

# **ASSIGNMENT ON JOINS**

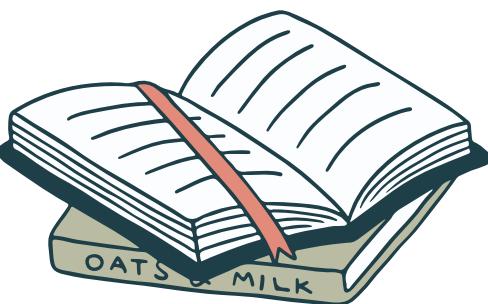
**By : Megha Prasad**



# Objectives

## Narrative structure

1. Create two vables:  
Employee & Department.
2. Insert values in respective tables
3. Apply inner join, left join & Right join.



Create employee  
table and insert  
values.

Create  
department table  
and insert values.

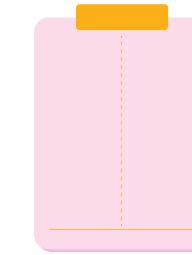
INNER JOIN

LEFT JOIN

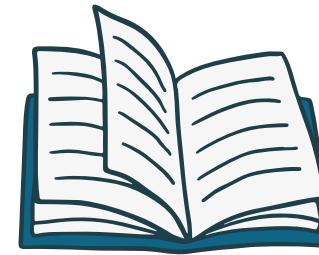
RIGHT JOIN

# Steps

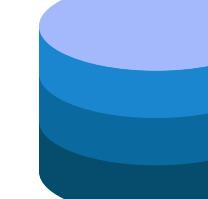
1



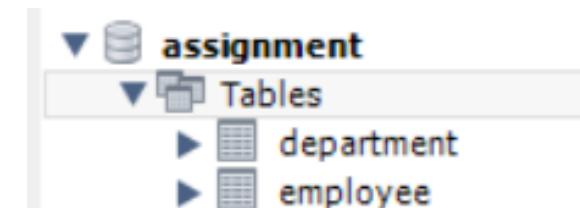
Study the objective



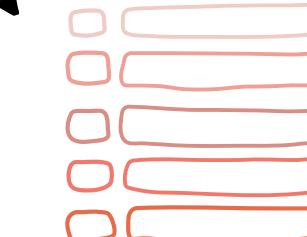
2



Create database named as  
assignment.



3



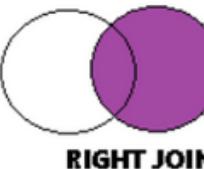
Create table using excel and SQL  
command.



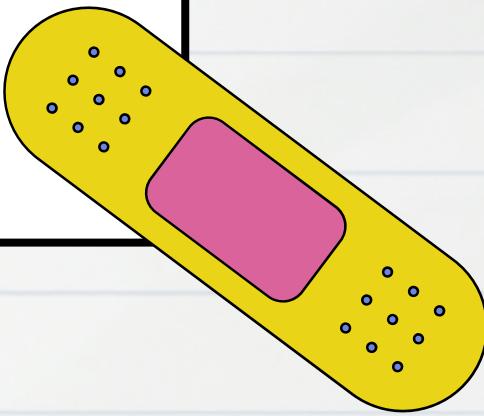
4



Use Joins



# Preparing data for copy paste



1. Convert both the table to csv and then export to SQL.

OR

2. Use excel to avoid typing each and every details into SQL.

department_id	department_name	Inserted new coloumns for easy copy paste					Concatenated
		(	1,	"HR"	)	,	
1	HR	(	2,	"Finance"	)	,	(1,"HR"),
2	Finance	(	3,	"IT"	)	,	(2,"Finance"),
3	IT	(	4,	"Marketing"	)	,	(3,"IT"),
4	Marketing	(	5,	"Sales"	)	,	(4,"Marketing"),
5	Sales	(	6,	"Customer Support"	)	,	(5,"Sales"),
6	Customer Support	(	7,	"Engineering"	)	,	(6,"Customer Support"),
7	Engineering	(	8,	"Research and Development"	)	,	(7,"Engineering"),
8	Research and Development	(	9,	"Quality Assurance"	)	,	(8,"Research and Development"),
9	Quality Assurance	(	10,	"Logistics"	)	,	(9,"Quality Assurance"),
10	Logistics						(10,"Logistics"),

