

### practical 3

SQL Queries - all types of Join, Sub-Query and View:

Write at least 10 SQL queries for suitable database

application using SQL DML statements

```
create table departments( department_id int ,department_name varchar(40)
,location_id int);
```

```
INSERT INTO departments(department_id,department_name,location_id) VALUES
(1,'Administration',1700);
```

```
INSERT INTO departments(department_id,department_name,location_id) VALUES
(2,'Marketing',1800);
```

```
INSERT INTO departments(department_id,department_name,location_id) VALUES
(3,'Purchasing',1700);
```

```
INSERT INTO departments(department_id,department_name,location_id) VALUES
(4,'Human Resources',2400);
```

```
INSERT INTO departments(department_id,department_name,location_id) VALUES
(5,'Shipping',1500);
```

```
INSERT INTO departments(department_id,department_name,location_id) VALUES
(6,'IT',1400);
```

```
INSERT INTO departments(department_id,department_name,location_id) VALUES
(7,'Public Relations',2700);
```

```
INSERT INTO departments(department_id,department_name,location_id) VALUES
(8,'Sales',2500);
```

```
INSERT INTO departments(department_id,department_name,location_id) VALUES
(9,'Executive',1700);
```

```
INSERT INTO departments(department_id,department_name,location_id) VALUES
(10,'Finance',1700);
```

```
INSERT INTO departments(department_id,department_name,location_id) VALUES
(11,'Accounting',1700);
```

```
create table emp( employee_id int ,first_name varchar(40) ,last_name
varchar(40) ,email varchar(40) ,phone_number varchar(40) ,hire_date
varchar(40) ,job_id int ,salary decimal ,manager_id int ,department_id int);
```

```
INSERT INTO
```

```
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES
(100,'Steven','King','steven.king@sqltutorial.org','5151234567','1987-06-17'
,4,24000.00,NULL,9);
```

```

INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES
(101,'Neena','Kochhar','neena.kochhar@sqltutorial.org','5151234568','1989-09
-21',5,17000.00,100,9);
INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES (102,'Lex','De Haan','lex.de
haan@sqltutorial.org','5151234569','1993-01-13',5,17000.00,100,9);
INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES
(103,'Alexander','Hunold','alexander.hunold@sqltutorial.org','5904234567','1
990-01-03',9,9000.00,102,6);
INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES
(104,'Bruce','Ernst','bruce.ernst@sqltutorial.org','590423568','1991-05-21',
9,6000.00,103,6);
INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES
(105,'David','Austin','david.austin@sqltutorial.org','5904234569','1997-06-2
5',9,4800.00,103,6);
INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES
(106,'Valli','Pataballa','valli.pataballa@sqltutorial.org','5904234560','199
8-02-05',9,4800.00,103,6);
INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES
(107,'Diana','Lorentz','diana.lorentz@sqltutorial.org','5904235567','1999-02
-07',9,4200.00,103,6);
INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES
(108,'Nancy','Greenberg','nancy.greenberg@sqltutorial.org','5151244569','199
4-08-17',7,12000.00,101,10);
INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES
(109,'Daniel','Faviet','daniel.faviet@sqltutorial.org','5151244169','1994-08
-16',6,9000.00,108,10);
INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal

```

```

ary,manager_id,department_id) VALUES
(110,'John','Chen','john.chen@sqltutorial.org','5151244269','1997-09-28',6,8
200.00,108,10);
INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES
(111,'Ismael','Sciarra','ismael.sciarra@sqltutorial.org','5151244369','1997-
09-30',6,7700.00,108,10);
INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES (112,'Jose Manuel','Urman','jose
manuel.urman@sqltutorial.org','5151244469','1998-03-07',6,7800.00,108,10);
INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES
(113,'Luis','Popp','luis.popp@sqltutorial.org','5151244567','1999-12-07',6,6
900.00,108,10);
INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES
(114,'Den','Raphaely','den.raphaely@sqltutorial.org','5151274561','1994-12-0
7',14,11000.00,100,3);
INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES
(115,'Alexander','Khoo','alexander.khoo@sqltutorial.org','5151274562','1995-
05-18',13,3100.00,114,3);
INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES
(116,'Shelli','Baida','shelli.baida@sqltutorial.org','5151274563','1997-12-2
4',13,2900.00,114,3);
INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES
(117,'Sigal','Tobias','sigal.tobias@sqltutorial.org','5151274564','1997-07-2
4',13,2800.00,114,3);
INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES
(118,'Guy','Himuro','guy.himuro@sqltutorial.org','5151274565','1998-11-15',1
3,2600.00,114,3);
INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES
(119,'Karen','Colmenares','karen.colmenares@sqltutorial.org','5151274566','1

