PayRollService Sql

Queries According to Use Cases -

**1) UC1**

mysql> create database payroll\_services;

Query OK, 1 row affected (0.14 sec)

mysql> show databases;

+--------------------+

| Database |

+--------------------+

| addressbook |

| information\_schema |

| mysql |

| payroll\_service |

| payroll\_services |

| performance\_schema |

| sys |

| test |

+--------------------+

8 rows in set (0.00 sec)

mysql> use payroll\_services;

Database changed

**2) UC2**

mysql> create table employee\_payroll ( employee\_id int not null, name varchar(150) not null, salary int not null, start\_date date not null);

Query OK, 0 rows affected (1.31 sec)

mysql> desc employee\_payroll;

+-------------+--------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+-------------+--------------+------+-----+---------+-------+

| employee\_id | int | NO | | NULL | |

| name | varchar(150) | NO | | NULL | |

| salary | int | NO | | NULL | |

| start\_date | date | NO | | NULL | |

+-------------+--------------+------+-----+---------+-------+

4 rows in set (0.01 sec)

**3)UC3**

mysql> insert into employee\_payroll ( employee\_id,name,salary,start\_date ) values (1404,'Mark',250000,'2018-09-01'),(1504,'Bill',300000,'2018-04-03'),(1245,'Sherlock',400000,'2019-05-08');

Query OK, 3 rows affected (0.35 sec)

Records: 3 Duplicates: 0 Warnings: 0

**4) UC4**

mysql> select \* from employee\_payroll;

+-------------+----------+--------+------------+

| employee\_id | name | salary | start\_date |

+-------------+----------+--------+------------+

| 1404 | Mark | 250000 | 2018-09-01 |

| 1504 | Bill | 300000 | 2018-04-03 |

| 1245 | Sherlock | 400000 | 2019-05-08 |

+-------------+----------+--------+------------+

3 rows in set (0.00 sec)

**5)UC5**

mysql> select salary from employee\_payroll where name='Bill';

+--------+

| salary |

+--------+

| 300000 |

+--------+

1 row in set (0.00 sec)

mysql> select \* from employee\_payroll where start\_date between cast('2018-01-01' as date) and date(now());

+-------------+----------+--------+------------+

| employee\_id | name | salary | start\_date |

+-------------+----------+--------+------------+

| 1404 | Mark | 250000 | 2018-09-01 |

| 1504 | Bill | 300000 | 2018-04-03 |

| 1245 | Sherlock | 400000 | 2019-05-08 |

+-------------+----------+--------+------------+

3 rows in set (0.05 sec)

**6) UC6**

mysql> alter table employee\_payroll add gender varchar(100) after name;

Query OK, 0 rows affected (2.01 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> desc employee\_payroll;

+-------------+--------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+-------------+--------------+------+-----+---------+-------+

| employee\_id | int | NO | | NULL | |

| name | varchar(150) | NO | | NULL | |

| gender | varchar(100) | YES | | NULL | |

| salary | int | NO | | NULL | |

| start\_date | date | NO | | NULL | |

+-------------+--------------+------+-----+---------+-------+

5 rows in set (0.01 sec)

mysql> update employee\_payroll set gender='M' where name='Bill';

Query OK, 1 row affected (0.09 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> update employee\_payroll set gender='M' where name='Mark';

Query OK, 1 row affected (0.17 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> update employee\_payroll set gender='M' where name='Sherlock';

Query OK, 1 row affected (0.14 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> select \* from employee\_payroll;

+-------------+----------+--------+--------+------------+

| employee\_id | name | gender | salary | start\_date |

+-------------+----------+--------+--------+------------+

| 1404 | Mark | M | 250000 | 2018-09-01 |

| 1504 | Bill | M | 300000 | 2018-04-03 |

| 1245 | Sherlock | M | 400000 | 2019-05-08 |

+-------------+----------+--------+--------+------------+

3 rows in set (0.00 sec)

**7)UC7**

mysql> insert into employee\_payroll ( employee\_id,name,gender,salary,start\_date ) values (1475,'Juli','F',250000,'2018-08-01'),(1604,'Marry','F',305000,'2019-04-03'),(1249,'Radha','F',420000,'20

Query OK, 3 rows affected (0.15 sec)

