# The New and the Old Join Syntax

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# The New and the Old Join Syntax

- Relational Database Essentials
- MySQL Constraints
- SELECT, INSERT, UPDATE, DELETE
- MySQL Aggregate Functions
- INNER JOIN, LEFT JOIN, RIGHT JOIN

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**Next:**

- Relational Database Essentials
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- Relational Database Essentials
- MySQL Constraints
- SELECT, INSERT, UPDATE, DELETE
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**Next:**

- Subqueries, Self-joins
- Stored Routines
- Advanced SQL Tools

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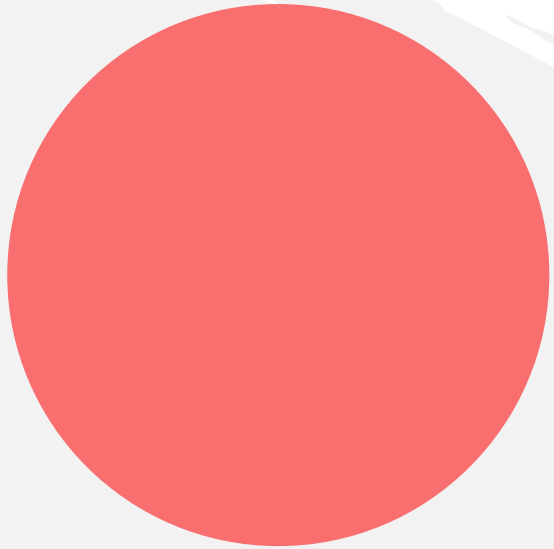
# The New and the Old Join Syntax

dept_manager_dup

```
dept_no CHAR(4)
emp_no INT
from_date DATE
to_date DATE
```



departments_dup

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dept_name VARCHAR(40)
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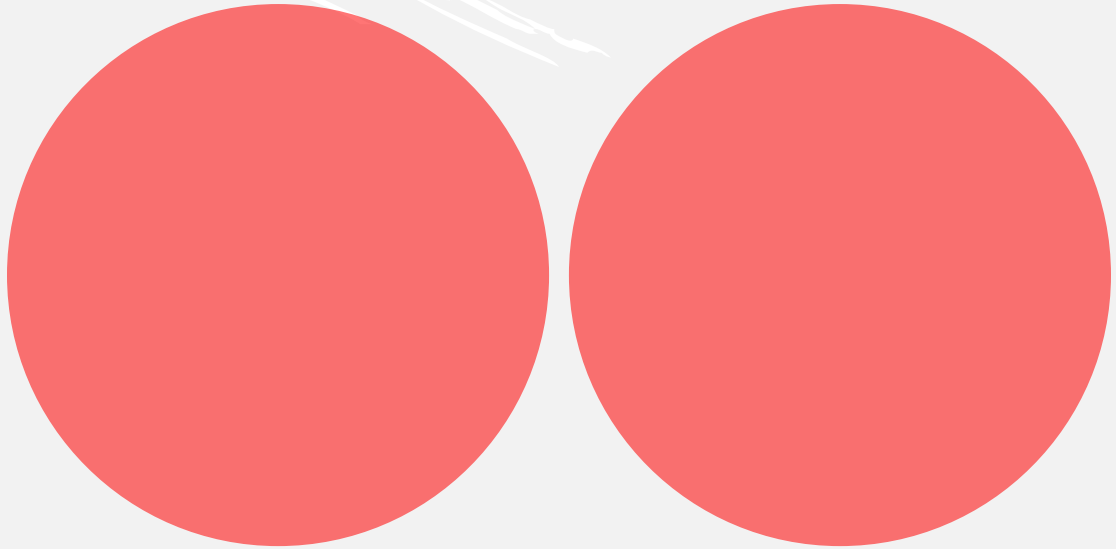

