

A modern conference room with large windows and a blue tint. The room features a long table, several chairs, and a laptop on the table. The text "FOREIGN KEY Constraint" is overlaid in the center.

FOREIGN KEY Constraint

FOREIGN KEY Constraint

Sales

Sales

purchase number

date_of_purchase

customer_id (FK)

item_code (FK)

Customers

customer id

first_name

last_name

email_address

number_of_complaints

Items

item code

item

unit_price

company_id (FK)

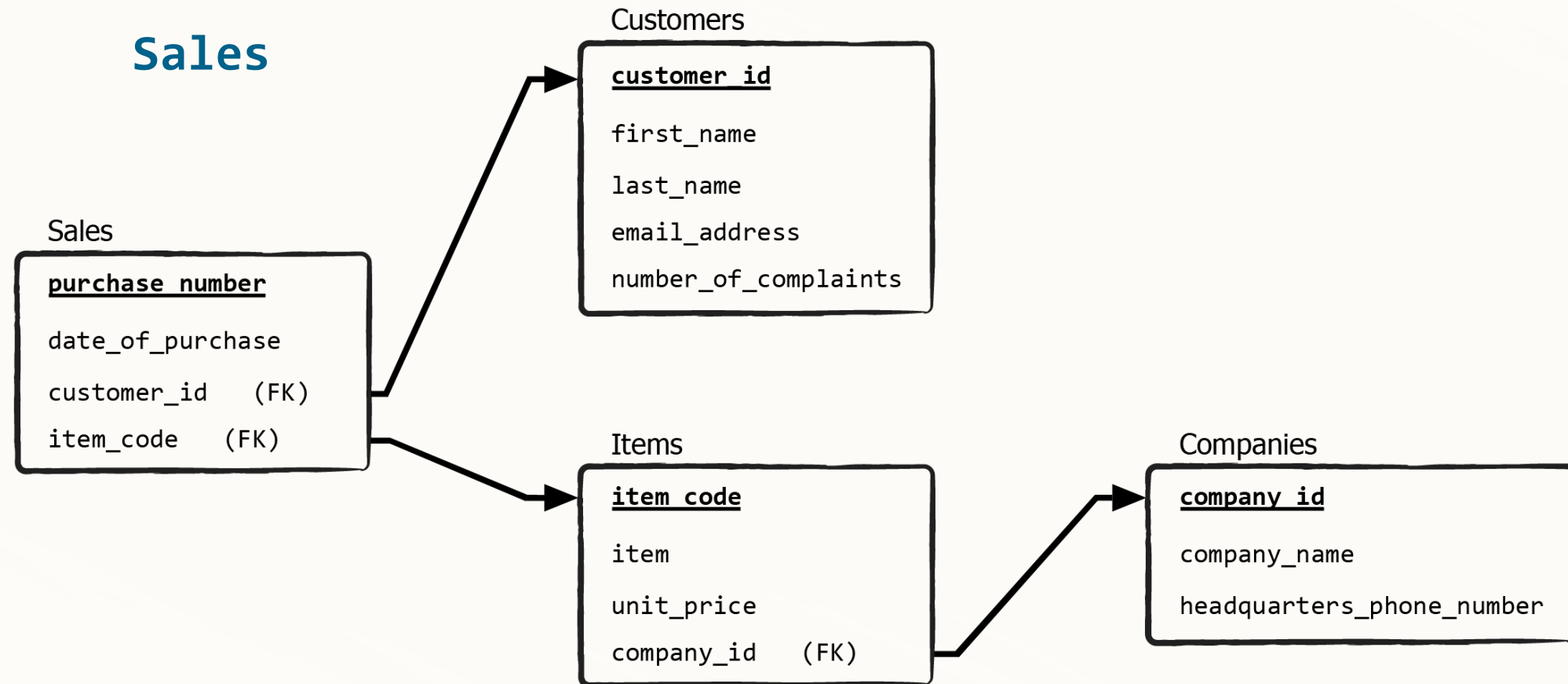
Companies

company id

