

DBMS Lab Exercise-5 SQL Joins

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21BCE1163

Consider the following Company Schema.

EMPLOYEE(Fname, Lname, PAN, Bdate, Address, Gender, Salary, Super_PAN,
Dno)

DEPARTMENT(Dname, Dnum, Mgr_PAN)

PROJECT(Pname, Pnum, Plocation, Dnum)

WORKSON(EPAN, Pno, Hours)

DEPENDENT(EPAN, Dependent_Name, age, gender, Relationship)

```
create table employee_21BCE1163 (fname varchar(20),lname
varchar(20),pan number(20),bdate date,addr varchar(20),gen
varchar(5),sal number(10),suppan number(10),dno number(10));
create table department_21BCE1163(dname varchar(30),dnum
number(20),mgrpan number(20));
create table project_21BCE1163 (pname varchar(20),pnum
number(20),ploc varchar(20),dnum number(20));
create table workson_21BCE1163(epan varchar(20),pno
varchar(20),hours number(10));
create table dependent_21BCE1163(epan varchar(10),dependent
_21BCE1163name varchar(20),age number(10),gen varchar(10),rel
varchar(20));
```

```
insert                into                employee_21BCE1163
values('sandip','datta',3000,'12-jul-
2003','Bankura','M',50000,5550,100);
insert into employee_21BCE1163 values('ananya','tej',3001,'21-
jan-2003','vijaywada','M',70000,5555,101);
insert into employee_21BCE1163 values('rohit','kumar',3002,'28-
apr-2002','tirupati','M',60000,5551,100);
insert                into                employee_21BCE1163
values('shneur','jhirad',3003,'30-mar-
2003','thane','M',87000,5555,102);
```

```
insert                                into                                employee_21BCE1163
values('nidhish','bellam',3004,'18-may-
2004','vijaywada','M',65400,5550,103);
```

```
insert into department_21BCE1163 values('hr',100,5550);
insert into department_21BCE1163 values('sales',101,5555);
insert into department_21BCE1163 values('mechanical',102,5551);
insert into department_21BCE1163 values('research',103,5550);
```

```
insert                                into                                project_21BCE1163
values('productx','1','delhi',100);
insert                                into                                project_21BCE1163
values('product55','2','bombay',101);
insert                                into                                project_21BCE1163
values('productwd','3','hydrabad',100);
insert                                into                                project_21BCE1163
values('productttt','4','bangalore',102);
insert                                into                                project_21BCE1163
values('product777','5','gujrat',103);
```

```
insert into workson_21BCE1163 values(3000,500,50);
insert into workson_21BCE1163 values(3001,501,51);
insert into workson_21BCE1163 values(3002,502,52);
insert into workson_21BCE1163 values(3003,503,53);
insert into workson_21BCE1163 values(3004,504,54);
```

```
insert                                into                                dependent_21BCE1163
values(3000,'aaaa',52,'m','father');
insert                                into                                dependent_21BCE1163
values(3001,'bbbb',58,'f','mother');
insert                                into                                dependent_21BCE1163
values(3002,'cccc',62,'m','father');
insert                                into                                dependent_21BCE1163
values(3003,'dddd',56,'f','mother');
insert                                into                                dependent_21BCE1163
values(3004,'eeee',65,'m','father');
```

```
desc employee_21BCE1163;
desc department_21BCE1163;
desc project_21BCE1163;
desc workson_21BCE1163;
desc dependent _21BCE1163;
```

TABLE EMPLOYEE

Column	Null?	Type
FNAME	-	VARCHAR2(20)
LNAME	-	VARCHAR2(20)
PAN	-	NUMBER(20,0)
BDATE	-	DATE
ADDR	-	VARCHAR2(20)
GEN	-	VARCHAR2(5)
SAL	-	NUMBER(10,0)
SUPPAN	-	NUMBER(10,0)
DNO	-	NUMBER(10,0)

TABLE DEPARTMENT

Column	Null?	Type
DNAME	-	VARCHAR2(30)
DNUM	-	NUMBER(20,0)
MGRPAN	-	NUMBER(20,0)

TABLE PROJECT

Column	Null?	Type
PNAME	-	VARCHAR2(20)
PNUM	-	NUMBER(20,0)
PLOC	-	VARCHAR2(20)
DNUM	-	NUMBER(20,0)