Records: 3 Duplicates: 0 Warnings: 0

mysql> select sum(salary) from employee\_payroll where gender='F' group by gender;

+-------------+

| sum(salary) |

+-------------+

| 975000 |

+-------------+

1 row in set (0.06 sec)

mysql> select sum(salary) from employee\_payroll where gender='F' ;

+-------------+

| sum(salary) |

+-------------+

| 975000 |

+-------------+

1 row in set (0.00 sec)

mysql> select sum(salary) from employee\_payroll where gender='F' group by gender;

+-------------+

| sum(salary) |

+-------------+

| 975000 |

+-------------+

1 row in set (0.00 sec)

mysql> select avg(salary) from employee\_payroll where gender='F' group by gender;

+-------------+

| avg(salary) |

+-------------+

| 325000.0000 |

+-------------+

1 row in set (0.00 sec)

mysql> select min(salary) from employee\_payroll where gender='F' group by gender;

+-------------+

| min(salary) |

+-------------+

| 250000 |

+-------------+

1 row in set (0.04 sec)

mysql> select max(salary) from employee\_payroll where gender='F' group by gender;

+-------------+

| max(salary) |

+-------------+

| 420000 |

+-------------+

1 row in set (0.00 sec)

mysql> select count(salary) from employee\_payroll where gender='F' group by gender;

+---------------+

| count(salary) |

+---------------+

| 3 |

+---------------+

1 row in set (0.00 sec)

mysql> select count(salary) from employee\_payroll where gender='M' group by gender;

+---------------+

| count(salary) |

+---------------+

| 3 |

+---------------+

1 row in set (0.00 sec)

mysql> select max(salary) from employee\_payroll where gender='M' group by gender;

+-------------+

| max(salary) |

+-------------+

| 400000 |

+-------------+

1 row in set (0.00 sec)

mysql> select min(salary) from employee\_payroll where gender='M' group by gender;

+-------------+

| min(salary) |

+-------------+

| 250000 |

+-------------+

1 row in set (0.00 sec)

mysql> select sum(salary) from employee\_payroll where gender='M' group by gender;

+-------------+

| sum(salary) |

+-------------+

| 950000 |

+-------------+

1 row in set (0.00 sec)

mysql> select avg(salary) from employee\_payroll where gender='M' group by gender;

+-------------+

| avg(salary) |

+-------------+

| 316666.6667 |

+-------------+

1 row in set (0.00 sec)

**8)UC8**

mysql> alter table employee\_payroll add address varchar(150) default 'TBD' after gender;

Query OK, 0 rows affected (1.57 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> alter table employee\_payroll add phone bigint after gender;

Query OK, 0 rows affected (1.55 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> alter table employee\_payroll add department varchar(150) not null after gender;

Query OK, 0 rows affected (1.43 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> desc employee\_payroll;

+-------------+--------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+-------------+--------------+------+-----+---------+-------+

| employee\_id | int | NO | | NULL | |

| name | varchar(150) | NO | | NULL | |

| gender | varchar(100) | YES | | NULL | |

| department | varchar(150) | NO | | NULL | |

| phone | bigint | YES | | NULL | |

| address | varchar(150) | YES | | TBD | |

| salary | int | NO | | NULL | |

| start\_date | date | NO | | NULL | |

+-------------+--------------+------+-----+---------+-------+

8 rows in set (0.07 sec)

**9)UC9**

mysql> alter table employee\_payroll add basic\_pay int not null after start\_date;

Query OK, 0 rows affected (1.60 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> alter table employee\_payroll add deductions int not null after start\_date;

Query OK, 0 rows affected (1.74 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> alter table employee\_payroll add taxable\_pay int not null after start\_date;

Query OK, 0 rows affected (1.58 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> alter table employee\_payroll add income\_tax int not null after start\_date;

Query OK, 0 rows affected (1.62 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> alter table employee\_payroll add net\_pay int not null after start\_date;

Query OK, 0 rows affected (1.95 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> desc employee\_payroll;

