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# Python MySQL Join

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### Join Two or More Tables

You can combine rows from two or more tables, based on a related column between them, by using a JOIN statement.

Consider you have a "users" table and a "products" table:

#### users

```
{ id: 1, name: 'John', fav: 154},
{ id: 2, name: 'Peter', fav: 154},
{ id: 3, name: 'Amy', fav: 155},
{ id: 4, name: 'Hannah', fav:},
{ id: 5, name: 'Michael', fav:}
```

### products

```
{ id: 154, name: 'Chocolate Heaven' },
{ id: 155, name: 'Tasty Lemons' },
{ id: 156, name: 'Vanilla Dreams' }
```

These two tables can be combined by using users' fav field and products' id field.

### Example

Join users and products to see the name of the users favorite product:

```
import mysql.connector
mydb = mysql.connector.connect(
  host="localhost",
  user="yourusername",
  passwd="yourpassword",
  database="mydatabase"
)
mycursor = mydb.cursor()
sql = "SELECT \
  users.name AS user, \
  products.name AS favorite \
  FROM users \
  INNER JOIN products ON users.fav = products.id"
mycursor.execute(sql)
myresult = mycursor.fetchall()
for x in myresult:
  print(x)
```

Run example »

**Note:** You can use JOIN instead of INNER JOIN. They will both give you the same result.

## **LEFT JOIN**

In the example above, Hannah, and Michael were excluded from the result, that is because INNER JOIN only shows the records where there is a match. If you want to show all users, even if they do not have a favorite product, use the LEFT JOIN statement:

### Example

Select all users and their favorite product:

```
sql = "SELECT \
  users.name AS user, \
  products.name AS favorite \
  FROM users \
  LEFT JOIN products ON users.fav = products.id"
```

Run example »

### **RIGHT JOIN**

If you want to return all products, and the users who have them as their favorite, even if no user have them as their favorite, use the RIGHT JOIN statement:

### Example

Select all products, and the user(s) who have them as their favorite:

```
sql = "SELECT \
  users.name AS user, \
  products.name AS favorite \
  FROM users \
  RIGHT JOIN products ON users.fav = products.id"
```

Run example »

**Note:** Hannah and Michael, who have no favorite product, are not included in the result.

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