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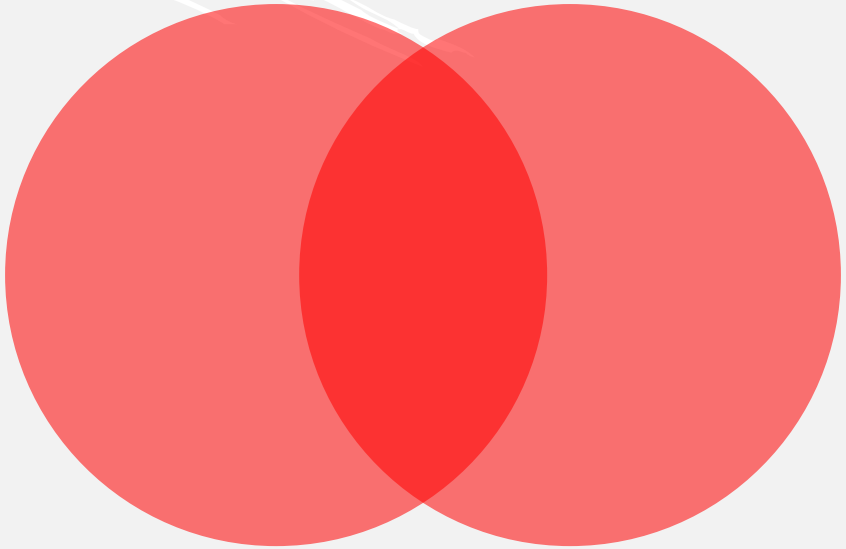

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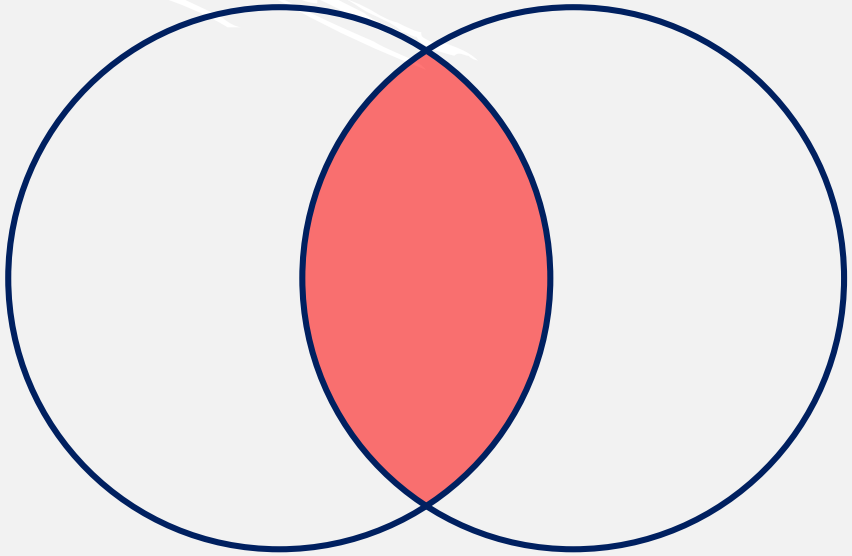

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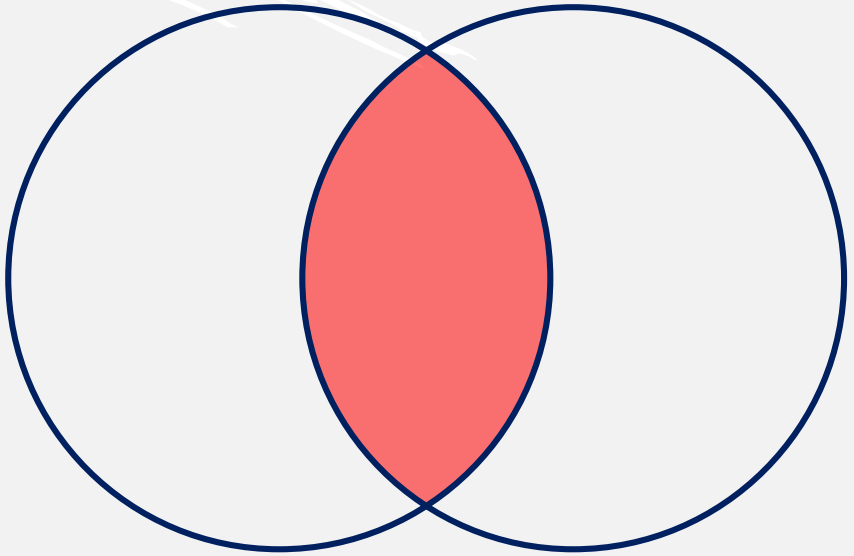

