

# Combining Data with Union

Name:

Class:

Date:

## Key Theory

We use UNION in a database to combine two SELECT statements together. A simple rule to follow is that both parts must be the same number of field.

### Do this

The below UNION works as both SELECT queries return the same number of fields.

```
SELECT field_one, field_two
FROM table_one
UNION
SELECT field_one, field_two
FROM table_two
```

### Not this

The below UNION cannot work as the first SELECT has three fields, while the second has two.

```
SELECT field_one, field_two,
field_three
FROM table_one
UNION
SELECT field_one, field_two
FROM table_two
```

## Example

```
SELECT trainer_id AS staff_id,
trainer_name AS staff_name
FROM teachers
UNION
SELECT staff_id AS staff_id,
staff_name AS staff_name
FROM admin_staff;
```

	staff_id	staff_name
▶	3	Christain
	4	Richard
	6	Narayan
	7	Richard
	8	Zak
	1	Shamira
	2	Karl

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## Task 1

### Task 1.1

For this task we will need to create a new table for admin\_staff and add some staff members.

```
CREATE TABLE admin_staff(staff_id INT PRIMARY KEY, staff_name VARCHAR(15),  
staff_dob DATE, salary DECIMAL(20,5));
```

```
INSERT INTO admin_staff VALUES (1, 'Shamira','1991-01-01', 15000.3);
```

```
INSERT INTO admin_staff VALUES (2, 'Karl','1991-01-01', 15000.3);
```

### Task 1.2

Now to create a UNION between teachers and admin\_staff.

```
SELECT * FROM teachers UNION SELECT * FROM admin_staff;
```

Should return all staff from both tables.

### Task 1.3

Now expand each of the SELECT statements to show only those members of staff both after 1990.

To do this you will require a WHERE on both SELECT statements.

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## Challenge

### Challenge 1

Create a query that selects from the teacher and admin\_staff tables.

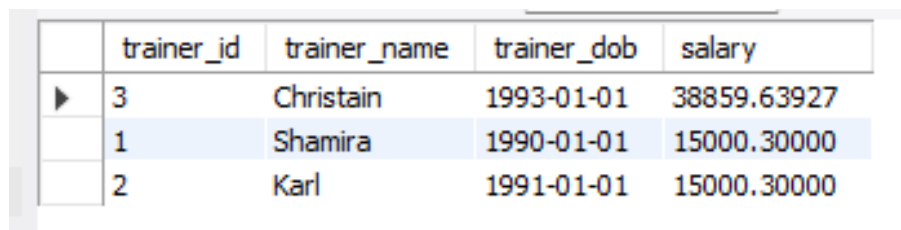
For this query we want to select:

Teachers who earn less than 40000

Admin staff that earn less than 35000

### Challenge 2

You may have noticed that the field names in the previous tasks are those the teacher table, even though the data describes all staff.



	trainer_id	trainer_name	trainer_dob	salary
▶	3	Christain	1993-01-01	38859.63927
	1	Shamira	1990-01-01	15000.30000
	2	Karl	1991-01-01	15000.30000

Using aliases for example: `SELECT trainer_id AS staff_id` provide fields that better describe the data.

### Challenge 3

It has been decided that the staff from the previous query will be given a bonus.

Teachers will be given a 10% bonus.

Admin staff will be given a 20% bonus.

This is done by adding a field in the SELECT that uses the SUM() function.

`SELECT SUM(salary * ?)`

The ? Should be replaced by a value that can make 10 or 20 percent.

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