# Creating Department Table

1

Create Database.

```
CREATE DATABASE Assignment;
```

```
use Assignment;
```



2

Create Department Table.

```
CREATE DATABASE Department(  
    department_id INT PRIMARY KEY,  
    department_name VARCHAR(50));
```



Department Table	
department_id	department_name
1	HR
2	Finance
3	IT
4	Marketing
5	Sales
6	Customer Support
7	Engineering
8	Research and Development
9	Quality Assurance
10	Logistics

# Insert data into Department Table



## Query

```
• INSERT INTO Department (department_id, department_name)
  VALUES (1,"HR"),
         (2,"Finance"),
         (3,"IT"),
         (4,"Marketing"),
         (5,"Sales"),
         (6,"Customer Support"),
         (7,"Engineering"),
         (8,"Research and Development"),
         (9,"Quality Assurance"),
         (10,"Logistics");
• SELECT * FROM Department;
```

## Output

	department_id	department_name
▶	1	HR
	2	Finance
	3	IT
	4	Marketing
	5	Sales
	6	Customer Support
	7	Engineering
	8	Research and Development
	9	Quality Assurance
	10	Logistics
	NONE	NONE

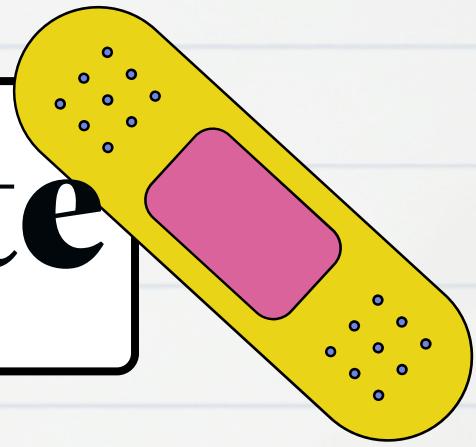
# Query for creating Employee Table

```
CREATE TABLE Employee (
    employee_id INT PRIMARY KEY,
    first_name VARCHAR(50),
    last_name VARCHAR(50),
    department_name VARCHAR(50));
```



Employee Table			
employee_id	first_name	last_name	department_name
1	John	Doe	HR
2	Jane	Smith	Finance
3	Alice	Johnson	IT
5	Charlie	Davis	Marketing
6	Eve	Martinez	Sales
7	Frank	Clark	Customer Support
8	Grace	Rodriguez	Engineering
9	Hank	Lewis	Research and Development
10	Ivy	Walker	Quality Assurance
11	Jack	Hall	Logistics
12	Ken	Allen	HR
13	Lara	Young	Finance
14	Mike	King	IT
15	Nina	Wright	Marketing
16	Oscar	Lopez	Sales
17	Paul	Hill	Customer Support
18	Quincy	Scott	Engineering
19	Rita	Green	Research and Development
20	Sam	Adams	Quality Assurance

# Preparing data for copy paste



Use excel to avoid typing each and every details into SQL.

