

LAB-3-SUB QUERIES

```
create table department(department_id number(10),department_name varchar(10),manager_id  
number(10),location_id number(10));
```

```
insert into department values(10,'admininstration',200,1700);
```

```
insert into department values(20,'marketing',201,1700);
```

```
insert into department values(30,'purchasing',202,1800);
```

```
insert into department values(40,'humanresource',203,1900);
```

```
insert into department values(50,'payroll',204,1700);
```

```
insert into department values(60,'shipping',205,1900);
```

```
insert into department values(70,'sales',206,1700);
```

```
insert into department values(80,'contracting',207,1700);
```

```
SQL> select * from department;
```

```
DEPARTMENT_ID DEPARTMENT_NAME  MANAGER_ID LOCATION_ID
```

```
-----  
10            admininstration    200      1700  
20            marketing          201      1700  
30            purchasing         202      1800  
40            humanresource      203      1900  
50            payroll            204      1700  
60            shipping           205      1900  
70            sales              206      1700  
80            contracting        207      1700
```

8 rows selected.

```
create table employee(emp_id number(10),first_name varchar(10),last_name
varchar(10),hire_date varchar(10),job_id varchar(10),salary varchar(10),commission_pct
varchar(10),manager_id number(10),department_id number(10));
```

```
insert into employee values(100,'swetha','jenifer','10-DEC-2021','M_P',70000.00,0.10,201,20);
insert into employee values(101,'chandler','bing','11-AUG-2021','HR',45000.00,0.19,203,40);
insert into employee values(102,'monica','geller','24-SEP-2021','P_EMP',13000.00,0.20,202,30);
insert into employee values(103,'racheal','green','10-SEP-2020','A_VP',25000.00,0.16,200,10);
insert into employee values(104,'phoebe','buffay','11-FEB-2021','M_VP',60000.00,0.30,201,20);
insert into employee values(105,'ross','geller','18-MAY-2022','S_EMP',10000.00,0.13,206,70);
insert into employee values(106,'dinesh','kumar','17-MAR-2022','PY_EMP',12000.00,0.16,204,50);
insert into employee values(107,'hari','prasath','09-OCT-2021','C_MD',45000.00,0.18,207,80);
insert into employee values(108,'yoga','eshwari','01-SEP-2021','S_EXE',35000.00,0.10,206,70);
insert into employee values(109,'rolex','suriya','11-NOV-2021','A_EXE',50000.00,0.11,200,10);
insert into employee values(110,'newlin','blessy','09-JUN-2021','P_EXE',25000.00,0.10,202,30);
insert into employee values(111,'joshwa','peter','18-JUL-2020','SP_EXE',36000.00,0.16,205,60);
insert into employee values(112,'sam','victor','09-JAN-2020','CNTR',40000.00,0.14,207,80);
insert into employee values(113,'harish','umesh','03-DEC-2021','S_MD',23000.00,0.10,206,70);
```

```
SQL> select * from employee;
```

EMP_ID	FIRST_NAME	LAST_NAME	HIRE_DATE	JOB_ID	SALARY	COMMISSION
100	swetha	jenifer	10-DEC-2021	M_P	70000	.1
201						20
101	chandler	bing	11-AUG-2021	HR	45000	.19
203						40

102	monica	geller	24-SEP-2021	P_EMP	13000	.2
202		30				

EMP_ID	FIRST_NAME	LAST_NAME	HIRE_DATE	JOB_ID	SALARY	COMMISSION
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MANAGER_ID	DEPARTMENT_ID
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103	racheal	green	10-SEP-2020	A_VP	25000	.16
200		10				

104	phoebe	buffay	11-FEB-2021	M_VP	60000	.3
201		20				

105	ross	geller	18-MAY-2022	S_EMP	10000	.13
206		70				

EMP_ID	FIRST_NAME	LAST_NAME	HIRE_DATE	JOB_ID	SALARY	COMMISSION
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MANAGER_ID	DEPARTMENT_ID
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106	dinesh	kumar	17-MAR-2022	PY_EMP	12000	.16
204		50				