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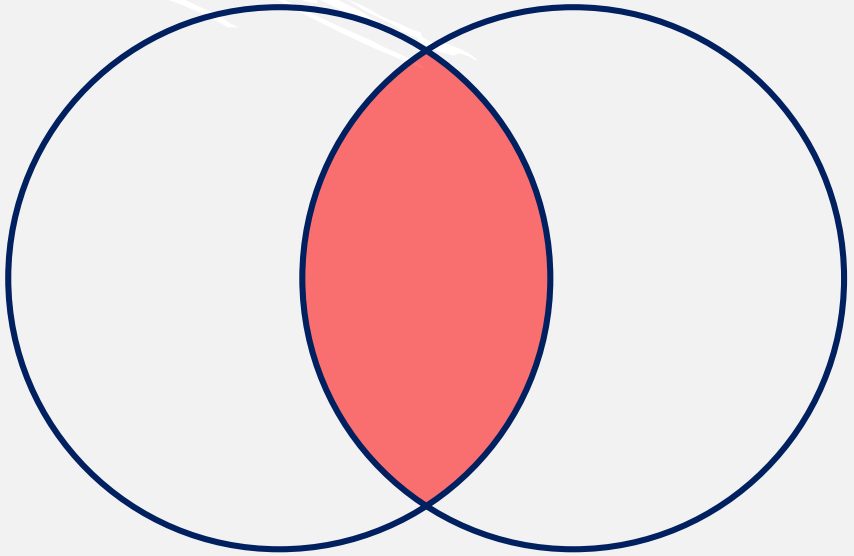

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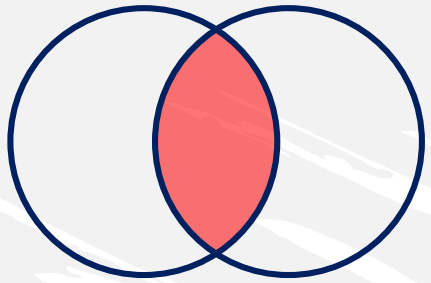

connection points

departments_dup

```
dept_no CHAR(4)
dept_name VARCHAR(40)
```

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# The New and the Old Join Syntax

| emp_no | dept_no | from_date | to_date |
|---|---|---|---|
| 999904 | NULL | 2017-01-01 | NULL |
| 999905 | NULL | 2017-01-01 | NULL |
| 999906 | NULL | 2017-01-01 | NULL |
| 999907 | NULL | 2017-01-01 | |
| 110085 | d002 | 1985-01-01 | 1989-12-17 |
| 110114 | d002 | 1989-12-17 | 9999-01-01 |
| 110183 | d003 | 1985-01-01 | 1992-03-21 |
| 110228 | d003 | 1992-03-21 | 9999-01-01 |
| 110303 | d004 | 1985-01-01 | 1988-09-09 |
| 110344 | d004 | 1988-09-09 | 1992-08-02 |
| 110386 | d004 | 1992-08-02 | 1996-08-30 |
| 110420 | d004 | 1996-08-30 | 9999-01-01 |
| 110511 | d005 | 1985-01-01 | 1992-04-25 |
| 110567 | d005 | 1992-04-25 | 9999-01-01 |
| 110725 | d006 | 1985-01-01 | 1989-05-06 |
| 110765 | d006 | 1989-05-06 | 1991-09-12 |
| 110800 | d006 | 1991-09-12 | 1994-06-28 |
| 110854 | d006 | 1994-06-28 | 9999-01-01 |
| 111035 | d007 | 1985-01-01 | 1991-03-07 |
| 111133 | d007 | 1991-03-07 | 9999-01-01 |
| 111400 | d008 | 1985-01-01 | 1991-04-08 |
| 111534 | d008 | 1991-04-08 | 9999-01-01 |
| 111692 | d009 | 1985-01-01 | 1988-10-17 |
| 111784 | d009 | 1988-10-17 | 1992-09-08 |
| 111877 | d009 | 1992-09-08 | 1996-01-03 |
| 111939 | d009 | 1996-01-03 | 9999-01-01 |