first_name	last_name	department_name	Inserted new coloumns for easy copy paste	Concatenated
John	Doe	HR	( 1 , " John " , " Doe " ) ,	(1,"John","Doe","HR"),
Jane	Smith	Finance	( 2 , " Jane " , " Smith " ) ,	(2,"Jane","Smith","Finance"),
Alice	Johnson	IT	( 3 , " Alice " , " Johnson " ) ,	(3,"Alice","Johnson","IT"),
Charlie	Davis	Marketing	( 5 , " Charlie " , " Davis " ) ,	(5,"Charlie","Davis","Marketing"),
Eve	Martinez	Sales	( 6 , " Eve " , " Martinez " ) ,	(6,"Eve","Martinez","Sales"),
Frank	Clark	Customer Support	( 7 , " Frank " , " Clark " ) ,	(7,"Frank","Clark","Customer Support"),
Grace	Rodriguez	Engineering	( 8 , " Grace " , " Rodriguez " ) ,	(8,"Grace","Rodriguez","Engineering"),
Hank	Lewis	Research and Development	( 9 , " Hank " , " Lewis " ) ,	(9,"Hank","Lewis","Research and Development"),
Ivy	Walker	Quality Assurance	( 10 , " Ivy " , " Walker " ) ,	(10,"Ivy","Walker","Quality Assurance"),
Jack	Hall	Logistics	( 11 , " Jack " , " Hall " ) ,	(11,"Jack","Hall","Logistics"),
Ken	Allen	HR	( 12 , " Ken " , " Allen " ) ,	(12,"Ken","Allen","HR"),
Lara	Young	Finance	( 13 , " Lara " , " Young " ) ,	(13,"Lara","Young","Finance"),
Mike	King	IT	( 14 , " Mike " , " King " ) ,	(14,"Mike","King","IT"),
Nina	Wright	Marketing	( 15 , " Nina " , " Wright " ) ,	(15,"Nina","Wright","Marketing"),
Oscar	Lopez	Sales	( 16 , " Oscar " , " Lopez " ) ,	(16,"Oscar","Lopez","Sales"),
Paul	Hill	Customer Support	( 17 , " Paul " , " Hill " ) ,	(17,"Paul","Hill","Customer Support"),
Quincy	Scott	Engineering	( 18 , " Quincy " , " Scott " ) ,	(18,"Quincy","Scott","Engineering"),
Rita	Green	Research and Development	( 19 , " Rita " , " Green " ) ,	(19,"Rita","Green","Research and Development"),
Sam	Adams	Quality Assurance	( 20 , " Sam " , " Adams " ) ;	(20,"Sam","Adams","Quality Assurance");