107	hari	prasath	09-OCT-2021	C_MD	45000	.18
207		80				

108	yoga	eshwari	01-SEP-2021	S_EXE	35000	.1
206		70				

EMP_ID FIRST_NAME LAST_NAME HIRE_DATE JOB_ID SALARY COMMISSION

MANAGER_ID DEPARTMENT_ID

109 rolex suriya 11-NOV-2021 A_EXE 50000 .11

200 10

110 newlin blessy 09-JUN-2021 P_EXE 25000 .1

202 30

111 joshwa peter 18-JUL-2020 SP_EXE 36000 .16

205 60

EMP_ID FIRST_NAME LAST_NAME HIRE_DATE JOB_ID SALARY COMMISSION

MANAGER_ID DEPARTMENT_ID

112 sam victor 09-JAN-2020 CNTR 40000 .14

207 80

113 harish umesh 03-DEC-2021 S_MD 23000 .1

206 70

14 rows selected.

1. write a SQL query to find those employees who receive a higher salary than the employee with ID 163. Return first name, last name.

```
SQL> SELECT first_name, last_name FROM employee WHERE salary > ( SELECT salary FROM employee WHERE emp_id=102 );
```

```
FIRST_NAME LAST_NAME
```

```
-----  
swetha  jenifer  
chandler bing  
racheal green  
phoebe  buffay  
hari    prasath  
yoga    eshwari  
rolex   suriya  
newlin  blessy  
joshwa  peter  
sam     victor  
harish  umesh
```

11 rows selected.

2. write a SQL query to find out which employees have the same designation as the employee whose ID is 169. Return first name, last name, department ID and job ID.

```
SQL> SELECT first_name, last_name, salary, department_id, job_id FROM employee WHERE job_id = ( SELECT job_id FROM employee WHERE emp_id=103 );
```

```
FIRST_NAME LAST_NAME SALARY  DEPARTMENT_ID JOB_ID
```

```
-----  
racheal  green    25000      10 A_VP
```

3. write a SQL query to find those employees whose salary matches the lowest salary of any of the departments. Return first name, last name and department

ID.

```
SQL> SELECT first_name, last_name, salary, department_id FROM employee WHERE salary IN (
SELECT MIN(salary) FROM employee
```

```
GROUP BY department_id );
```

```
FIRST_NAME LAST_NAME SALARY DEPARTMENT_ID
```

```
-----
```

chandler	bing	45000	40
monica	geller	13000	30
racheal	green	25000	10
phoebe	buffay	60000	20
ross	geller	10000	70
dinesh	kumar	12000	50
hari	prasath	45000	80
newlin	blessy	25000	30
joshwa	peter	36000	60
sam	victor	40000	80

10 rows selected.

4. write a SQL query to find those employees who earn more than the average salary. Return employee ID, first name, last name.

```
SQL> SELECT emp_id, first_name, last_name FROM employee WHERE salary > ( SELECT AVG(salary)
FROM employee);
```

```
EMP_ID FIRST_NAME LAST_NAME
```

```
-----
```

100	swetha	jenifer
101	chandler	bing
104	phoebe	buffay
107	hari	prasath

108	yoga	eshwari
109	rolex	suriya
111	joshwa	peter
112	sam	victor

8 rows selected.

5. write a SQL query to find those employees who report to that manager whose first name is 'Payam'. Return first name, last name, employee ID and salary.

```
SQL> SELECT first_name, last_name, emp_id, salary FROM employee WHERE manager_id =
(SELECT manager_id FROM employee WHERE first_name = 'newlin' );
```

FIRST_NAME	LAST_NAME	EMP_ID	SALARY
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monica	geller	102	13000
newlin	blessy	110	25000

6. write a SQL query to find all those employees who work in the Finance department. Return department ID, name (first), job ID and department name.

```
SQL> SELECT e.department_id, e.first_name, e.job_id , d.department_name FROM employee e ,
department d WHERE e.department_id = d.department_id AND d.department_name =
'marketing';
```

DEPARTMENT_ID	FIRST_NAME	JOB_ID	DEPARTMENT_NAME
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20	swetha	M_P	marketing
20	phoebe	M_VP	marketing

7. write a SQL query to find the employee whose salary is 3000 and reporting person's ID is 121. Return all fields.