TABLE WORKSON

Column	Null?	Type
EPAN	-	VARCHAR2(20)
PNO	-	VARCHAR2(20)
HOURS	-	NUMBER(10,0)

TABLE DEPENDENT

Column	Null?	Type
EPAN	-	VARCHAR2(10)
DEPENDENTNAME	-	VARCHAR2(20)
AGE	-	NUMBER(10,0)
GEN	-	VARCHAR2(10)
REL	-	VARCHAR2(20)

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1. List the names of all employees who have a dependent with relationship Father-Son.

```
SELECT employee_21BCE1163.fname,employee_21BCE1163.lname from
employee_21BCE1163
full outer join dependent _21BCE1163 on dependent
_21BCE1163.epan=employee_21BCE1163.pan where dependent
_21BCE1163.rel='father';
```

FNAME	LNAME
sandip	datta
rohit	kumar
nidhish	bellam

2. List the names of all employees in department 3 who work on the ProductX project.

```
select employee_21BCE1163.fname,employee_21BCE1163.lname from
employee_21BCE1163 full outer join department_21BCE1163 on
employee_21BCE1163.dno=department_21BCE1163.dnum full outer
join project_21BCE1163 on
employee_21BCE1163.dno=project_21BCE1163.dnum where
project_21BCE1163.pname='productx';
```

FNAME	LNAME
sandip	datta
rohit	kumar

3. List the employee name, Address, department name of employees who works in Mechanical Department.

```
select
employee_21BCE1163.fname,employee_21BCE1163.lname,employee_21BCE
1163.addr, department_21BCE1163.dname from employee_21BCE1163
full outer join department_21BCE1163 on
employee_21BCE1163.dno=department_21BCE1163.dnum where
department_21BCE1163.dname='mechanical';
```

FNAME	LNAME	ADDR	DNAME
shneur	jhirad	thane	mechanical

4. List the details employees who work on a project located in Bangalore.

```
select * from employee_21BCE1163 full outer join
department_21BCE1163 on
employee_21BCE1163.dno=department_21BCE1163.dnum full outer
join project_21BCE1163 on
employee_21BCE1163.dno=project_21BCE1163.dnum where
project_21BCE1163.ploc='bangalore';
```

FNAME	LNAME	PAN	BDATE	ADDR	GEN	SAL	SUPPAN	DNO	DNAME	DNUM	MGRPAN	PNAME	PNUM	PLOC	DNUM
shneur	jhirad	3003	30-MAR-03	thane	M	87000	5555	102	mechanical	102	2555	producttt	4	bangalore	102

5. List the names of employees who do not work on any project

```
select * from employee_21BCE1163 full outer join
department_21BCE1163 on
employee_21BCE1163.dno=department_21BCE1163.dnum full outer join
project_21BCE1163 on
employee_21BCE1163.dno=project_21BCE1163.dnum where
employee_21BCE1163.dno=null;
```

no data found

6. List the names of department managers who have no dependents.

```
select * from employee_21BCE1163 full outer join dependent
_21BCE1163 on employee_21BCE1163.pan=dependent _21BCE1163.epan
where dependent _21BCE1163.epan=null;
```

no data found

7. List the department name, manager name, and manager salary for “Sales” department.

```
select department_21BCE1163.dname, employee_21BCE1163.fname as
managername, employee_21BCE1163.sal as managersalary from
employee_21BCE1163 full outer join department_21BCE1163 on
employee_21BCE1163.dno=department_21BCE1163.dnum where
department_21BCE1163.dname='sales';
```

DNAME	MANAGERNAME	MANAGERSALARY
sales	ananya	70000

8. List the employee name, supervisor name, and employee salary for each employee who works in the ‘Research’ department

```
select employee_21BCE1163.fname , employee_21BCE1163.sal from
employee_21BCE1163 full outer join department_21BCE1163 on
employee_21BCE1163.dno=department_21BCE1163.dnum where
department_21BCE1163.dname='research';
```

FNAME	SAL
nidhish	65400

9. Retrieve the names of all employees whose supervisor's supervisor has '5555' for PAN.

```
select employee_21BCE1163.fname as employee_21BCE1163name from
employee_21BCE1163 full outer join department_21BCE1163 on
employee_21BCE1163.suppan=department_21BCE1163.mgrpan where
department_21BCE1163.mgrpan='5555';
```

