

SQL JOINS

How to crud related tables

PHP web development 2019/2020

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Table of Contents



1. JOINS - purpose
2. JOINS - types
3. How to CRUD related tables



JOINs purpose

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

```
SELECT * FROM `recipes`
```

20 Филтриране на редове: 1 сортиране в таблицата

▼	recipe_id	recipe_name	recipe_descr	prep_time	meal_type_id	date_added	date_modified	date_deleted
ане	1	таратор	описание таратор	15	1	2020-02-26	2020-02-26 00:00:00	NULL

How to replace the meal_type_id with meal_type_name?

meal_type_id	meal_type_name
1	нова супа
3	основни ястия
4	предястия



JOINs types

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



**JOIN /
INNER JOIN**

JOIN/INNER JOIN

- 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 само записите,
за които има
РК - FK
СЪОТВЕТСТВИЕ.

JOIN/INNER JOIN - example

- recipes table

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

ма отметка:  Редакция  Копиране  Изтриване  Експорт

**set meal_type_id default value to NULL*

JOIN/INNER JOIN

- 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
 - a. името на рецептата и тип ястие
 - b. името на рецептата, тип ястие, време за приготвяне
 - c. име на рецептата, тип ястие, описание на рецептата
4. *Приложете в sql заявката си, съкратен запис на името на таблиците.



LEFT JOIN

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;
```

JOIN/INNER JOIN

- 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

☐ Показване на всички | Брой редове: 25 | Филтриране на редове: Търсене в таблицата | Сортиране по ключ: Няма

настройки

type_id	recipe_name	recipe_descr	prep_time	meal_type_id	date_added	date_modified	date_deleted	m
1	таратор	описание таратор	15	1	2020-02-26	2020-02-26 00:00:00	NULL	
3	палачинки	Как се приготвят палачинки	120	→ NULL	2020-03-11	2020-03-11 00:00:00	NULL	

JOIN/INNER JOIN

- 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

Показване на всички | Брой редове: 25 | Филтриране на редове: Търсене в таблицата | Сортиране по ключ: Няма

Резултати

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
3	основни ястия	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
4	предястия	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

JOIN/INNER JOIN

- Explain the difference between the two queries and their results!





RIGHT JOIN

RIGHT JOIN

- the sql query

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


RIGHT JOIN

- 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

RIGHT JOIN

- Explain the results of the query - joining meal_types to recipes using
 - LEFT JOIN
 - RIGHT 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 ▾ | Филтриране на редове: Търсене в таблицата | Сортиране по ключ: Няма ▾

+ 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

RIGHT JOIN

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



TIPS & TRICKS

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

1. First is the result you have the get, then you select the join to use!

**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?



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Coworking

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