+-------------+--------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+-------------+--------------+------+-----+---------+-------+

| employee\_id | int | NO | | NULL | |

| name | varchar(150) | NO | | NULL | |

| gender | varchar(100) | YES | | NULL | |

| department | varchar(150) | NO | | NULL | |

| phone | bigint | YES | | NULL | |

| address | varchar(150) | YES | | TBD | |

| salary | int | NO | | NULL | |

| start\_date | date | NO | | NULL | |

| net\_pay | int | NO | | NULL | |

| income\_tax | int | NO | | NULL | |

| taxable\_pay | int | NO | | NULL | |

| deductions | int | NO | | NULL | |

| basic\_pay | int | NO | | NULL | |

+-------------+--------------+------+-----+---------+-------+

13 rows in set (0.01 sec)

**10)UC10**

mysql> insert into employee\_payroll ( employee\_id,name,gender,department,phone,address,salary,start\_date,net\_pay,income\_tax,taxable\_pay,deductions,basic\_pay ) values (1475,'Juli','F',250000,'2018-08-01')

mysql> insert into employee\_payroll ( employee\_id,name,gender,department,phone,address,salary,start\_date,net\_pay,income\_tax,taxable\_pay,deductions,basic\_pay )

-> values (1890,'Terisa','F','Sales',778855214,'ShyamNagr',400000,'2018-04-05',390000,14000,250000,1500,385000);

Query OK, 1 row affected (0.11 sec)

mysql> insert into employee\_payroll ( employee\_id,name,gender,department,phone,address,salary,start\_date,net\_pay,income\_tax,taxable\_pay,deductions,basic\_pay )

-> values (1891,'Terisa','F','Marketing',778855214,'ShyamNagr',400000,'2018-04-05',390000,14000,250000,1500,385000);

Query OK, 1 row affected (0.13 sec)

mysql> select \* from employee\_payroll;

+-------------+----------+--------+------------+-----------+-----------+--------+------------+---------+------------+-------------+------------+-----------+

| employee\_id | name | gender | department | phone | address | salary | start\_date | net\_pay | income\_tax | taxable\_pay | deductions | basic\_pay |

+-------------+----------+--------+------------+-----------+-----------+--------+------------+---------+------------+-------------+------------+-----------+

| 1404 | Mark | M | | NULL | TBD | 250000 | 2018-09-01 | 0 | 0 | 0 | 0 | 0 |

| 1504 | Bill | M | | NULL | TBD | 300000 | 2018-04-03 | 0 | 0 | 0 | 0 | 0 |

| 1245 | Sherlock | M | | NULL | TBD | 400000 | 2019-05-08 | 0 | 0 | 0 | 0 | 0 |

| 1475 | Juli | F | | NULL | TBD | 250000 | 2018-08-01 | 0 | 0 | 0 | 0 | 0 |

| 1604 | Marry | F | | NULL | TBD | 305000 | 2019-04-03 | 0 | 0 | 0 | 0 | 0 |

| 1249 | Radha | F | | NULL | TBD | 420000 | 2019-05-08 | 0 | 0 | 0 | 0 | 0 |

| 1890 | Terisa | F | Sales | 778855214 | ShyamNagr | 400000 | 2018-04-05 | 390000 | 14000 | 250000 | 1500 | 385000 |

| 1891 | Terisa | F | Marketing | 778855214 | ShyamNagr | 400000 | 2018-04-05 | 390000 | 14000 | 250000 | 1500 | 385000 |

+-------------+----------+--------+------------+-----------+-----------+--------+------------+---------+------------+-------------+------------+-----------+

8 rows in set (0.00 sec)

mysql>

**11)UC11**

mysql> create table employee\_details ( employee\_id int not null, phone bigint, address varchar(150) , gender varchar(100), start\_date date, name varchar(150),primary key(employee\_id));

Query OK, 0 rows affected (0.94 sec)

mysql> create table departments ( name varchar(150) not null, department\_id int unsigned not null,primary key(department\_id) );

Query OK, 0 rows affected (0.85 sec)

mysql> create table employee\_departments( employee\_id int not null, department\_id int unsigned not null, primary key(employee\_id,department\_id),foreign key(employee\_id) references

-> employee\_details(employee\_id),foreign key(department\_id) references departments(department\_id));

Query OK, 0 rows affected (1.46 sec)

mysql> create table payroll ( employee\_id int unique not null, basic\_pay int not null,net\_pay int not null,taxabale\_pay int not null,deductions int not null,income\_tax int not null,

-> foreign key(employee\_id) references employee\_details(employee\_id));

