# **SQL INNER JOIN**

**SQL INNER JOIN:**

1. The INNER JOIN keyword selects records that have matching values in both tables.
2. The syntax:

|  |
| --- |
| SELECT column\_name(s)  FROM table1  INNER JOIN table2  ON table1.column\_name = table2.column\_name; |

1. Let's look at a selection of the Products table:

|  |  |  |  |
| --- | --- | --- | --- |
| **ProductID** | **ProductName** | **CategoryID** | **Price** |
| 1 | Chais | 1 | 18 |
| 2 | Chang | 1 | 19 |
| 3 | Aniseed Syrup | 2 | 10 |

And a selection of the Categories table:

|  |  |  |
| --- | --- | --- |
| **CategoryID** | **CategoryName** | **Description** |
| 1 | Beverages | Soft drinks, coffees, teas, beers, and ales |
| 2 | Condiments | Sweet and savory sauces, relishes, spreads, and seasonings |
| 3 | Confections | Desserts, candies, and sweet breads |

1. We will join the Products table with the Categories table, by using the CategoryID field from both tables.  
   Example:  
   Join Products and Categories with the INNER JOIN keyword:

|  |
| --- |
| SELECT ProductID, ProductName, CategoryName  FROM Products  INNER JOIN Categories ON Products.CategoryID = Categories.CategoryID; |

|  |  |  |
| --- | --- | --- |
| **ProductID** | **ProductName** | **CategoryName** |
| 39 | Chartreuse verte | Beverages |
| 2 | Chang | Beverages |
| 24 | Guaraná Fantástica | Beverages |
| 34 | Sasquatch Ale | Beverages |
| 35 | Steeleye Stout | Beverages |

**Naming the Columns:**

1. It is a good practice to include the table name when specifying columns in the SQL statement.  
   Example:  
   Specify the table names:

|  |
| --- |
| SELECT Products.ProductID, Products.ProductName, Categories.CategoryName  FROM Products  INNER JOIN Categories ON Products.CategoryID = Categories.CategoryID; |

|  |  |  |
| --- | --- | --- |
| **ProductID** | **ProductName** | **CategoryName** |
| 39 | Chartreuse verte | Beverages |
| 2 | Chang | Beverages |
| 24 | Guaraná Fantástica | Beverages |
| 34 | Sasquatch Ale | Beverages |
| 35 | Steeleye Stout | Beverages |

The example above works without specifying table names, because none of the specified column names are present in both tables. If you try to include CategoryID in the SELECT statement, you will get an error if you do not specify the table name (because CategoryID is present in both tables).

**JOIN or INNER JOIN:**

1. JOIN and INNER JOIN will return the same result.
2. INNER is the default join type for JOIN, so when you write JOIN the parser actually writes INNER JOIN.
3. Example:  
   JOIN is the same as INNER JOIN:

|  |
| --- |
| SELECT Products.ProductID, Products.ProductName, Categories.CategoryName  FROM Products  JOIN Categories ON Products.CategoryID = Categories.CategoryID; |

|  |  |  |
| --- | --- | --- |
| **ProductID** | **ProductName** | **CategoryName** |
| 1 | Chais | Beverages |
| 2 | Chang | Beverages |
| 3 | Aniseed Syrup | Condiments |
| 4 | Chef Anton's Cajun Seasoning | Condiments |

**JOIN Three Tables:**

1. The following SQL statement selects all orders with customer and shipper information:  
   Example:

|  |
| --- |
| SELECT Orders.OrderID, Customers.CustomerName, Shippers.ShipperName  FROM ((Orders  INNER JOIN Customers ON Orders.CustomerID = Customers.CustomerID)  INNER JOIN Shippers ON Orders.ShipperID = Shippers.ShipperID); |

|  |  |  |
| --- | --- | --- |
| **OrderID** | **CustomerName** | **ShipperName** |
| 10290 | Comércio Mineiro | Speedy Express |
| 10284 | Lehmanns Marktstand | Speedy Express |
| 10388 | Seven Seas Imports | Speedy Express |
| 10390 | Ernst Handel | Speedy Express |
| 10296 | LILA-Supermercado | Speedy Express |