

SQL

Inner Join

what is it?

Use an INNER join, or just a JOIN, when you want to find the match between two tables.

You need to have a column on both tables that you join ON, and that's where the match happens. Any results where there is not a match are discarded.

Orders Table	Inventory Table	Result	
order_item	inventory_item	order_item	inventory_item
Nails	Nails	Nails	Nails
Hammer	Hammer	Hammer	Hammer
Screws	Screws	Screws	Screws
Pliers	Tool cabinet		
Blow torch	Nail gun		

```
select
  o.order_item,
  i.inventory_item
from
  orders o
join
  inventory i
on
  o.order_item = i.inventory_item
```

SQL

Left Join

what is it?

Use a LEFT JOIN when you want to find a match between two tables, but also show a NULL where there is no match from the right table.

A RIGHT JOIN does the same but in reverse. Like the INNER JOIN, you need a column to join ON. Unlike the INNER JOIN, a NULL is used to show there is no match between the two tables.

Orders Table	Inventory Table	Result	
order_item	inventory_item	order_item	inventory_item
Nails	Nails	Nails	Nails
Hammer	Hammer	Hammer	Hammer
Screws	Screws	Screws	Screws
Pliers	Tool cabinet	Pliers	NULL
Blow torch	Nail gun	Blow torch	NULL

```
select
  o.order_item,
  i.inventory_item
from
  orders o
left join
  inventory i
on
  o.order_item = i.inventory_item
```

SQL

Cross Join

what is it?

A CROSS JOIN joins everything with everything. There is no need to provide a column to join on, and it can result in a very big data set, (and a really big image so you'll have to use your imagination when reviewing the image below).

Proceed with caution.

Orders Table	Inventory Table	Result	
order_item	inventory_item	order_item	inventory_item
Nails	Nails	Nails	Nails
Hammer	Hammer	Nails	Hammer
Screws	Screws	Nails	Screws
Pliers	Tool cabinet	Nails	Tool cabinet
Blow torch	Nail gun	Nails	Nail gun
		Hammer	Nails
		Hammer	Hammer
		Hammer	Screws
		Hammer	Tool cabinet
		Hammer	Nail gun

...

```
select
  o.order_item,
  i.inventory_item
from
  orders o
cross join
  inventory i
```