SQL JOINS

How to crud related tables

PHP web development 2019/2020

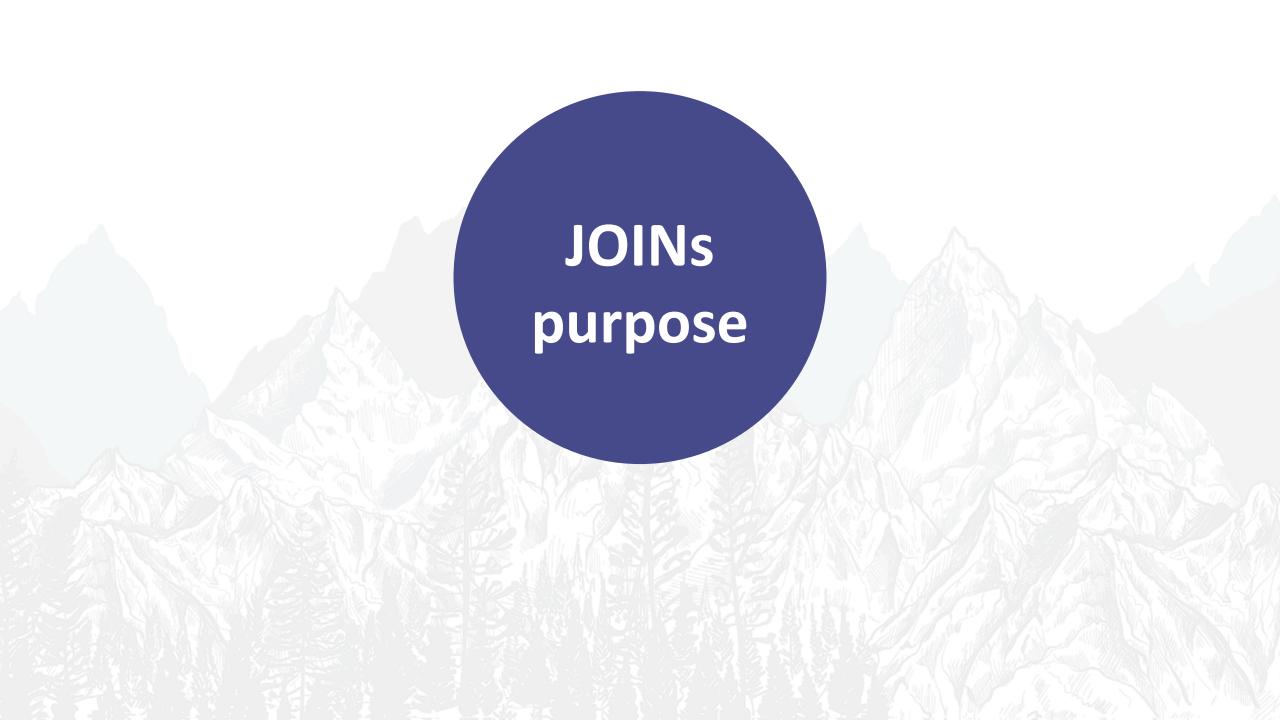
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JOINs - purpose

purpose

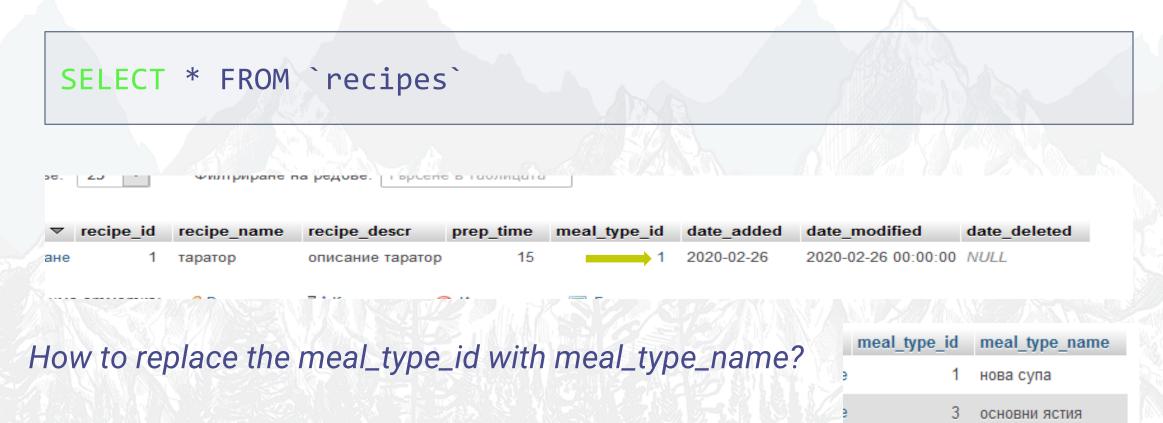
1. Свързваме таблици в БД чрез FK и PK /Internal relation

1. Достъпваме информация от няколко /свързани/ таблици и можем да изпълним CRUD към нея.

