SWETHA JENIFER -225229142

**Joins**

**Perform the Self joins, Inner joins, and Outer Joins from Employee, Department Tables**

SQL> create table department(department\_id number(10),department\_name varchar(16),manager\_id number(10),location\_id number(10));

Table created.

SQL> desc department;

Name Null? Type

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DEPARTMENT\_ID NUMBER(10)

DEPARTMENT\_NAME VARCHAR2(16)

MANAGER\_ID NUMBER(10)

LOCATION\_ID NUMBER(10)

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

1 row created.

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

1 row created.

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

1 row created.

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

1 row created.

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

1 row created.

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

1 row created.

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

1 row created.

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

1 row created.

SQL> select \* from department;

DEPARTMENT\_ID DEPARTMENT\_NAME MANAGER\_ID LOCATION\_ID

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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.

SQL> create table empl(emp\_id number(10),first\_name varchar(10),last\_name varchar(10),hire\_date varchar(13),job\_id varchar(10),salary varchar(10),commission\_pct varchar(10),manager\_id number(10),department\_id number(10));

Table created.

SQL> desc empl;

Name Null? Type

----------------------------------------- -------- ----------------------------

EMP\_ID NUMBER(10)

FIRST\_NAME VARCHAR2(10)

LAST\_NAME VARCHAR2(10)

HIRE\_DATE VARCHAR2(13)

JOB\_ID VARCHAR2(10)

SALARY VARCHAR2(10)

COMMISSION\_PCT VARCHAR2(10)

MANAGER\_ID NUMBER(10)

DEPARTMENT\_ID NUMBER(10)

SQL> insert into empl values(100,'swetha','jenifer','10-DEC-2021','M\_P',70000.00,0.10,201,20);

1 row created.

SQL> insert into empl values(101,'chandler','bing','11-AUG-2021','HR',45000.00,0.19,203,40);

1 row created.

SQL> insert into empl values(102,'monica','geller','24-SEP-2021','P\_EMP',13000.00,0.20,202,30);

1 row created.

SQL> insert into empl values(103,'racheal','green','10-SEP-2020','A\_VP',25000.00,0.16,200,10);

1 row created.

SQL> insert into empl values(104,'phoebe','buffay','11-FEB-2021','M\_VP',60000.00,0.30,201,20);

1 row created.

SQL> insert into empl values(105,'ross','geller','18-MAY-2022','S\_EMP',10000.00,0.13,206,70);

1 row created.

SQL> insert into empl values(106,'dinesh','kumar','17-MAR-2022','PY\_EMP',12000.00,0.16,204,50);

1 row created.

SQL> insert into empl values(107,'hari','prasath','09-OCT-2021','C\_MD',45000.00,0.18,207,80);

1 row created.

SQL> insert into empl values(108,'yoga','eshwari','01-SEP-2021','S\_EXE',35000.00,0.10,206,70);

1 row created.

SQL> insert into empl values(109,'rolex','suriya','11-NOV-2021','A\_EXE',50000.00,0.11,200,10);

1 row created.

SQL> insert into empl values(110,'newlin','blessy','09-JUN-2021','P\_EXE',25000.00,0.10,202,30);

1 row created.

SQL> insert into empl values(111,'joshwa','peter','18-JUL-2020','SP\_EXE',36000.00,0.16,205,60);

1 row created.

SQL> insert into empl values(112,'sam','victor','09-JAN-2020','CNTR',40000.00,0.14,207,80);

1 row created.

SQL> insert into empl values(113,'harish','umesh','03-DEC-2021','S\_MD',23000.00,0.10,206,70);

1 row created.