Query OK, 0 rows affected (1.38 sec)

mysql> create table company(name varchar(150), employee\_id int unique not null, foreign key(employee\_id) references employee\_details(employee\_id));

Query OK, 0 rows affected (0.57 sec)

mysql> show tables;

+----------------------------+

| Tables\_in\_payroll\_services |

+----------------------------+

| company |

| departments |

| employee\_departments |

| employee\_details |

| payroll |

+----------------------------+

5 rows in set (0.06 sec)

12) UC12

a) joining data from all tables for required employee

mysql> select \* from employee\_details as ed inner join payroll as p on ed.employee\_id=p.employee\_id;

+-------------+----------+----------+--------+------------+--------+-------------+-----------+---------+--------------+------------+------------+

| employee\_id | phone | address | gender | start\_date | name | employee\_id | basic\_pay | net\_pay | taxabale\_pay | deductions | income\_tax |

+-------------+----------+----------+--------+------------+--------+-------------+-----------+---------+--------------+------------+------------+

| 1405 | 85296374 | Ramnaagr | F | 2019-01-05 | Terisa | 1405 | 400000 | 390000 | 280000 | 5000 | 1500 |

+-------------+----------+----------+--------+------------+--------+-------------+-----------+---------+--------------+------------+------------+

1 row in set (0.00 sec)

mysql> select \* from employee\_details as ed inner join payroll as p on ed.employee\_id=p.employee\_id right join employee\_departments as edpart on ed.employee\_id=edpart.employee\_id;

+-------------+----------+----------+--------+------------+--------+-------------+-----------+---------+--------------+------------+------------+-------------+---------------+

| employee\_id | phone | address | gender | start\_date | name | employee\_id | basic\_pay | net\_pay | taxabale\_pay | deductions | income\_tax | employee\_id | department\_id |

+-------------+----------+----------+--------+------------+--------+-------------+-----------+---------+--------------+------------+------------+-------------+---------------+

| 1405 | 85296374 | Ramnaagr | F | 2019-01-05 | Terisa | 1405 | 400000 | 390000 | 280000 | 5000 | 1500 | 1405 | 852 |

| 1405 | 85296374 | Ramnaagr | F | 2019-01-05 | Terisa | 1405 | 400000 | 390000 | 280000 | 5000 | 1500 | 1405 | 853 |

+-------------+----------+----------+--------+------------+--------+-------------+-----------+---------+--------------+------------+------------+-------------+---------------+

2 rows in set (0.00 sec)

mysql> select \* from employee\_details as ed inner join payroll as p on ed.employee\_id=p.employee\_id right join employee\_departments as edpart on ed.employee\_id=edpart.employee\_id

-> inner join company as c on ed.employee\_id=c.employee\_id;

+-------------+----------+----------+--------+------------+--------+-------------+-----------+---------+--------------+------------+------------+-------------+---------------+------------+-------------+

| employee\_id | phone | address | gender | start\_date | name | employee\_id | basic\_pay | net\_pay | taxabale\_pay | deductions | income\_tax | employee\_id | department\_id | name | employee\_id |

+-------------+----------+----------+--------+------------+--------+-------------+-----------+---------+--------------+------------+------------+-------------+---------------+------------+-------------+

| 1405 | 85296374 | Ramnaagr | F | 2019-01-05 | Terisa | 1405 | 400000 | 390000 | 280000 | 5000 | 1500 | 1405 | 852 | BridgeLabz | 1405 |

| 1405 | 85296374 | Ramnaagr | F | 2019-01-05 | Terisa | 1405 | 400000 | 390000 | 280000 | 5000 | 1500 | 1405 | 853 | BridgeLabz | 1405 |

+-------------+----------+----------+--------+------------+--------+-------------+-----------+---------+--------------+------------+------------+-------------+---------------+------------+-------------+

2 rows in set (0.00 sec)

mysql> select \* from employee\_details as ed inner join payroll as p on ed.employee\_id=p.employee\_id right join employee\_departments as edpart on ed.employee\_id=edpart.employee\_id

-> inner join company as c on ed.employee\_id=c.employee\_id right join departments on edpart.department\_id=departments.department\_id;

+-------------+----------+----------+--------+------------+--------+-------------+-----------+---------+--------------+------------+------------+-------------+---------------+------------+-------------+-----------+---------------+

| employee\_id | phone | address | gender | start\_date | name | employee\_id | basic\_pay | net\_pay | taxabale\_pay | deductions | income\_tax | employee\_id | department\_id | name | employee\_id | name | department\_id |