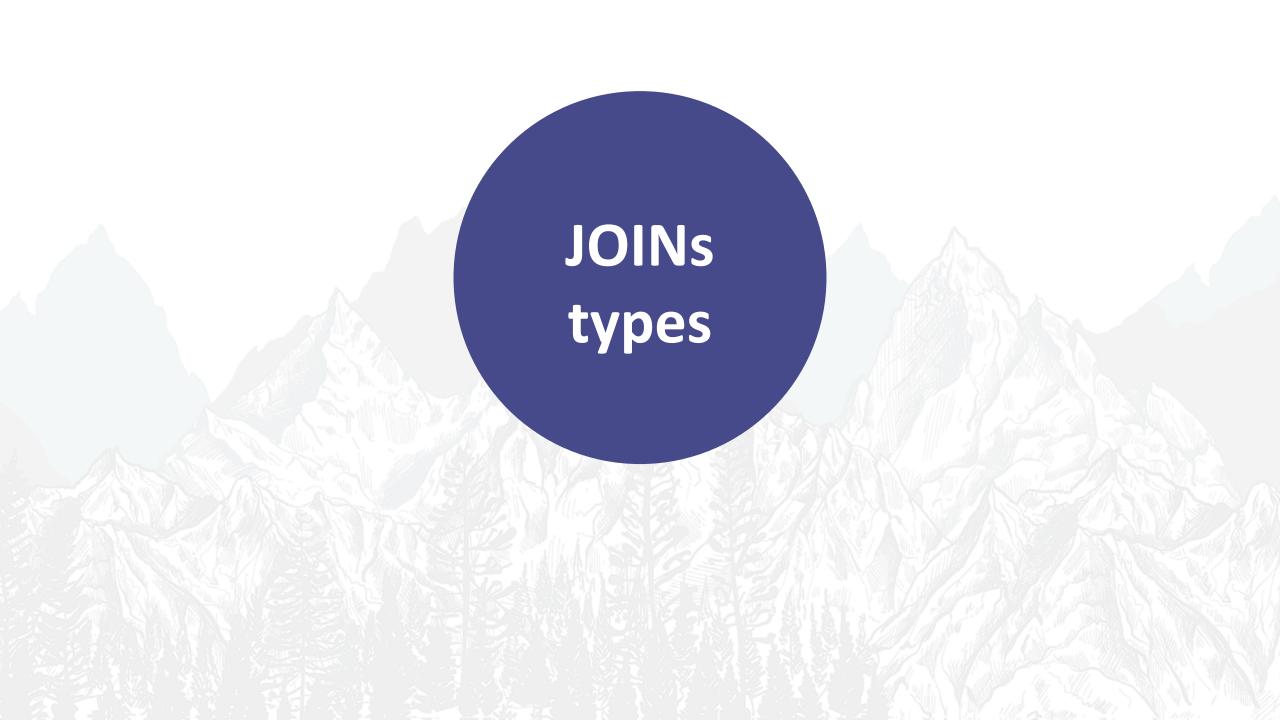
JOINs - example



- Recipes have meal_type
 - meal_type_id is FK in recipes table points to meal_types table



предястия



JOINs - types

types

INNER JOIN or

JOIN: Returns all rows when there is at least one match in BOTH tables

LEFT JOIN: Return all rows from the left table, and the matched rows from the right table

RIGHT JOIN: Return all rows from the right table, and the matched rows from the left table

FULL JOIN: Return all rows when there is a match in ONE of the tables





the sql query

SELECT column_name(s)

FROM table1

INNER JOIN table2

ON table1.column_name=table2.column_name;

or

SELECT column_name(s)

FROM table1

JOIN table2

ON table1.column_name=table2.column_name;

JOIN/INNER JOIN - result

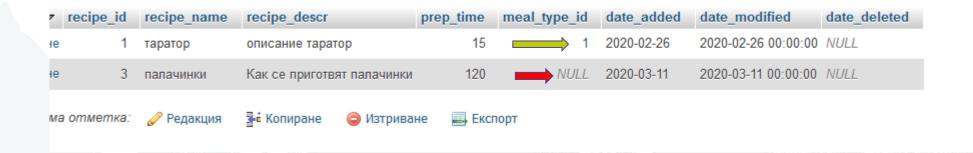
result

Като резултат виждаме <u>само</u> записите, за които има PK - FK съответствие.

