



DEV ACADEMY
TE KURA HANGARAU
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Databases: Joins & Relationships

Week 3, Day 2



Agenda

- Relationships
 - One-to-one
 - One-to-many
- Joins
 - Primary key
 - Foreign key
 - Constraints and data integrity
- Using database functions in HTTP routes

Table: `vehicles`

id	make	model	year
201	GMC	Vandura	1979
202	Magic	School Bus	1986
203	Batmobile	Batmobile	1966
204	Batmobile	Tumbler	2005
205	Knight Industries	Two Thousand	1982



Table: `owners`

id	name	date_of_birth	address
101	Michael Knight	9/1/1949	Los Angeles
102	Mr T	21/5/1952	Chicago
103	Ms Frizzle	2/2/1986	Walkerville
104	Batman	17/4/1915	Gotham City
105	Emmett Brown	1/4/1901	Hill Valley



Relationships: One-to-many



Joins: One-to-many

Table: `owners`

id	name	date_of_birth	address
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Table: `vehicles`

id	owner_id	make	model	year
201		GMC	Vandura	1979
202	103	Magic	School Bus	1986
203		Batmobile	Batmobile	1966
204		Batmobile	Tumbler	2005
205		Knight Industries	Two Thousand	1982

Ms. Frizzle owns the Magic School Bus, and so the `owner_id` column in the `vehicles` table is set to `103`.

Joins: One-to-many

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104	Batman	17/4/1915	Gotham City
105	Emmett Brown	1/4/1901	Hill Valley

Table: `vehicles`

id	owner_id	make	model	city
201	102	GMC	Vandura	1979
202	103	Magic	School Bus	1986
203	104	Batmobile	Batmobile	1966
204	104	Batmobile	Tumbler	2005
205	101	Knight Industries	Two Thousand	1982

Joins: One-to-many

Table: `owners`

<code>id</code>	<code>name</code>	<code>date_of_birth</code>	<code>address</code>
101	Michael Knight	9/1/1949	Los Angeles
102	Mr T	21/5/1952	Chicago
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Table: `vehicles`

<code>id</code>	<code>owner_id</code>	<code>make</code>	<code>model</code>	<code>year</code>
201	102	GMC	Vandura	1979
202	103	Magic	School Bus	1986
203	104	Batmobile	Batmobile	1966
204	104	Batmobile	Tumbler	2005
205	101	Knight Industries	Two Thousand	1982

A *foreign key* references a *primary key* in another table.

The `owner_id` column in the `vehicles` table is a **foreign key** that references the `id` column in the `owners` table.