SQL> select \* from empl;

EMP\_ID FIRST\_NAME LAST\_NAME HIRE\_DATE JOB\_ID SALARY COMMISSION

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MANAGER\_ID DEPARTMENT\_ID

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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

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MANAGER\_ID DEPARTMENT\_ID

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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

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MANAGER\_ID DEPARTMENT\_ID

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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 the first name, last name, department**

**number, and department name for each employee.**

SQL> SELECT E.first\_name , E.last\_name , E.department\_id , D.department\_name FROM empl E JOIN department D ON E.department\_id = D.department\_id;

FIRST\_NAME LAST\_NAME DEPARTMENT\_ID DEPARTMENT\_NAME

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swetha jenifer 20 marketing

chandler bing 40 humanresource

monica geller 30 purchasing

racheal green 10 admininstration

phoebe buffay 20 marketing

ross geller 70 sales

dinesh kumar 50 payroll

hari prasath 80 contracting

yoga eshwari 70 sales

rolex suriya 10 admininstration

newlin blessy 30 purchasing

FIRST\_NAME LAST\_NAME DEPARTMENT\_ID DEPARTMENT\_NAME

---------- ---------- ------------- ----------------

joshwa peter 60 shipping

sam victor 80 contracting

harish umesh 70 sales

14 rows selected.

**2.  write a SQL query to find the first name, last name, department, for**

**each employee**

SQL> SELECT E.first\_name , E.last\_name, D.department\_name FROM empl E JOIN department D ON E.department\_id = D.department\_id;

FIRST\_NAME LAST\_NAME DEPARTMENT\_NAME

---------- ---------- ----------------

swetha jenifer marketing

chandler bing humanresource

monica geller purchasing

racheal green admininstration

phoebe buffay marketing

ross geller sales

dinesh kumar payroll

hari prasath contracting

yoga eshwari sales

rolex suriya admininstration

newlin blessy purchasing

FIRST\_NAME LAST\_NAME DEPARTMENT\_NAME

---------- ---------- ----------------

joshwa peter shipping

sam victor contracting

harish umesh sales

14 rows selected.

**3.  write a SQL query to find the first name, last name, salary, and job**

**grade for all employees.**

SQL> create table job\_grades(grade\_level varchar(1),lowest\_sal varchar(10),highest varchar(10));

Table created.

SQL>

SQL> insert into job\_grades values('A',10000.00,12000.00);

1 row created.

SQL> insert into job\_grades values('B',13000.00,15000.00);

1 row created.

SQL> insert into job\_grades values('C',20000.00,25000.00);

1 row created.

SQL> insert into job\_grades values('D',30000.00,39000.00);

1 row created.

SQL> insert into job\_grades values('E',40000.00,70000.00);

1 row created.

SQL> select \* from job\_grades;

G LOWEST\_SAL HIGHEST

- ---------- ----------

A 10000 12000

B 13000 15000

C 20000 25000

D 30000 39000

E 40000 70000

SQL> SELECT E.first\_name, E.last\_name, E.salary, J.grade\_level FROM empl E JOIN job\_grades J ON E.salary BETWEEN J.lowest\_sal AND J.highest;

FIRST\_NAME LAST\_NAME SALARY G

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ross geller 10000 A

dinesh kumar 12000 A

monica geller 13000 B

racheal green 25000 C

newlin blessy 25000 C

harish umesh 23000 C

yoga eshwari 35000 D

joshwa peter 36000 D

swetha jenifer 70000 E

chandler bing 45000 E

phoebe buffay 60000 E

FIRST\_NAME LAST\_NAME SALARY G

---------- ---------- ---------- -

hari prasath 45000 E

rolex suriya 50000 E

sam victor 40000 E

14 rows selected.

**4. Write a SQL query to find all those employees who work in department**

**ID 80 or 40. Return first name, last name, department number and**

**department name.**

SQL> SELECT E.first\_name , E.last\_name , E.department\_id , D.department\_name FROM empl E JOIN department D ON E.department\_id = D.department\_id AND E.department\_id IN (80 , 40) ORDER BY E.last\_name;

FIRST\_NAME LAST\_NAME DEPARTMENT\_ID DEPARTMENT\_NAME

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chandler bing 40 humanresource

hari prasath 80 contracting

sam victor 80 contracting

**5. Write a SQL query to find those employees whose first name contains**

**the letter ‘z’. Return first name, last name, department\_name.**

SQL> SELECT E.first\_name,E.last\_name,D.department\_name FROM empl E JOIN department D ON E.department\_id = D.department\_id WHERE E.first\_name LIKE '%c%';

