MySQL is a widely used relational database management system (RDBMS).

MySQL is free and open-source.

MySQL is ideal for both small and large applications.

What is MySQL?

MySQL is a relational database management system

MySQL is open-source

MySQL is free

MySQL is ideal for both small and large applications

MySQL is very fast, reliable, scalable, and easy to use

MySQL is cross-platform

MySQL is compliant with the ANSI SQL standard

MySQL was first released in 1995

MySQL is developed, distributed, and supported by Oracle Corporation

MySQL is named after co-founder Monty Widenius's daughter: My

MySQL is a very popular open-source relational database management system (RDBMS).

Who Uses MySQL?

Huge websites like Facebook, Twitter, Airbnb, Booking.com, Uber, GitHub, YouTube, etc.

Content Management Systems like WordPress, Drupal, Joomla!, Contao, etc.

A very large number of web developers around the world

Show Data On Your Web Site

To build a web site that shows data from a database, you will need:

An RDBMS database program (like MySQL)

A server-side scripting language, like PHP

To use SQL to get the data you want

To use HTML / CSS to style the page

What is RDBMS?

RDBMS stands for Relational Database Management System.

RDBMS is a program used to maintain a relational database.

RDBMS is the basis for all modern database systems such as MySQL, Microsoft SQL Server, Oracle, and Microsoft Access.

RDBMS uses SQL queries to access the data in the database.

What is a Database Table?

A table is a collection of related data entries, and it consists of columns and rows.

A column holds specific information about every record in the table.

A record (or row) is each individual entry that exists in a table.

Look at a selection from the Northwind "Customers" table:

CustomerID CustomerName ContactName Address City PostalCode Country

1

Alfreds Futterkiste Maria Anders Obere Str. 57 Berlin 12209 Germany

2 Ana Trujillo Emparedados y helados Ana Trujillo Avda. de la Constitución 2222 México D.F. 05021 Mexico

3 Antonio Moreno Taquería Antonio Moreno Mataderos 2312 México D.F. 05023 Mexico

4

Around the Horn Thomas Hardy 120 Hanover Sq. London WA1 1DP UK

5 Berglunds snabbköp Christina Berglund Berguvsvägen 8 Luleå S-958 22 Sweden

The columns in the "Customers" table above are: CustomerID, CustomerName, ContactName, Address, City, PostalCode and Country. The table has 5 records (rows).

What is a Relational Database?

A relational database defines database relationships in the form of tables. The tables are related to each other - based on data common to each.

Look at the following three tables "Customers", "Orders", and "Shippers" from the Northwind database:

Customers Table

CustomerID CustomerName ContactName Address City PostalCode Country

1

Alfreds Futterkiste Maria Anders Obere Str. 57 Berlin 12209 Germany

2 Ana Trujillo Emparedados y helados Ana Trujillo Avda. de la Constitución 2222 México D.F. 05021 Mexico

3 Antonio Moreno Taquería Antonio Moreno Mataderos 2312 México D.F. 05023 Mexico

4

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The relationship between the "Customers" table and the "Orders" table is the CustomerID column:

Orders Table

OrderID CustomerID EmployeeID OrderDate ShipperID

10278

5 8 1996-08-12 2

10280 5 2 1996-08-14 1

10308 2 7 1996-09-18 3

10355

4 6 1996-11-15 1

10365 3 3 1996-11-27 2

10383 4 8 1996-12-16 3

10384 5 3 1996-12-16 3

The relationship between the "Orders" table and the "Shippers" table is the ShipperID column:

Shippers Table

ShipperID ShipperName Phone

1 Speedy Express (503) 555-9831

2 United Package (503) 555-3199

3 Federal Shipping (503) 555-9931

Some of The Most Important SQL Commands

SELECT - extracts data from a database

UPDATE - updates data in a database

DELETE - deletes data from a database

INSERT INTO - inserts new data into a database

CREATE DATABASE - creates a new database

ALTER DATABASE - modifies a database

CREATE TABLE - creates a new table

ALTER TABLE - modifies a table

DROP TABLE - deletes a table

CREATE INDEX - creates an index (search key)

DROP INDEX - deletes an index

## What is a Relational Database?

A relational database defines database relationships in the form of tables. The tables are related to each other - based on data common to each.

Look at the following three tables "Customers", "Orders", and "Shippers" from the Northwind database:

### Customers Table

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CustomerID** | **Customer Name** | **ContactName** | **Address** | **City** | **PostalCode** | **Country** |
| 1 | Alfreds Futterkiste | Maria Anders | Obere Str. 57 | Berlin | 12209 | Germany |
| 2 | Ana Trujillo Emparedados y helados | Ana Trujillo | Avda. de la Constitución 2222 | México D.F. | 05021 | Mexico |
| 3 | Antonio Moreno Taquería | Antonio Moreno | Mataderos 2312 | México D.F. | 05023 | Mexico |
| 4 | Around the Horn | Thomas Hardy | 120 Hanover Sq. | London | WA1 1DP | UK |
| 5 | Berglunds snabbköp | Christina Berglund | Berguvsvägen 8 | Luleå | S-958 22 | Sweden |

### Orders Table

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **OrderID** | **CustomerID** | **EmployeeID** | **OrderDate** | **ShipperID** |
| 10278 | 5 | 8 | 1996-08-12 | 2 |
| 10280 | 5 | 2 | 1996-08-14 | 1 |
| 10308 | 2 | 7 | 1996-09-18 | 3 |
| 10355 | 4 | 6 | 1996-11-15 | 1 |
| 10365 | 3 | 3 | 1996-11-27 | 2 |
| 10383 | 4 | 8 | 1996-12-16 | 3 |
| 10384 | 5 | 3 | 1996-12-16 | 3 |

### Shippers Table

|  |  |  |
| --- | --- | --- |
| **ShipperID** | **ShipperName** | **Phone** |
| 1 | Speedy Express | (503) 555-9831 |
| 2 | United Package | (503) 555-3199 |
| 3 | Federal Shipping | (503) 555-9931 |