

Description

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	

Table 1: teacher

id	name
1	Computing
2	Design
3	Engineering

Table 2: dept

1 NULL, INNER JOIN, LEFT JOIN, RIGHT JOIN

List the teachers who have NULL for their department.

```
SELECT name
FROM teacher
WHERE dept is NULL
```

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)
```

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)
```

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)
```

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
```

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)
```

7

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

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

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
```

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
```

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
```