FIRST\_NAME LAST\_NAME DEPARTMENT\_NAME

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racheal green admininstration

monica geller purchasing

chandler bing humanresource

SQL> SELECT E.first\_name,E.last\_name,D.department\_name FROM empl E JOIN department D ON E.department\_id = D.department\_id WHERE E.first\_name LIKE '%z%';

no rows selected

**6. write a SQL query to find all departments, including those without**

**employees. Return first name, last name, department ID, department name.**

SQL> SELECT E.first\_name, E.last\_name, D.department\_id, D.department\_name FROM empl E RIGHT OUTER JOIN department D ON E.department\_id = D.department\_id;

FIRST\_NAME LAST\_NAME DEPARTMENT\_ID DEPARTMENT\_NAME

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swetha jenifer 20 marketing

chandler bing 40 humanresource

monica geller 30 purchasing

racheal green 10 admininstration

phoebe buffay 20 marketing

ross geller 70 sales

dinesh kumar 50 payroll

hari prasath 80 contracting

yoga eshwari 70 sales

rolex suriya 10 admininstration

newlin blessy 30 purchasing

FIRST\_NAME LAST\_NAME DEPARTMENT\_ID DEPARTMENT\_NAME

---------- ---------- ------------- ----------------

joshwa peter 60 shipping

sam victor 80 contracting

harish umesh 70 sales

14 rows selected.

**7. write a SQL query to find the employees who earn less than the**

**employee of ID 182. Return first name, last name and salary.**

SQL> SELECT E.first\_name, E.last\_name, E.salary FROM empl E JOIN empl S ON E.salary < S.salary AND S.emp\_id = 111;

FIRST\_NAME LAST\_NAME SALARY

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monica geller 13000

racheal green 25000

ross geller 10000

dinesh kumar 12000

yoga eshwari 35000

newlin blessy 25000

harish umesh 23000

7 rows selected.

**8. write a SQL query to find the employees and their managers. These**

**managers do not work under any manager. Return the first name of the**

**employee and manager.**

SQL>

SQL> SELECT E.first\_name AS "Employee Name" FROM empl E LEFT OUTER JOIN employee M ON E.manager\_id = M.emp\_id;

SELECT E.first\_name AS "Employee Name" FROM empl E LEFT OUTER JOIN employee M ON E.manager\_id = M.emp\_id

\*

ERROR at line 1:

ORA-00942: table or view does not exist

SQL> SELECT E.first\_name AS "Employee Name" FROM empl E LEFT OUTER JOIN empl M ON E.manager\_id = M.emp\_id;

Employee N

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newlin

monica

phoebe

swetha

dinesh

chandler

rolex

racheal

harish

yoga

ross

Employee N

----------

sam

hari

joshwa

14 rows selected.

**9. write a SQL query to calculate the difference between the maximum**

**salary of the job and the employee&#39;s salary. Return job title, employee**

**name, and salary difference.**

SQL> SELECT first\_name||''||last\_name AS employee\_name,salary as salary\_difference FROM empl;

EMPLOYEE\_NAME SALARY\_DIF

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swethajenifer 70000

chandlerbing 45000

monicageller 13000

rachealgreen 25000

phoebebuffay 60000

rossgeller 10000

dineshkumar 12000

hariprasath 45000

yogaeshwari 35000

rolexsuriya 50000

newlinblessy 25000

EMPLOYEE\_NAME SALARY\_DIF

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joshwapeter 36000

samvictor 40000

harishumesh 23000

14 rows selected.

**10. write a SQL query to calculate the average salary, the number of**

**employees receiving commissions in that department. Return**

**department name, average salary and number of employees.**

SQL> SELECT department\_name, AVG(salary), COUNT(commission\_pct) FROM department JOIN empl USING (department\_id) GROUP BY department\_name;

DEPARTMENT\_NAME AVG(SALARY) COUNT(COMMISSION\_PCT)

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purchasing 19000 2

admininstration 37500 2

payroll 12000 1

sales 22666.6667 3

marketing 65000 2

humanresource 45000 1

contracting 42500 2

shipping 36000 1

8 rows selected.