# Insert data into Employee Table



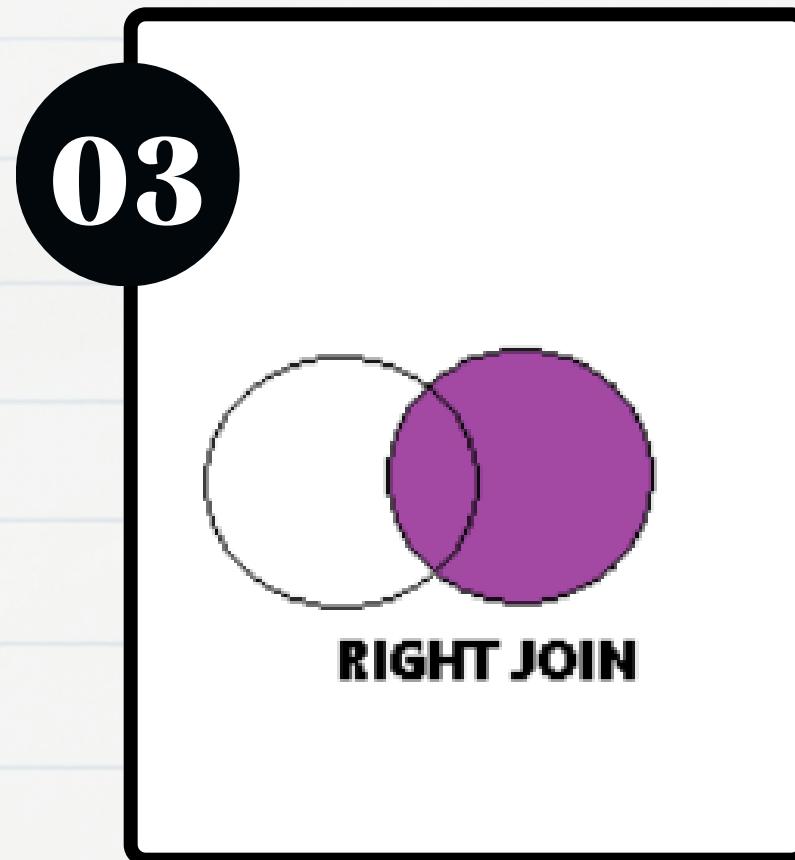
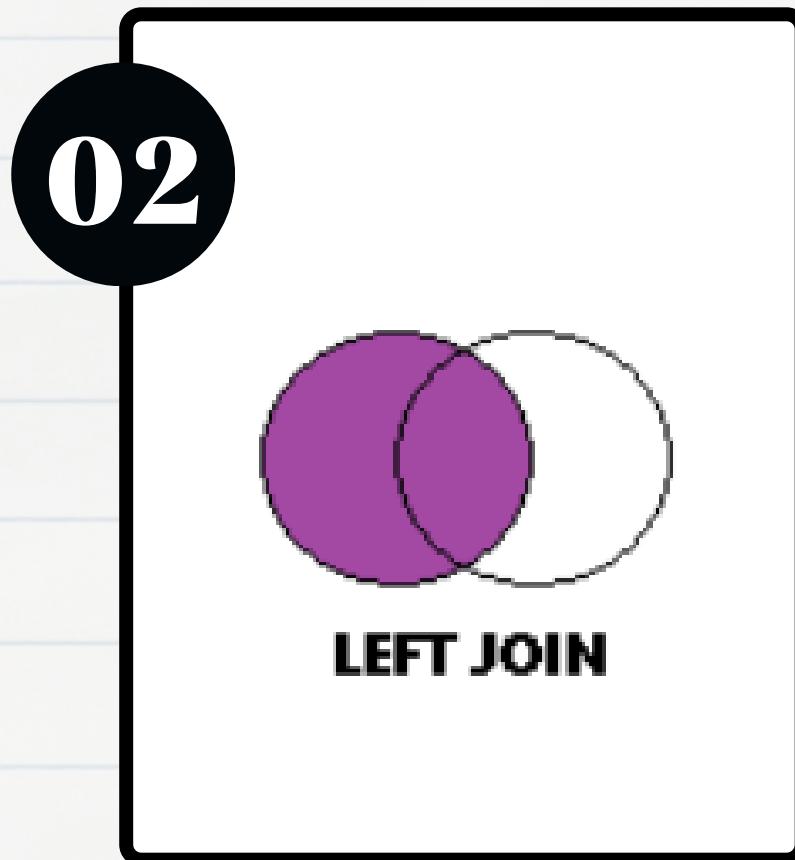
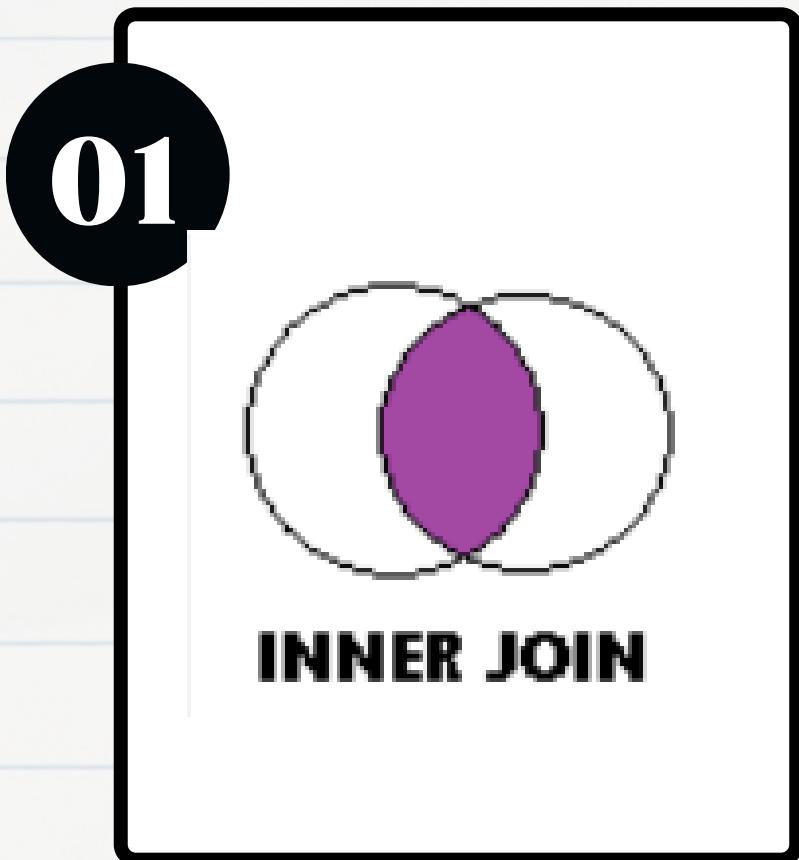
## Query

