

Using Null

Language: English • 日本語 • 中文

teacher							
id	dept	name	phone	mobile			
101	1	Shrivell	2753	07986 555 1234			
102	1	Throd	2754	07122 555 1920			
103	1	Splint	2293				
104		Spiregrain	3287				
105	2	Cutflower	3212	07996 555 6574			
106		Deadyawn	3345				
...							
dept							
id	name						
1	Computing						
2	Design						
3	Engineering						
...							

Teachers and Departments

The school includes many departments. Most teachers work exclusively for a single department. Some teachers have no department.

Selecting NULL values.

Summary

NULL, INNER JOIN, LEFT JOIN, RIGHT JOIN

1. 😞

List the teachers who have NULL for their department.

Why we cannot use =

You might think that the phrase dept=NULL would work here but it doesn't - you can use the phrase dept IS NULL.

That's not a proper explanation.

SELECT name FROM teacher WHERE dept IS NULL

Submit SQL

Restore default

Correct answer

name
Spiregrain
Deadyawn

2. 😞

Note the INNER JOIN misses the teachers with no department and the departments with no teacher.

SELECT teacher.name, dept.name
FROM teacher INNER JOIN dept
ON (teacher.dept=dept.id)

Submit SQL

Restore default

Correct answer

name	name
Shrivell	Computing
Throd	Computing
Splint	Computing
Cutflower	Design

3. 😞

Use a different JOIN so that all teachers are listed.

SELECT teacher.name, dept.name
FROM teacher LEFT JOIN dept
ON (teacher.dept=dept.id)

Submit SQL

Restore default

Correct answer

name	name
Shrivell	Computing
Throd	Computing
Splint	Computing
Spiregrain	
Cutflower	Design
Deadyawn	

4. 😞

Use a different JOIN so that all departments are listed.

SELECT teacher.name, dept.name
FROM teacher RIGHT JOIN dept
ON (teacher.dept=dept.id)

Submit SQL

Restore default

Correct answer

name	name
Splint	Computing
Throd	Computing
Shrivell	Computing
Cutflower	Design
	Engineering

Using the COALESCE function

5. 😞

Use COALESCE to print the mobile number. Use the number '07986 444 2266' if there is no number given. Show teacher name and mobile number or '07986 444 2266'

SELECT name,COALESCE(mobile,'07986 444 2266') FROM teacher

Submit SQL

Restore default

Correct answer

name	COALESCE(mobi..
Shrivell	07986 555 1234
Throd	07122 555 1920
Splint	07986 444 2266
Spiregrain	07986 444 2266
Cutflower	07996 555 6574
Deadyawn	07986 444 2266

6. 😞

Use the COALESCE function and a LEFT JOIN to print the teacher name and department name. Use the string 'None' where there is no department.

SELECT teacher.name, COALESCE(dept.name,'None')
FROM teacher LEFT JOIN dept
ON (teacher.dept=dept.id)

Submit SQL

Restore default

Correct answer

name	COALESCE(dept..
Shrivell	Computing
Throd	Computing
Splint	Computing
Spiregrain	None
Cutflower	Design
Deadyawn	None

7. 😞

Use COUNT to show the number of teachers and the number of mobile phones.

SELECT COUNT(name), COUNT(mobile) FROM teacher

Submit SQL

Restore default

Correct answer

COUNT(name)	COUNT(mobile)
6	3

8. 😞

Use COUNT and GROUP BY dept.name to show each department and the number of staff. Use a RIGHT JOIN to ensure that the Engineering department is listed.

SELECT dept.name, COUNT(teacher.name)
FROM teacher RIGHT JOIN dept
ON (teacher.dept=dept.id)
GROUP BY dept.name

Submit SQL

Restore default

Correct answer

name	COUNT(teacher..
Computing	3
Design	1
Engineering	0

Using CASE

9. 😞

Use CASE to show the name of each teacher followed by 'Sci' if the teacher is in dept 1 or 2 and 'Art' otherwise.

SELECT name,
CASE WHEN dept IN(1,2) THEN 'Sci' ELSE 'Art' END
FROM teacher

Submit SQL

Restore default

Correct answer

name	CASE WHEN dep..
Shrivell	Sci
Throd	Sci
Splint	Sci
Spiregrain	Art
Cutflower	Sci
Deadyawn	Art

10. 😞

Use CASE to show the name of each teacher followed by 'Sci' if the teacher is in dept 1 or 2, show 'Art' if the teacher's dept is 3 and 'None' otherwise.

SELECT name,
CASE WHEN dept IN(1,2) THEN 'Sci'
WHEN dept = 3 THEN 'Art'
ELSE 'None'
END
FROM teacher

Submit SQL

Restore default

Correct answer

name	CASE WHEN dep..
Shrivell	Sci
Throd	Sci
Splint	Sci
Spiregrain	None
Cutflower	Sci
Deadyawn	None

Clear your results

Using Null Quiz

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