```

```

999-08-10',13,2500.00,114,3);
INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES
(120,'Matthew','Weiss','matthew.weiss@sqltutorial.org','6501231234','1996-07
-18',19,8000.00,100,5);
INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES
(121,'Adam','Fripp','adam.fripp@sqltutorial.org','6501232234','1997-04-10',1
9,8200.00,100,5);
INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES
(122,'Payam','Kaufling','payam.kaufling@sqltutorial.org','6501233234','1995-
05-01',19,7900.00,100,5);
INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES
(123,'Shanta','Vollman','shanta.vollman@sqltutorial.org','6501234234','1997-
10-10',19,6500.00,100,5);
INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES
(126,'Irene','Mikkilineni','irene.mikkilineni@sqltutorial.org','6501241224',
'1998-09-28',18,2700.00,120,5);
INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES
(145,'John','Russell','john.russell@sqltutorial.org',NULL,'1996-10-01',15,14
000.00,100,8);
INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES
(146,'Karen','Partners','karen.partners@sqltutorial.org',NULL,'1997-01-05',1
5,13500.00,100,8);
INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES
(176,'Jonathon','Taylor','jonathon.taylor@sqltutorial.org',NULL,'1998-03-24'
,16,8600.00,100,8);
INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES
(177,'Jack','Livingston','jack.livingston@sqltutorial.org',NULL,'1998-04-23'
,16,8400.00,100,8);

```

```

INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES
(178,'Kimberely','Grant','kimberely.grant@sqltutorial.org',NULL,'1999-05-24'
,16,7000.00,100,8);
INSERT INTO
emp(employee_id,first_name,last_name,email,phone_number,hire_date,job_id,sal
ary,manager_id,department_id) VALUES
(179,'Charles','Johnson','charles.johnson@sqltutorial.org',NULL,'2000-01-04'
,16,6200.00,100,8);

```

### 1. Queries for join

```

SELECT e.first_name, e.last_name, d.department_id
FROM emp e
INNER JOIN departments d ON e.department_id = d.department_id;

```

```

SELECT e.first_name, e.last_name, d.department_name
FROM emp e
LEFT JOIN departments d ON e.department_id = d.department_id;

```

```

SELECT e.first_name, e.last_name
FROM emp e
RIGHT JOIN departments d ON e.department_id = d.department_id
WHERE e.department_id IS NULL;

```

### 2. Queries for view

```

CREATE VIEW emp_salary_view AS
SELECT first_name, last_name, salary
FROM emp;
CREATE VIEW it_emp_view AS
SELECT first_name, last_name, salary
FROM emp
WHERE department_id = (SELECT department_id FROM departments WHERE
department_name = 'IT');
SELECT * FROM it_emp_view;

```

### 3. Queries for Sub-Query

```

SELECT first_name, last_name, salary
FROM emp
WHERE salary > (SELECT AVG(salary) FROM emp);

```

```

SELECT first_name, last_name

```

```
FROM emp
WHERE department_id = (SELECT department_id FROM emp WHERE first_name =
'John' AND
last_name = 'Doe');
SELECT department_name
FROM departments
WHERE department_id IN
(SELECT department_id FROM emp GROUP BY department_id HAVING COUNT(*) > 1);
```