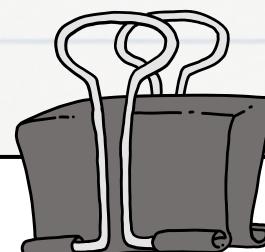
```
• INSERT INTO Employee (employee_id , first_name, last_name, department_name)
  VALUES (1,"John","Doe","HR"),
         (2,"Jane","Smith","Finance"),
         (3,"Alice","Johnson","IT"),
         (5,"Charlie","Davis","Marketing"),
         (6,"Eve","Martinez","Sales"),
         (7,"Frank","Clark","Customer Support"),
         (8,"Grace","Rodriguez","Engineering"),
         (9,"Hank","Lewis","Research and Development"),
         (10,"Ivy","Walker","Quality Assurance"),
         (11,"Jack","Hall","Logistics"),
         (12,"Ken","Allen","HR"),
         (13,"Lara","Young","Finance"),
         (14,"Mike","King","IT"),
         (15,"Nina","Wright","Marketing"),
         (16,"Oscar","Lopez","Sales"),
         (17,"Paul","Hill","Customer Support"),
         (18,"Quincy","Scott","Engineering"),
         (19,"Rita","Green","Research and Development"),
         (20,"Sam","Adams","Quality Assurance");
• SELECT * FROM employee;
```

## Output

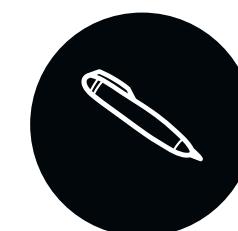
	employee_id	first_name	last_name	department_name
▶	1	John	Doe	HR
	2	Jane	Smith	Finance
	3	Alice	Johnson	IT
	5	Charlie	Davis	Marketing
	6	Eve	Martinez	Sales
	7	Frank	Clark	Customer Support
	8	Grace	Rodriguez	Engineering
	9	Hank	Lewis	Research and Development
	10	Ivy	Walker	Quality Assurance
	11	Jack	Hall	Logistics
	12	Ken	Allen	HR
	13	Lara	Young	Finance
	14	Mike	King	IT
	15	Nina	Wright	Marketing
	16	Oscar	Lopez	Sales
	17	Paul	Hill	Customer Support
	18	Quincy	Scott	Engineering
	19	Rita	Green	Research and Development
	20	Sam	Adams	Quality Assurance
	HULL	HULL	HULL	HULL

# Joins



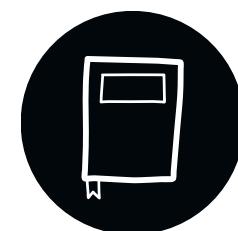


# INNER JOIN

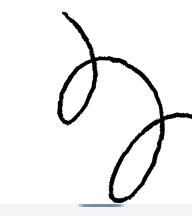


Query :