company_name

headquarters_phone_number

FOREIGN KEY Constraint



FOREIGN KEY Constraint

foreign key

points to a column of another table and, thus, links the two tables

FOREIGN KEY Constraint

Table 1

column_name

Table 2

column_name

FOREIGN KEY Constraint

Table 1

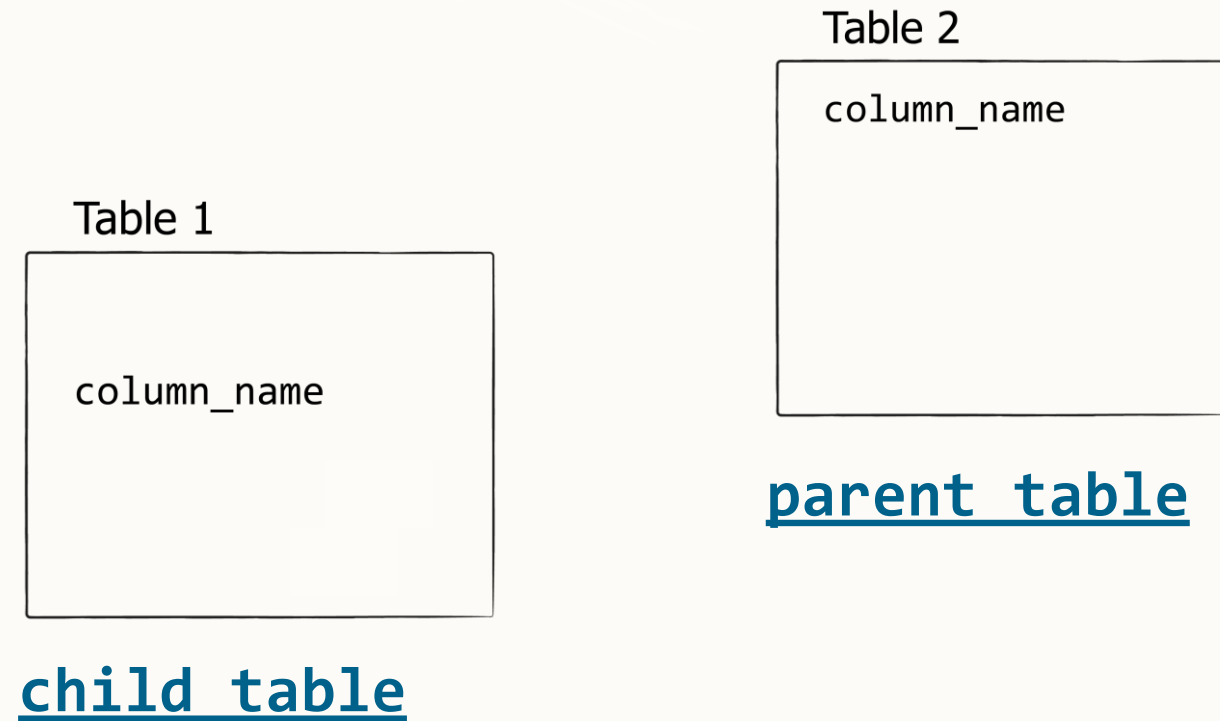
column_name

child table

Table 2

column_name

FOREIGN KEY Constraint



FOREIGN KEY Constraint

Table 1

column_name (FK)

child table

Table 2

column_name

parent table

FOREIGN KEY Constraint

Table 1

column_name (FK)

