Inner Joins

Name:	Class:	Date:

Key Theory

An INNER JOIN has the purpose of joining tables together by taking all fields and data from one table and all fields and data from another table and display them as a single table.

The purpose is to find matching records from both tables and pair them together.

The ON clause is essential to ensure that the RDMS know which fields comprise the relationship.

```
SELECT teachers.trainer_id, teachers.trainer_name, subject_name
FROM teachers                           -- FROM clause and left table
INNER JOIN subjects                     -- Join type and right table
ON teachers.trainer_id = subjects.trainer_id;     -- PK and FK pairing
```

Without an ON clause the query will take every field from the left and right, attempting to pair them up regardless of PK and FK relationships.

This will result in records being duplicated and incorrect results.

Example

```
SELECT teachers.trainer_id,
teachers.trainer_name, subject_name
FROM teachers
INNER JOIN subjects
ON teachers.trainer_id = subjects.trainer_id;
```

trainer_id	trainer_name	subject_name
3	Christain	Database
4	Richard	Software Development

Inner Joins

Task 1

Task 1.1

Using a SELECT perform an INNER JOIN on the teachers and subjects tables.

SELECT teachers.trainer_id,

teachers.trainer_name, subject_name

FROM teachers

INNER JOIN subjects

ON teachers.trainer_id = subjects.trainer_id;

Task 1.2

Now you have seen the result of doing an INNER JOIN correctly remove:

ON teachers.trainer_id = subjects.trainer_id

Can you explain to one other person what impact the removal of the ON clause has on the results?

Task 1.3

Create a query to SELECT all fields from subjects and teachers.

Subjects should be the left table and teachers should be the right.

The ON clause should be on trainer_id from both tables.

Include a WHERE trainer_name = 'Christain'

Challenge 1

We can DELETE data from one table using an INNER JOIN.

Work out what to change on the first line of Task 1.3 to achieve this.