EMPLOYEE NAME
ananya
shneur

10. List the employee name and Salary of employee who works more than 10 hours in a week.

```
select employee_21BCE1163.fname, employee_21BCE1163.sal from
employee_21BCE1163 left join workson _21BCE1163on
employee_21BCE1163.pan=workson.epan where workson.hours>10;
```


FNAME	SAL
sandip	50000
ananya	70000
rohit	60000
shneur	87000
nidhish	65400

Whole Code:

```
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number(20),ploc varchar(20),dnum number(20));
create table workson _21BCE1163(epan varchar(20),pno
varchar(20),hours number(10));
create table dependent _21BCE1163(epan varchar(10),dependent
_21BCE1163name varchar(20) ,age number(10),gen varchar(10),rel
varchar(20));
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apr-2002','tirupati','M',60000,5551,100);
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```

insert                                into                                employee_21BCE1163
values('shneur','jhirad',3003,'30-mar-
2003','thane','M',87000,5555,102);
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values('product777','5','gujrat',103);

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insert into workson_21BCE1163 values(3004,504,54);

insert                                into                                dependent_21BCE1163
values(3000,'aaaa',52,'m','father');
insert                                into                                dependent_21BCE1163
values(3001,'bbbb',58,'f','mother');
insert                                into                                dependent_21BCE1163
values(3002,'cccc',62,'m','father');
insert                                into                                dependent_21BCE1163
values(3003,'dddd',56,'f','mother');
insert                                into                                dependent_21BCE1163
values(3004,'eeee',65,'m','father');

desc employee_21BCE1163;
desc department_21BCE1163;
desc project_21BCE1163;
desc workson_21BCE1163;
desc dependent _21BCE1163;

```

```
SELECT employee_21BCE1163.fname,employee_21BCE1163.lname from
employee_21BCE1163
full outer join dependent _21BCE1163 on dependent
_21BCE1163.epan=employee_21BCE1163.pan where dependent
_21BCE1163.rel='father';
```

```
select employee_21BCE1163.fname,employee_21BCE1163.lname from
employee_21BCE1163 full outer join department_21BCE1163 on
employee_21BCE1163.dno=department_21BCE1163.dnum full outer
join project_21BCE1163 on
employee_21BCE1163.dno=project_21BCE1163.dnum where
project_21BCE1163.pname='productx';
```

```
select
employee_21BCE1163.fname,employee_21BCE1163.lname,employee_21B
CE1163.addr, department_21BCE1163.dname from employee_21BCE1163
full outer join department_21BCE1163 on
employee_21BCE1163.dno=department_21BCE1163.dnum where
department_21BCE1163.dname='mechanical';
```

```
select * from employee_21BCE1163 full outer join
department_21BCE1163 on
employee_21BCE1163.dno=department_21BCE1163.dnum full outer
join project_21BCE1163 on
employee_21BCE1163.dno=project_21BCE1163.dnum where
project_21BCE1163.ploc='bangalore';
```

```
select * from employee_21BCE1163 full outer join
department_21BCE1163 on
employee_21BCE1163.dno=department_21BCE1163.dnum full outer
join project_21BCE1163 on
employee_21BCE1163.dno=project_21BCE1163.dnum where
employee_21BCE1163.dno=null;
```

```
select * from employee_21BCE1163 full outer join dependent
_21BCE1163 on employee_21BCE1163.pan=dependent _21BCE1163.epan
where dependent _21BCE1163.epan=null;
```

```
select department_21BCE1163.dname, employee_21BCE1163.fname as
managername, employee_21BCE1163.sal as managersalary from
employee_21BCE1163 full outer join department_21BCE1163 on
employee_21BCE1163.dno=department_21BCE1163.dnum where
department_21BCE1163.dname='sales';
```

```
select employee_21BCE1163.fname , employee_21BCE1163.sal from
employee_21BCE1163 full outer join department_21BCE1163 on
```

```
employee_21BCE1163.dno=department_21BCE1163.dnum      where  
department_21BCE1163.dname='research';
```

```
select employee_21BCE1163.fname as employee_21BCE1163name from  
employee_21BCE1163 full outer join department_21BCE1163 on  
employee_21BCE1163.suppan=department_21BCE1163.mgrpan  where  
department_21BCE1163.mgrpan='5555';
```

```
select  employee_21BCE1163.fname,employee_21BCE1163.sal  from  
employee_21BCE1163 left join workson _21BCE1163on  
employee_21BCE1163.pan=workson.epan where workson.hours>10;
```