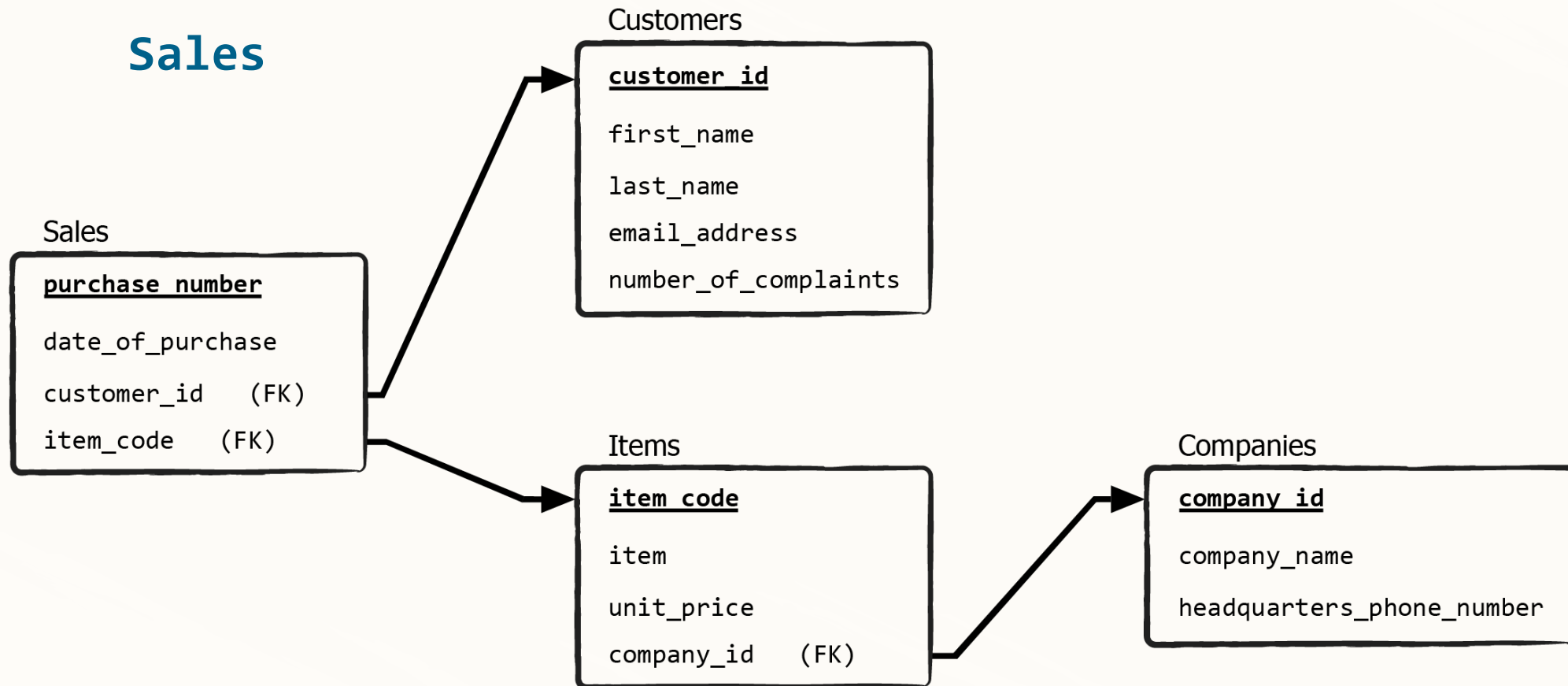
Table 2

column_name

parent table = referenced table

child table = referencing table

FOREIGN KEY Constraint



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Sales

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purchase number

date_of_purchase

customer_id

item_code

Customers

customer id

first_name

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FOREIGN KEY Constraint

Sales

Sales

purchase number

date_of_purchase

customer_id (FK)

item_code

Customers

customer id

first_name

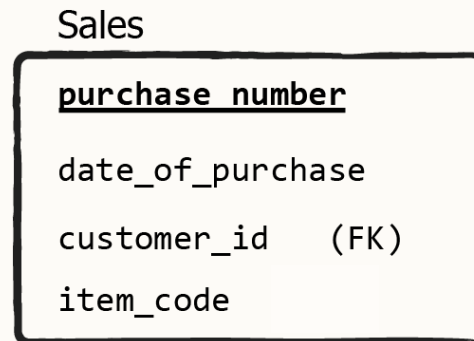
last_name

email_address

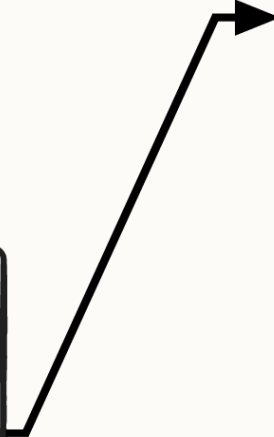
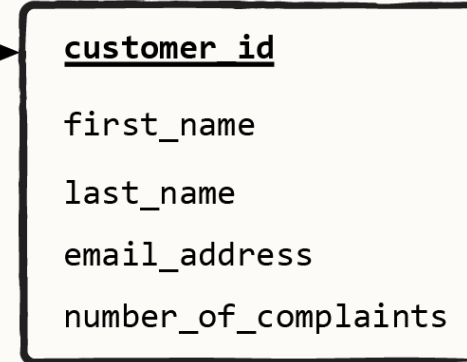
number_of_complaints

