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	Not 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*	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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