



School Of Computer Science and Engineering

Assignment 6
(Winter Sem 2021-2022)

Course Code: CSE2007

Course Title: Database Management Systems

Faculty Name: Manomita Chakraborty (70296)

Aim: To understand join operations in SQL

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Regno: 20BCD7171

Employee

	EmployeeID	FirstName	LastName	Salary	JoiningDate	Department	Gender
1	1	Vikas	Ahlawat	600000.00	2013-02-15 11:16:28.290	IT	Male
2	2	nikita	Jain	530000.00	2014-01-09 17:31:07.793	HR	Female
3	3	Ashish	Kumar	1000000.00	2014-01-09 10:05:07.793	IT	Male
4	4	Nikhil	Sharma	480000.00	2014-01-09 09:00:07.793	HR	Male
5	5	anish	kadian	500000.00	2014-01-09 09:31:07.793	Payroll	Male

```
CREATE TABLE EMPLOYEE_20BCD7171(EMPID NUMERIC(1), FIRST_NAME  
VARCHAR(6),LAST_NAME VARCHAR(10), SALARY NUMERIC(10), JOIN_DATE VARCHAR(30),  
DEPARTMENT VARCHAR(10), GENDER CHAR(6));
```

```
INSERT INTO EMPLOYEE_20BCD7171 VALUES(1, 'Vikas', 'Ahlawat', '600000', '2013-02-15  
11:16:28.290', 'IT', 'Male');
```

```
INSERT INTO EMPLOYEE_20BCD7171 VALUES(2, 'Nikita', 'Jain', '530000', '2014-01-09  
17:31:07.793', 'HR', 'Female');
```

```
INSERT INTO EMPLOYEE_20BCD7171 VALUES(3, 'Ashish', 'Kumar', '1000000', '2014-01-09  
10:05:07.793', 'IT', 'Male');
```

```
INSERT INTO EMPLOYEE_20BCD7171 VALUES(4, 'Nikhil', 'Sharma', '480000', '2014-01-09  
09:00:07.793', 'HR', 'Male');
```

```
INSERT INTO EMPLOYEE_20BCD7171 VALUES(5, 'Anish', 'Kadian', '500000', '2014-01-09
09:31:07.793', 'PAYROLL', 'Male');
```

Project

	ProjectDetailID	EmployeeDetailID	ProjectName
1	1	1	Task Track
2	2	1	CLP
3	3	1	Survey Managment
4	4	2	HR Managment
5	5	3	Task Track
6	6	3	GRS
7	7	3	DDS
8	8	4	HR Managment
9	9	6	GL Managment

```
CREATE TABLE PROJECT_20BCD7171(PROJECTDETAIL_ID NUMERIC(1), EMPDETAIL_ID
NUMERIC(1), PROJECT_NAME VARCHAR(20));
```

```
INSERT INTO PROJECT_20BCD7171 VALUES(1,1,'TASK TRACK');
```

```
INSERT INTO PROJECT_20BCD7171 VALUES(2,1,'CLP');
```

```
INSERT INTO PROJECT_20BCD7171 VALUES(3,1,'SURVEY MANAGEMENT');
```

```
INSERT INTO PROJECT_20BCD7171 VALUES(4,2,'HP MANAGEMENT');
```

```
INSERT INTO PROJECT_20BCD7171 VALUES(5,3,'TASK TRACK');
```

```
INSERT INTO PROJECT_20BCD7171 VALUES(6,3,'GRS');
```

```
INSERT INTO PROJECT_20BCD7171 VALUES(7,3,'DDS');
```

```
INSERT INTO PROJECT_20BCD7171 VALUES(8,4,'HR MANAGEMENT');
```

```
INSERT INTO PROJECT_20BCD7171 VALUES(9,6,'GL MANAGEMENT');
```