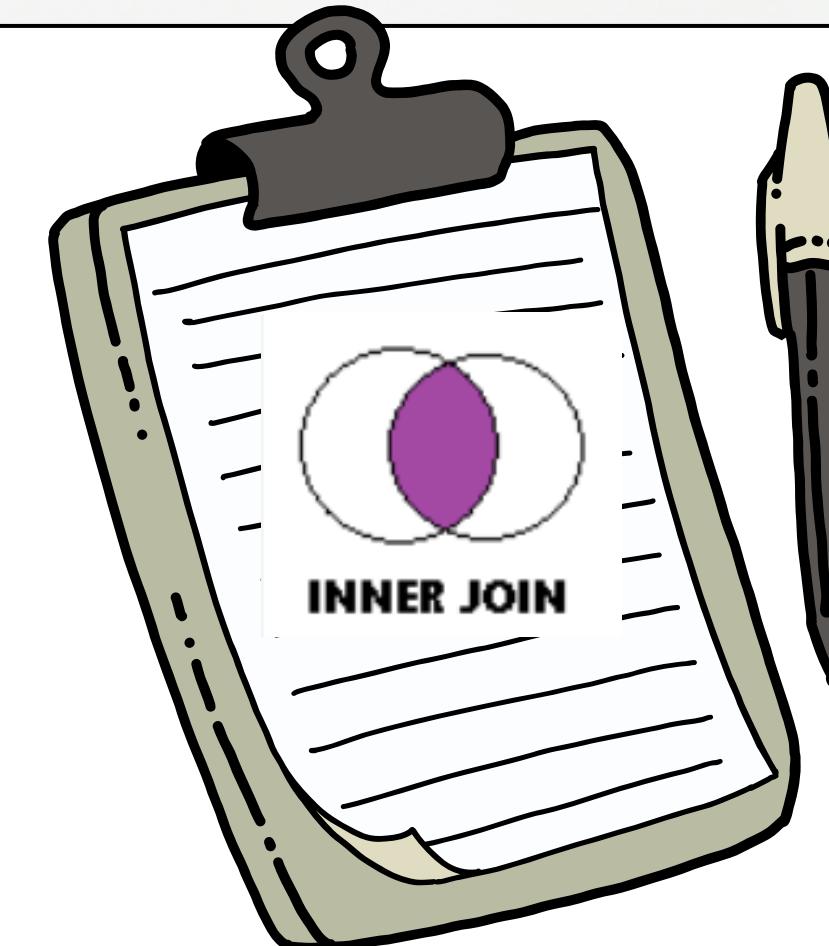
```
/* INNER JOIN */
• SELECT * FROM Employee AS E
  INNER JOIN Department AS D
  ON E.Employee_id =
    D.Department_id;
```

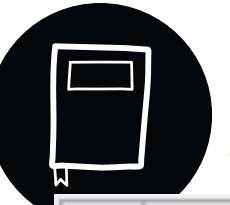
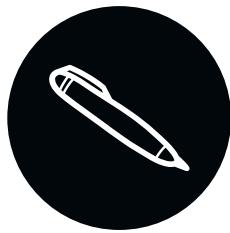


Output



	employee_id	first_name	last_name	department_name	department_id	department_name
▶	1	John	Doe	HR	1	HR
	2	Jane	Smith	Finance	2	Finance
	3	Alice	Johnson	IT	3	IT
	5	Charlie	Davis	Marketing	5	Sales
	6	Eve	Martinez	Sales	6	Customer Support
	7	Frank	Clark	Customer Support	7	Engineering
	8	Grace	Rodriguez	Engineering	8	Research and Development
	9	Hank	Lewis	Research and Development	9	Quality Assurance
	10	Ivy	Walker	Quality Assurance	10	Logistics





# LEFT JOIN

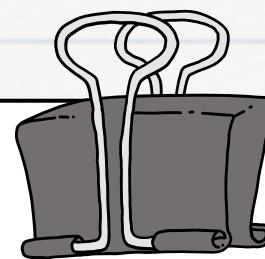
Query :

```
/* LEFT JOIN */
• SELECT * FROM Employee AS E
  LEFT JOIN Department AS D
  ON E.Employee_id = D.Department_id;
```

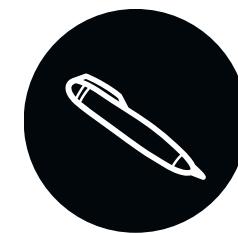
Output

	employee_id	first_name	last_name	department_name	department_id	department_name
▶	1	John	Doe	HR	1	HR
	2	Jane	Smith	Finance	2	Finance
	3	Alice	Johnson	IT	3	IT
	5	Charlie	Davis	Marketing	5	Sales
	6	Eve	Martinez	Sales	6	Customer Support
	7	Frank	Clark	Customer Support	7	Engineering
	8	Grace	Rodriguez	Engineering	8	Research and Development
	9	Hank	Lewis	Research and Development	9	Quality Assurance
	10	Ivy	Walker	Quality Assurance	10	Logistics
	11	Jack	Hall	Logistics	NULL	NULL
	12	Ken	Allen	HR	NULL	NULL
	13	Lara	Young	Finance	NULL	NULL
	14	Mike	King	IT	NULL	NULL
	15	Nina	Wright	Marketing	NULL	NULL
	16	Oscar	Lopez	Sales	NULL	NULL
	17	Paul	Hill	Customer Support	NULL	NULL
	18	Quincy	Scott	Engineering	NULL	NULL
	19	Rita	Green	Research and Development	NULL	NULL
	20	Sam	Adams	Quality Assurance	NULL	NULL