FOREIGN KEY Constraint

Sales

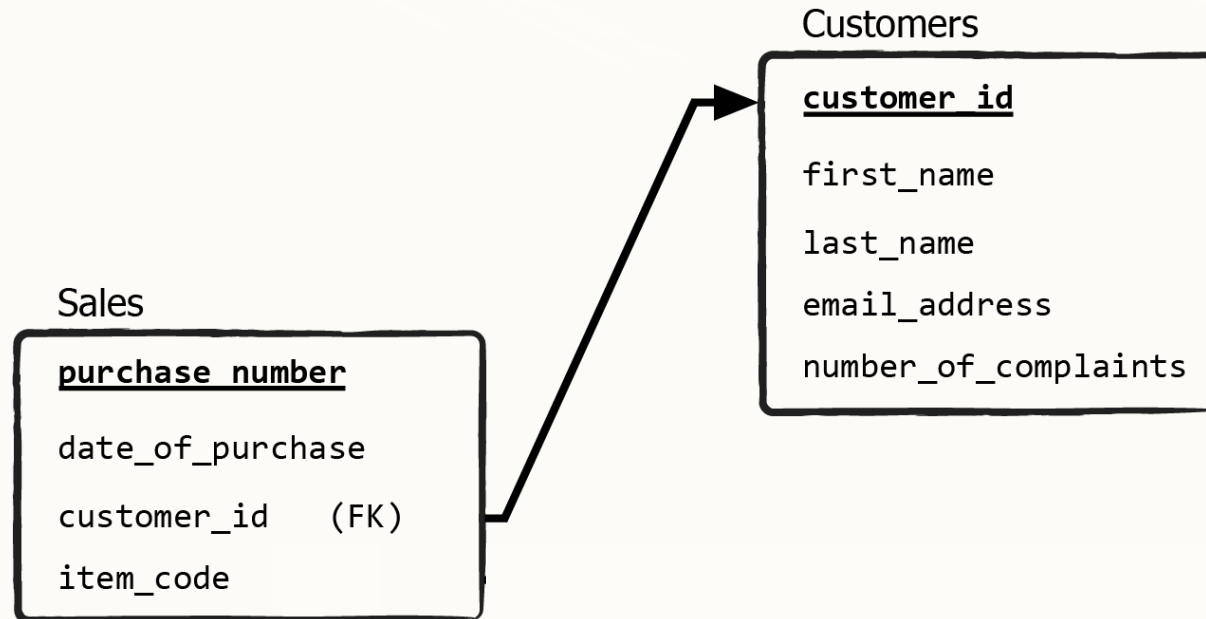


Customers



FOREIGN KEY Constraint

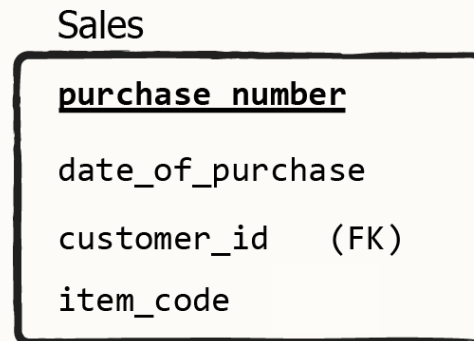
Sales



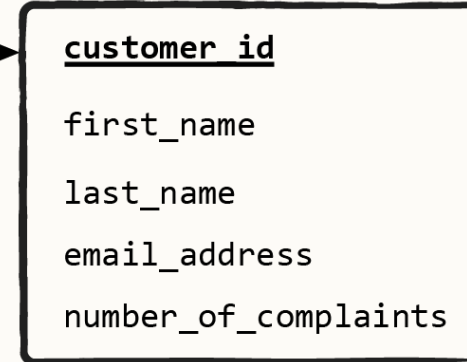
Remember, this is not an obligatory requirement – these two keys may have two completely different names. What's important is that the data types and the information match! It's just common practice to use, if not the same, then similar names for both keys.

FOREIGN KEY Constraint

Sales



Customers



parent table = referenced table

child table = referencing table

FOREIGN KEY Constraint

- a *foreign key* in SQL is defined through a foreign key constraint

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the foreign key maintains the *referential integrity* within the database

FOREIGN KEY Constraint

- ON DELETE CASCADE

if a specific value *from the parent table's primary key* has been deleted, all the records *from the child table* referring to this value will be removed as well

FOREIGN KEY Constraint

Customers				
customer_id	first_name	last_name	email_address	number_of_complaints
1	John	McKinley	john.mackinley@365careers.com	0
2	Elizabeth	McFarlane	e.mcfarlane@365careers.com	2
3	Kevin	Lawrence	kevin.lawrence@365careers.com	1
4	Catherine	Winnfield	c.winnfield@365careers.com	0

Sales			
purchase_number	date_of_purchase	customer_id	item_code
1	9/3/2016	1	A_1
2	12/2/2016	2	C_1
3	4/15/2017	3	D_1
4	5/24/2017	1	B_2
5	5/25/2017	4	B_2
6	6/6/2017	2	B_1
7	6/10/2017	4	A_2
8	6/13/2017	3	C_1
9	7/20/2017	1	A_1
10	8/11/2017	2	B_1

FOREIGN KEY Constraint

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3	4/15/2017	3	D_1	
4	5/24/2017	1	B_2	
5	5/25/2017		B_2	
6	6/6/2017	2	B_1	
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ON DELETE CASCADE

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9	7/20/2017	1	A_1	
10	8/11/2017	2	B_1	