Limit to 1000 rows

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
5	21:30:10	CREATE TABLE EMPLOYEE_20BCD7171(EMPID NUMERIC(1), FIRST_NAME VARCHAR...	0 row(s) affected	0.422 sec
6	21:30:10	CREATE TABLE PROJECT_20BCD7171(PROJECTDETAIL_ID NUMERIC(1), EMPDETAIL...	0 row(s) affected	0.344 sec
7	21:30:11	INSERT INTO EMPLOYEE_20BCD7171 VALUES(1, 'Vikas', 'Ahlawat', '600000', '2013-02-1...	1 row(s) affected	0.109 sec
8	21:30:11	INSERT INTO EMPLOYEE_20BCD7171 VALUES(2, 'Nikita', 'Jain', '530000', '2014-01-09 1...	1 row(s) affected	0.094 sec
9	21:30:11	INSERT INTO EMPLOYEE_20BCD7171 VALUES(3, 'Ashish', 'Kumar', '1000000', '2014-01-...	1 row(s) affected	0.093 sec
10	21:30:11	INSERT INTO EMPLOYEE_20BCD7171 VALUES(4, 'Nikhil', 'Sharma', '480000', '2014-01-0...	1 row(s) affected	0.204 sec
11	21:30:11	INSERT INTO EMPLOYEE_20BCD7171 VALUES(5, 'Anish', 'Kadian', '500000', '2014-01-09...	1 row(s) affected	0.140 sec
12	21:30:11	INSERT INTO PROJECT_20BCD7171 VALUES(1,1,'TASK TRACK')	1 row(s) affected	0.094 sec
13	21:30:11	INSERT INTO PROJECT_20BCD7171 VALUES(2,1,'CLP')	1 row(s) affected	0.125 sec
14	21:30:11	INSERT INTO PROJECT_20BCD7171 VALUES(3,1,'SURVEY MANAGEMENT')	1 row(s) affected	0.141 sec
15	21:30:12	INSERT INTO PROJECT_20BCD7171 VALUES(4,2,'HP MANAGEMENT')	1 row(s) affected	0.156 sec
16	21:30:12	INSERT INTO PROJECT_20BCD7171 VALUES(5,3,'TASK TRACK')	1 row(s) affected	0.032 sec
17	21:30:12	INSERT INTO PROJECT_20BCD7171 VALUES(6,3,'GRS')	1 row(s) affected	0.047 sec
18	21:30:12	INSERT INTO PROJECT_20BCD7171 VALUES(7,3,'DDS')	1 row(s) affected	0.046 sec
19	21:30:12	INSERT INTO PROJECT_20BCD7171 VALUES(8,4,'HR MANAGEMENT')	1 row(s) affected	0.047 sec
20	21:30:12	INSERT INTO PROJECT_20BCD7171 VALUES(9,6,'GL MANAGEMENT')	1 row(s) affected	0.063 sec

Questions

- Find employee name, project name order by FirstName from "Employee" and "Project" for those employees who are assigned projects.

```
SELECT FIRST_NAME, LAST_NAME FROM EMPLOYEE_20BCD7171 A INNER JOIN
PROJECT_20BCD7171 B ON A.EMPID=B.EMPDETAIL_ID ORDER BY FIRST_NAME;
```

20 • SELECT FIRST_NAME, LAST_NAME FROM EMPLOYEE_20BCD7171 A INNER JOIN PROJECT_20BCD7171 B ON A.EMPID=B.EMPDETAIL_ID ON

21 • SELECT FIRST_NAME, LAST_NAME FROM EMPLOYEE_20BCD7171 A LEFT OUTER JOIN PROJECT_20BCD7171 B ON A.EMPID=B.EMPDETAIL_

22 • SELECT FIRST_NAME, LAST_NAME, '-NO PROJECT ASSIGNED' FROM EMPLOYEE_20BCD7171 A LEFT OUTER JOIN PROJECT_20BCD7171 B

23 • SELECT FIRST_NAME, LAST_NAME FROM EMPLOYEE_20BCD7171 A RIGHT OUTER JOIN PROJECT_20BCD7171 B ON A.EMPID=B.EMPDETAIL_

Result Grid

FIRST_NAME	LAST_NAME
Ashish	Kumar
Ashish	Kumar
Nikhil	Sharma
Nikita	Jain
Vikas	Ahlawat
Vikas	Ahlawat
Vikas	Ahlawat

Export: Wrap Cell Content: Form Editor

2. Find employee name, project name order by FirstName from "Employee" and "Project" for all employees, even if no project has been assigned to them.

```
SELECT FIRST_NAME, LAST_NAME FROM EMPLOYEE_20BCD7171 A LEFT OUTER JOIN  
PROJECT_20BCD7171 B ON A.EMPID=B.EMPDETAIL_ID ORDER BY FIRST_NAME;
```