SQL> SELECT * FROM employee WHERE salary=70000.00 and manager_id=201;

EMP_ID	FIRST_NAME	LAST_NAME	HIRE_DATE	JOB_ID	SALARY	COMMISSION
100	swetha	jenifer	10-DEC-2021	M_P	70000	.1
201						

8. write a SQL query to find those employees whose ID matches any of the numbers 134, 159 and 183. Return all the fields.

SQL> SELECT * FROM employee WHERE emp_id IN (100,103,106);

EMP_ID	FIRST_NAME	LAST_NAME	HIRE_DATE	JOB_ID	SALARY	COMMISSION
100	swetha	jenifer	10-DEC-2021	M_P	70000	.1
201						
103	racheal	green	10-SEP-2020	A_VP	25000	.16
200						
106	dinesh	kumar	17-MAR-2022	PY_EMP	12000	.16
204						

9. write a SQL query to find those employees whose salary is in the range of 10000, and 30000 (Begin and end values have included.). Return all the fields.

SQL> SELECT * FROM employee WHERE salary BETWEEN 10000 and 30000;

EMP_ID	FIRST_NAME	LAST_NAME	HIRE_DATE	JOB_ID	SALARY	COMMISSION


```

-----
102 monica geller 24-SEP-2021 P_EMP 13000 .2
202      30

103 racheal green 10-SEP-2020 A_VP 25000 .16
200      10

105 ross geller 18-MAY-2022 S_EMP 10000 .13
206      70

```

```

EMP_ID FIRST_NAME LAST_NAME HIRE_DATE JOB_ID SALARY COMMISSION
-----
MANAGER_ID DEPARTMENT_ID
-----

```

```

106 dinesh kumar 17-MAR-2022 PY_EMP 12000 .16
204      50

110 newlin blessy 09-JUN-2021 P_EXE 25000 .1
202      30

113 harish umesh 03-DEC-2021 S_MD 23000 .1
206      70

```

6 rows selected.

10. write a SQL query to find those employees who get second-highest salary.

Return all the fields of the employees.

```

SQL> SELECT * FROM employees WHERE emp_id IN (SELECT emp_id FROM employee WHERE
salary = (SELECT MAX(salary) FROM employee WHERE salary < (SELECT MAX(salary) FROM
employee)));

```

EMP_ID	FIRST_NAME	LAST_NAME	HIRE_DATE	JOB_ID	SALARY	COMMISSION
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MANAGER_ID	DEPARTMENT_ID
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104	phoebe	buffay	11-FEB-2021	M_VP	60000	.3
201		20				

11. write a SQL query to find those employees who earn more than the average salary and work in the same department as an employee whose first name contains the letter e. Return employee ID, first name and salary.

SQL> SELECT emp_id, first_name , salary FROM employee WHERE salary > (SELECT AVG (salary) FROM employee) AND department_id IN (SELECT department_id FROM employee WHERE first_name LIKE '%e%');

EMP_ID	FIRST_NAME	SALARY
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104	phoebe	60000
100	swetha	70000
101	chandler	45000
109	rolex	50000

12. write a SQL query to find those employees whose salary is lower than that of employees whose job title is 'C_MD'. Return employee ID, first name, last name, job ID.

SQL> SELECT emp_id,first_name,last_name, job_id FROM employee WHERE salary < ANY (SELECT salary FROM employee WHERE job_id = 'C_MD') AND job_id <> 'C_MD';

EMP_ID	FIRST_NAME	LAST_NAME	JOB_ID
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105	ross	geller	S_EMP
106	dinesh	kumar	PY_EMP
102	monica	geller	P_EMP
113	harish	umesh	S_MD
103	racheal	green	A_VP

110	newlin	blessy	P_EXE
108	yoga	eshwari	S_EXE
111	joshwa	peter	SP_EXE
112	sam	victor	CNTR

9 rows selected.