JOIN/INNER JOIN - example



recipes table



^{*}set meal_type_id default value to NULL



the sql query

```
SELECT *
FROM `recipes`

JOIN meal_types on recipes.meal_type_id = meal_types.meal_type_id
```

the result

+ Настройки										
recipe_id	recipe_name	recipe_descr	prep_time	meal_type_id	date_added	date_modified	date_deleted	meal_type_id	meal_type_name	
1	таратор	описание таратор	15	1	2020-02-26	2020-02-26 00:00:00	NULL	1	нова супа	

JOIN/INNER JOIN - tasks

tasks

- 1. Направете JOIN заявка към таблиците recipes & meal_types в phpMyAdmin
- 2. Селектирайте всички данни
- 3. Селектирайте само
 - а. името на рецептата и тип ястие
 - b. името на рецептата, тип ястие, време за приготвяне
 - с. име на рецептата, тип ястие, описание на рецептата
- 4. *Приложете в sql заявката си, съкратен запис на името на таблиците.



LEFT JOIN



the sql query

```
SELECT column_name(s)
FROM table1
LEFT JOIN table2
ON table1.column_name=table2.column_name;
```

or

SELECT column_name(s)
FROM table1
LEFT OUTER JOIN table2
ON table1.column_name=table2.column_name;



the sql query - join recipes to meal-types

```
SELECT * FROM `recipes`

LEFT JOIN meal_types ON recipes.meal_type_id = meal_types.meal_type_id
```

the result





the sql query - join meal-types to recipes

SELECT * FROM `meal_types`

LEFT JOIN recipes ON meal_types.meal_type_id = recipes.meal_type_id

the result

Показв	ане на всички Бр	оой редове:	25 У ф	илтриране на редов	е: Търсене в	з таблицата	Сортиране по кл	юч: Няма	~
ройки									
type_id	meal_type_name	recipe_id	recipe_name	recipe_descr	prep_time	meal_type_id	date_added	date_modified	date_deleted
1	нова супа	1	таратор	описание таратор	15	1	2020-02-26	2020-02-26 00:00:00	NULL
3	основни ястия	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
4	предястия	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL



Explain the difference between the two queries and their results!







the sql query

SELECT column_name(s)

FROM table1

RIGHT JOIN table2

ON table1.column_name=table2.column_name;



the sql query - join recipes to meal-types

SELECT * FROM `recipes`

RIGHT JOIN meal_types ON recipes.meal_type_id = meal_types.meal_type_id

the result

+ Настройки

recipe_id	recipe_name	recipe_descr	prep_time	meal_type_id	date_added	date_modified	date_deleted	meal_type_id	meal_type_name
1	таратор	описание таратор	15	1	2020-02-26	2020-02-26 00:00:00	NULL	1	нова супа
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	3	основни ястия
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	4	предястия



- Explain the results of the query joining meal_types to recipes using
 - LEFT JOIN
 - RIGHT JOIN



the sql query - join meal-types to recipes

SELECT * FROM `meal_types`

RIGHT JOIN recipes ON meal_types.meal_type_id = recipes.meal_type_id

the result

Показване на всички Брой редове: 25

		-							
+ Настройки									
meal_type_id	meal_type_name	recipe_id	recipe_name	recipe_descr	prep_time	meal_type_id	date_added	date_modified	date_deleted
1	нова супа	1	таратор	описание таратор	15	1	2020-02-26	2020-02-26 00:00:00	NULL
NULL	NULL	3	палачинки	Как се приготвят палачинки	120	NULL	2020-03-11	2020-03-11 00:00:00	NULL

Сортиране по ключ:

Филтриране на редове: Търсене в таблицата



- Explain the results of the query joining recipes to meal_types using
 - LEFT JOIN
 - RIGHT JOIN



TIPS AND TRICKS

tasks

- 1. Add date_added, date_modified, date_deleted columns to meal_types table.
- 2. Select all recipes joining meal_types. What happens to the same column data?
- 3. Select recipes where meal_types column date_deleted is not NULL.

REMEMBER





*true for every query you set

- 1. You can join as many tables as you need if you are able to manage to get the desired and trustworthy result!
- 2. When you join tables with same column names, you have to give a unique name for each of them in the SQL query!



Questions?



Partners















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