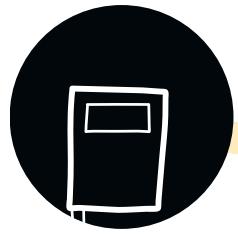


# RIGHT JOIN

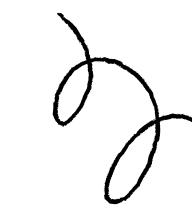


Query :

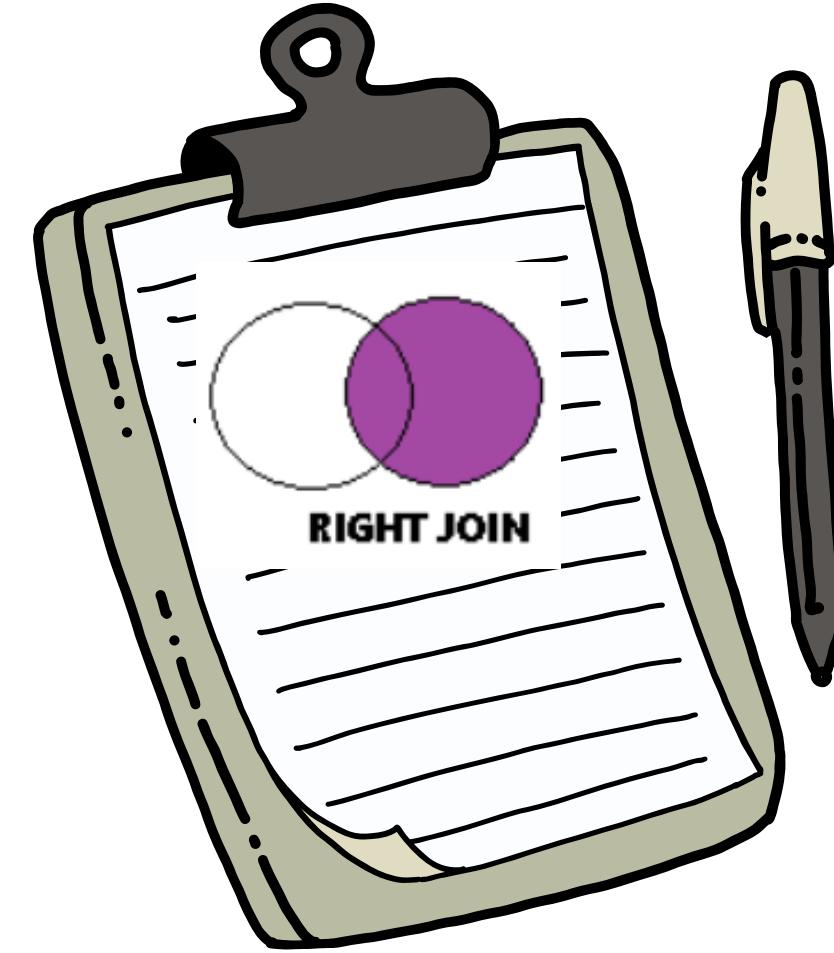
```
/* RIGHT JOIN */
• SELECT * FROM Employee AS E
  RIGHT JOIN Department AS D
  ON E.Employee_id = D.Department_id;
```



Output



	employee_id	first_name	last_name	department_name	department_id	department_name
▶	1	John	Doe	HR	1	HR
	2	Jane	Smith	Finance	2	Finance
	3	Alice	Johnson	IT	3	IT
	HULL	HULL	HULL	HULL	4	Marketing
	5	Charlie	Davis	Marketing	5	Sales
	6	Eve	Martinez	Sales	6	Customer Support
	7	Frank	Clark	Customer Support	7	Engineering
	8	Grace	Rodriguez	Engineering	8	Research and Development
	9	Hank	Lewis	Research and Development	9	Quality Assurance
	10	Ivy	Walker	Quality Assurance	10	Logistics



# Thank you

