |
+---------------+
|             2 |
+---------------+
1 row in set (0.00 sec)

mysql> SELECT COUNT(salary) FROM employee_payroll WHERE gender = 'F' GROUP BY
gender;
+---------------+
```

```
| COUNT(salary) |
+---------------+
|             1 |
+---------------+
1 row in set (0.00 sec)
```

UC8:
Query to extend database employee_payroll to store employee phone, address and department

```
mysql> ALTER TABLE employee_payroll ADD phoneNumber  INT AFTER name;
Query OK, 0 rows affected (0.09 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> ALTER TABLE employee_payroll ADD address VARCHAR(150)  AFTER phoneNumber;
Query OK, 0 rows affected (0.11 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> ALTER TABLE employee_payroll ADD department  VARCHAR(150) NOT NULL AFTER
address;
Query OK, 0 rows affected (0.09 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> Describe employee_payroll;
+-------------+--------------+------+-----+---------+----------------+
| Field       | Type         | Null | Key | Default | Extra          |
+-------------+--------------+------+-----+---------+----------------+
| id          | int unsigned | NO   | PRI | NULL    | auto_increment |
| name        | varchar(150) | NO   |     | NULL    |                |
| phoneNumber | int          | YES  |     | NULL    |                |
| address     | varchar(150) | YES  |     | NULL    |                |
| department  | varchar(150) | NO   |     | NULL    |                |
| gender      | char(1)      | YES  |     | NULL    |                |
| salary      | double       | NO   |     | NULL    |                |
| start       | date         | NO   |     | NULL    |                |
+-------------+--------------+------+-----+---------+----------------+
8 rows in set (0.01 sec)
```

UC9:
Query to extend employee_payroll table to have basic pay, deductions, taxable pay, income tax, net pay.

```
mysql> ALTER TABLE employee_payroll ADD basicPay INT  AFTER gender;
Query OK, 0 rows affected (0.09 sec)
```

```
Records: 0  Duplicates: 0  Warnings: 0

mysql> ALTER TABLE employee_payroll ADD deductions  Double AFTER basicPay;
Query OK, 0 rows affected (0.07 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> ALTER TABLE employee_payroll ADD taxablePay  Double AFTER deductions;
Query OK, 0 rows affected (0.08 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> ALTER TABLE employee_payroll ADD incomeTax  Double AFTER taxablePay;
Query OK, 0 rows affected (0.08 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> ALTER TABLE employee_payroll ADD netPay Double  AFTER incomeTax;
Query OK, 0 rows affected (0.07 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> Describe employee_payroll;
+-------------+--------------+------+-----+---------+----------------+
| Field       | Type         | Null | Key | Default | Extra          |
+-------------+--------------+------+-----+---------+----------------+
| id          | int unsigned | NO   | PRI | NULL    | auto_increment |
| name        | varchar(150) | NO   |     | NULL    |                |
| phoneNumber | int          | YES  |     | NULL    |                |
| address     | varchar(150) | YES  |     | NULL    |                |
| department  | varchar(150) | NO   |     | NULL    |                |
| gender      | char(1)      | YES  |     | NULL    |                |
| basicPay    | int          | YES  |     | NULL    |                |
| deductions  | double       | YES  |     | NULL    |                |
| taxablePay  | double       | YES  |     | NULL    |                |
| incomeTax   | double       | YES  |     | NULL    |                |
| netPay      | double       | YES  |     | NULL    |                |
| salary      | double       | NO   |     | NULL    |                |
| start       | date         | NO   |     | NULL    |                |
+-------------+--------------+------+-----+---------+----------------+
13 rows in set (0.01 sec)

mysql>
```

UC10:
Query to insert department for terissa making two different entries for two different department.

```
mysql> update employee_payroll set department = 'Marketing' where name = 'Terisa';
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> Insert INTO employee_payroll(name, address, department, gender,  salary,  start)
VALUES
    -> ('Terisa', 'Dellas', 'Sales', 'F', 3000000.00, '2019-11-13');
Query OK, 1 row affected (0.00 sec)

mysql> SELECT * FROM employee_payroll;
+----+---------+-------------+---------+------------+--------+----------+------------+------------+-----------+--------
+---------+------------+
| id | name    | phoneNumber | address | department | gender | basicPay | deductions |
taxablePay | incomeTax | netPay | salary  | start      |
+----+---------+-------------+---------+------------+--------+----------+------------+------------+-----------+--------
+---------+------------+
|  1 | Bill    |        NULL | NULL    |            | M      |     NULL |       NULL |       NULL |      NULL |
NULL | 1000000 | 2018-01-03 |
|  2 | Terisa  |        NULL | NULL    | Marketing  | F      |     NULL |       NULL |       NULL |      NULL
|   NULL | 3000000 | 2019-11-13 |
|  3 | Charlie |        NULL | NULL    |            | M      |     NULL |       NULL |       NULL |      NULL |
NULL | 3000000 | 2020-05-21 |
|  5 | Terisa  |        NULL | Dellas  | Sales      | F      |     NULL |       NULL |       NULL |      NULL |
NULL | 3000000 | 2019-11-13 |
+----+---------+-------------+---------+------------+--------+----------+------------+------------+-----------+--------
+---------+------------+
4 rows in set (0.00 sec)


mysql> update employee_payroll set salary = 5000000.00 where name = 'Terisa';
Query OK, 2 rows affected (0.01 sec)
Rows matched: 2  Changed: 2  Warnings: 0
```

```
mysql> SELECT * FROM employee_payroll;
+----+---------+-------------+---------+------------+--------+----------+------------+------------+-----------+--------
+---------+------------+
| id | name    | phoneNumber | address | department | gender | basicPay | deductions |
taxablePay | incomeTax | netPay | salary  | start      |
+----+---------+-------------+---------+------------+--------+----------+------------+------------+-----------+--------
+---------+------------+
|  1 | Bill    |        NULL | NULL    |            | M      |     NULL |       NULL |       NULL |      NULL |
NULL | 1000000 | 2018-01-03 |
|  2 | Terisa  |        NULL | NULL    | Marketing  | F      |     NULL |       NULL |       NULL |      NULL
|   NULL | 5000000 | 2019-11-13 |
|  3 | Charlie |        NULL | NULL    |            | M      |     NULL |       NULL |       NULL |      NULL |
NULL | 3000000 | 2020-05-21 |
|  5 | Terisa  |        NULL | Dellas  | Sales      | F      |     NULL |       NULL |       NULL |      NULL |
NULL | 5000000 | 2019-11-13 |
+----+---------+-------------+---------+------------+--------+----------+------------+------------+-----------+--------
+---------+------------+
4 rows in set (0.00 sec)
```