+-------------+----------+----------+--------+------------+--------+-------------+-----------+---------+--------------+------------+------------+-------------+---------------+------------+-------------+-----------+---------------+

| 1405 | 85296374 | Ramnaagr | F | 2019-01-05 | Terisa | 1405 | 400000 | 390000 | 280000 | 5000 | 1500 | 1405 | 852 | BridgeLabz | 1405 | Sales | 852 |

| 1405 | 85296374 | Ramnaagr | F | 2019-01-05 | Terisa | 1405 | 400000 | 390000 | 280000 | 5000 | 1500 | 1405 | 853 | BridgeLabz | 1405 | Marketing | 853 |

+-------------+----------+----------+--------+------------+--------+-------------+-----------+---------+--------------+------------+------------+-------------+---------------+------------+-------------+-----------+---------------+

2 rows in set (0.00 sec)

mysql>

b)

mysql> select ed.name, p.\* from employee\_details as ed right join payroll as p on ed.employee\_id=p.employee\_id having name='Bill';

+------+-------------+-----------+---------+--------------+------------+------------+

| name | employee\_id | basic\_pay | net\_pay | taxabale\_pay | deductions | income\_tax |

+------+-------------+-----------+---------+--------------+------------+------------+

| Bill | 1409 | 450000 | 350000 | 220000 | 4000 | 1500 |

+------+-------------+-----------+---------+--------------+------------+------------+

1 row in set (0.00 sec)

mysql> select \* from employee\_details where start\_date between cast('2018-04-01' as date) and date(now());

+-------------+----------+----------+--------+------------+--------+

| employee\_id | phone | address | gender | start\_date | name |

+-------------+----------+----------+--------+------------+--------+

| 1405 | 85296374 | Ramnaagr | F | 2019-01-05 | Terisa |

| 1409 | 85296374 | Space | M | 2018-04-05 | Bill |

| 1410 | 85296374 | Space | F | 2018-07-05 | Juli |

+-------------+----------+----------+--------+------------+--------+

3 rows in set (0.00 sec)

mysql> select \* from employee\_details as ed inner join payroll as p on ed.employee\_id = p.employee\_id where gender='F';

+-------------+----------+----------+--------+------------+--------+-------------+-----------+---------+--------------+------------+------------+

| employee\_id | phone | address | gender | start\_date | name | employee\_id | basic\_pay | net\_pay | taxabale\_pay | deductions | income\_tax |

+-------------+----------+----------+--------+------------+--------+-------------+-----------+---------+--------------+------------+------------+

| 1405 | 85296374 | Ramnaagr | F | 2019-01-05 | Terisa | 1405 | 400000 | 390000 | 280000 | 5000 | 1500 |

| 1410 | 85296374 | Space | F | 2018-07-05 | Juli | 1410 | 650000 | 550000 | 420000 | 4000 | 1500 |

+-------------+----------+----------+--------+------------+--------+-------------+-----------+---------+--------------+------------+------------+

2 rows in set (0.00 sec)

mysql> select sum(p.basic\_pay) from employee\_details as ed inner join payroll as p on ed.employee\_id = p.employee\_id where gender='F';

+------------------+

| sum(p.basic\_pay) |

+------------------+

| 1050000 |

+------------------+

1 row in set (0.00 sec)

mysql> select min(p.basic\_pay) from employee\_details as ed inner join payroll as p on ed.employee\_id = p.employee\_id where gender='F';

+------------------+

| min(p.basic\_pay) |

+------------------+

| 400000 |

+------------------+

1 row in set (0.00 sec)

mysql> select max(p.basic\_pay) from employee\_details as ed inner join payroll as p on ed.employee\_id = p.employee\_id where gender='F';

+------------------+

| max(p.basic\_pay) |

+------------------+

| 650000 |

+------------------+

1 row in set (0.00 sec)

mysql> select avg(p.basic\_pay) from employee\_details as ed inner join payroll as p on ed.employee\_id = p.employee\_id where gender='F';

+------------------+

| avg(p.basic\_pay) |

+------------------+

| 525000.0000 |

+------------------+

1 row in set (0.00 sec)