21 • SELECT FIRST_NAME, LAST_NAME FROM EMPLOYEE_20BCD7171 A LEFT OUTER JOIN PROJECT_20BCD7171 B ON A.EMPID=B.EMPDETAIL_ID
22 • SELECT FIRST_NAME, LAST_NAME, '-NO PROJECT ASSIGNED' FROM EMPLOYEE_20BCD7171 A LEFT OUTER JOIN PROJECT_20BCD7171 B
23 • SELECT FIRST_NAME, LAST_NAME FROM EMPLOYEE_20BCD7171 A RIGHT OUTER JOIN PROJECT_20BCD7171 B ON A.EMPID=B.EMPDETAIL_ID
24 • SELECT FIRST_NAME, PROJECT_NAME FROM EMPLOYEE_20BCD7171 A JOIN PROJECT_20BCD7171 B ON A.EMPID=B.EMPDETAIL_ID ORDER BY

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

	FIRST_NAME	LAST_NAME
▶	Anish	Kadian
	Ashish	Kumar
	Ashish	Kumar
	Ashish	Kumar
	Nikhil	Sharma
	Nikita	Jain
	Vikas	Ahlawat
	Vikas	Ahlawat
	Vikas	Ahlawat

Result 2 | Read Only

3. Find employee name, project name order by FirstName from "Employee" and "Project" for all employees. If no project has been assigned, the message "-No Project Assigned" will be displayed

```
SELECT FIRST_NAME, LAST_NAME, '-NO PROJECT ASSIGNED' FROM  
EMPLOYEE_20BCD7171 A LEFT OUTER JOIN PROJECT_20BCD7171 B ON  
A.EMPID=B.EMPDETAIL_ID ORDER BY FIRST_NAME;
```

22 • SELECT FIRST_NAME, LAST_NAME, '-NO PROJECT ASSIGNED' FROM EMPLOYEE_20BCD7171 A LEFT OUTER JOIN PROJECT_20BCD7171 B
23 • SELECT FIRST_NAME, LAST_NAME FROM EMPLOYEE_20BCD7171 A RIGHT OUTER JOIN PROJECT_20BCD7171 B ON A.EMPID=B.EMPDETAIL_ID
24 • SELECT FIRST_NAME, PROJECT_NAME FROM EMPLOYEE_20BCD7171 A JOIN PROJECT_20BCD7171 B ON A.EMPID=B.EMPDETAIL_ID ORDER BY

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

	FIRST_NAME	LAST_NAME	-NO PROJECT ASSIGNED
▶	Anish	Kadian	-NO PROJECT ASSIGNED
	Ashish	Kumar	-NO PROJECT ASSIGNED
	Ashish	Kumar	-NO PROJECT ASSIGNED
	Ashish	Kumar	-NO PROJECT ASSIGNED
	Nikhil	Sharma	-NO PROJECT ASSIGNED
	Nikita	Jain	-NO PROJECT ASSIGNED
	Vikas	Ahlawat	-NO PROJECT ASSIGNED
	Vikas	Ahlawat	-NO PROJECT ASSIGNED
	Vikas	Ahlawat	-NO PROJECT ASSIGNED

Result Grid | Form Editor | Field Types

4. Find all project names from the table project, even if there is no matching EmployeeID in the employee table, ordered by FirstName.

```
SELECT FIRST_NAME, LAST_NAME FROM EMPLOYEE_20BCD7171 A RIGHT OUTER JOIN  
PROJECT_20BCD7171 B ON A.EMPID=B.EMPDETAIL_ID ORDER BY FIRST_NAME;
```

23 • `SELECT FIRST_NAME, LAST_NAME FROM EMPLOYEE_20BCD7171 A RIGHT OUTER JOIN PROJECT_20BCD7171 B ON A.EMPID=B.EMPDETAIL_ID ORDER BY FIRST_NAME;`

	FIRST_NAME	LAST_NAME
▶	NULL	NULL
	Ashish	Kumar
	Ashish	Kumar
	Ashish	Kumar
	Nikhil	Sharma
	Nikita	Jain
	Vikas	Ahlawat
	Vikas	Ahlawat
	Vikas	Ahlawat

5. Retrieve the entire record (employee name, project name) from both tables ([Employee], [Project]). If no match is found in any table, display NULL

```
SELECT FIRST_NAME, PROJECT_NAME FROM EMPLOYEE_20BCD7171 A JOIN  
PROJECT_20BCD7171 B ON A.EMPID=B.EMPDETAIL_ID ORDER BY FIRST_NAME;
```

24 • `SELECT FIRST_NAME, PROJECT_NAME FROM EMPLOYEE_20BCD7171 A JOIN PROJECT_20BCD7171 B ON A.EMPID=B.EMPDETAIL_ID ORDER BY FIRST_NAME;`