dept_manager_dup

```
dept_no CHAR(4)
emp_no INT
from_date DATE
to_date DATE
```

| dept_no | emp_no | dept_name |
|---|---|---|
| d003 | 110228 | Human Resources |
| d003 | 110183 | Human Resources |
| d004 | 110344 | Production |
| d004 | 110420 | Production |
| d004 | 110303 | Production |
| d004 | 110386 | Production |
| d005 | 110567 | Development |
| d005 | 110511 | Development |
| d006 | 110800 | Quality Management |
| d006 | 110765 | Quality Management |
| d006 | 110854 | Quality Management |
| d006 | 110725 | Quality Management |
| d007 | 111035 | Sales |
| d007 | 111133 | Sales |
| d008 | 111400 | Research |
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| d009 | 111784 | Customer Service |
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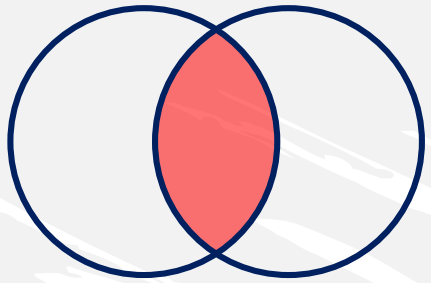

connection points

| dept_no | dept_name |
|---|---|
| NULL | Public Relations |
| d001 | Marketing |
| d003 | Human Resources |
| d004 | Production |
| d005 | Development |
| d006 | Quality Management |
| d007 | Sales |
| d008 | Research |
| d009 | Customer Service |
| d010 | NULL |
| d011 | NULL |

departments_dup

```
dept_no CHAR(4)
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```

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# The New and the Old Join Syntax

| emp_no | dept_no | from_date | to_date |
|---|---|---|---|
| 999904 | NULL ✗ | 2017-01-01 | NULL |
| 999905 | NULL ✗ | 2017-01-01 | NULL |
| 999906 | NULL ✗ | 2017-01-01 | NULL |
| 999907 | NULL ✗ | 2017-01-01 | NULL |
| 110085 | d002 ✗ | 1985-01-01 | 1989-12-17 |
| 110114 | d002 ✗ | 1989-12-17 | 9999-01-01 |
| 110183 | d003 ✓ | 1985-01-01 | 1992-03-21 |
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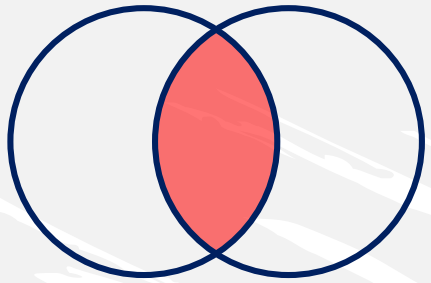

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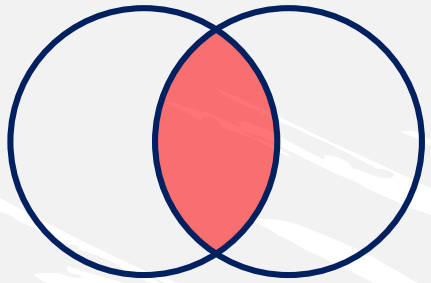

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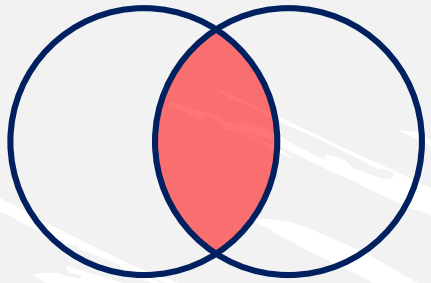

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# The New and the Old Join Syntax

## WHERE *(the Old Join Syntax)*

```
SELECT
    t1.column_name, t1.column_name, …, t2.column_name, …
FROM
    table_1 t1,
    table_2 t2
WHERE
    t1.column_name = t2.column_name;
```

# The New and the Old Join Syntax

- JOIN or WHERE?

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# The New and the Old Join Syntax

## JOIN or WHERE?

- the retrieved output is *identical*

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# The New and the Old Join Syntax

## JOIN or WHERE?

- the retrieved output is *identical*

- using WHERE is more *time-consuming*

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# The New and the Old Join Syntax

## JOIN or WHERE?

- the retrieved output is *identical*

- using WHERE is more *time-consuming*

- the WHERE syntax is perceived as *morally old* and is rarely employed by professionals

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# The New and the Old Join Syntax

## JOIN or WHERE?

- the retrieved output is *identical*

- using WHERE is more *time-consuming*

- the WHERE syntax is perceived as *morally old* and is rarely employed by professionals

- the JOIN syntax allows you to modify the connection between tables easily

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# The New and the Old Join Syntax

JOIN *(the New Join Syntax)* vs WHERE *(the Old Join Syntax)*

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