	FIRST_NAME	PROJECT_NAME
▶	Ashish	TASK TRACK
	Ashish	GRS
	Ashish	DDS
	Nikhil	HR MANAGEMENT
	Nikita	HP MANAGEMENT
	Vikas	TASK TRACK
	Vikas	CLP
	Vikas	SURVEY MANAGEMENT

6. Write a query that returns the names of employees who have no projects assigned to them and displays "-No Project Assigned."

```
SELECT FIRST_NAME, PROJECT_NAME, '-NO PROJECT ASSIGNED' AS PROJECT_NAME FROM  
EMPLOYEE_20BCD7171 A LEFT OUTER JOIN PROJECT_20BCD7171 B ON  
A.EMPID=B.EMPDETAIL_ID ORDER BY FIRST_NAME;
```

25 • `SELECT FIRST_NAME, PROJECT_NAME, '-NO PROJECT ASSIGNED' AS PROJECT_NAME FROM EMPLOYEE_20BCD7171 A LEFT OUTER JOIN`

FIRST_NAME	PROJECT_NAME	PROJECT_NAME
Anish	NULL	-NO PROJECT ASSIGNED
Ashish	DDS	-NO PROJECT ASSIGNED
Ashish	GRS	-NO PROJECT ASSIGNED
Ashish	TASK TRACK	-NO PROJECT ASSIGNED
Nikhil	HR MANAGEMENT	-NO PROJECT ASSIGNED
Nikita	HP MANAGEMENT	HP MANAGEMENT ASSIGNED
Vikas	SURVEY MANAGEMENT	-NO PROJECT ASSIGNED
Vikas	CLP	-NO PROJECT ASSIGNED
Vikas	TASK TRACK	-NO PROJECT ASSIGNED

7. Write a query to find project names that have not been assigned to any employee.

```
SELECT PROJECT_NAME FROM EMPLOYEE_20BCD7171 A RIGHT OUTER JOIN  
PROJECT_20BCD7171 B ON A.EMPID=B.EMPDETAIL_ID ORDER BY FIRST_NAME;
```

26 • `AME FROM EMPLOYEE_20BCD7171 A RIGHT OUTER JOIN PROJECT_20BCD7171 B ON A.EMPID=B.EMPDETAIL_ID ORDER BY FIRST_NAME;`

PROJECT_NAME
GL MANAGEMENT
TASK TRACK
GRS
DDS
HR MANAGEMENT
HP MANAGEMENT
TASK TRACK
CLP
SURVEY MANAGEMENT

8. Write a query to retrieve the Employee Names who are assigned to more than one project.

```
SELECT EMPID, FIRST_NAME, PROJECT_NAME FROM EMPLOYEE_20BCD7171 E INNER JOIN PROJECT_20BCD7171 P ON E.EMPID = P.EMPDETAIL_ID WHERE EMPID IN (SELECT EMPDETAIL_ID FROM PROJECT_20BCD7171 GROUP BY EMPDETAIL_ID HAVING COUNT(*) > 1);
```

27 • `SELECT EMPID, FIRST_NAME, PROJECT_NAME FROM EMPLOYEE_20BCD7171 E INNER JOIN PROJECT_20BCD7171 P ON E.EMPID = P.EMPDETAIL_ID`

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

	EMPID	FIRST_NAME	PROJECT_NAME
▶	1	Vikas	TASK TRACK
	1	Vikas	CLP
	1	Vikas	SURVEY MANAGEMENT
	3	Ashish	TASK TRACK
	3	Ashish	GRS
	3	Ashish	DDS

Result Grid
Form Editor
Field Types

9. Write a query to retrieve the Project Names on which multiple employees are working, as well as their Employee Names.

```
SELECT FIRST_NAME, PROJECT_NAME FROM EMPLOYEE_20BCD7171 E INNER JOIN PROJECT_20BCD7171 P ON EMPID=P.EMPDETAIL_ID;
```

28 • `SELECT FIRST_NAME, PROJECT_NAME FROM EMPLOYEE_20BCD7171 E INNER JOIN PROJECT_20BCD7171 P ON EMPID=P.EMPDETAIL_ID;`

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

	FIRST_NAME	PROJECT_NAME
▶	Vikas	TASK TRACK
	Vikas	CLP
	Vikas	SURVEY MANAGEMENT
	Nikita	HP MANAGEMENT
	Ashish	TASK TRACK
	Ashish	GRS
	Ashish	DDS
	Nikhil	HR MANAGEMENT

Result Grid
Form Editor
Field Types