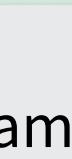


# Learn to Code

With the world's largest web developer site.

Search our tutorials, e.g. HTML



[Not Sure Where To Begin?](#)

## HTML

The language for building web pages

[Learn HTML](#)

[Video Tutorial](#)

[HTML Reference](#)

[Get Certified](#)

HTML Example:

```
<!DOCTYPE html>
<html>
<head>
<title>HTML Tutorial</title>
</head>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

[Try it Yourself](#)

## CSS

The language for styling web pages

[Learn CSS](#)

[CSS Reference](#)

[Get Certified](#)

CSS Example:

```
body {
background-color: lightblue;
}

h1 {
color: white;
text-align: center;
}

p {
font-family: verdana;
}
```

[Try it Yourself](#)

## JavaScript

The language for programming web pages

[Learn JavaScript](#)

[JavaScript Reference](#)

[Get Certified](#)

JavaScript Example:

```
<button onclick="myFunction()">Click Me!
</button>

<script>
function myFunction() {
let x =
document.getElementById("demo");
x.style.fontSize = "25px";
x.style.color = "red";
}
</script>
```

[Try it Yourself](#)

## Python

A popular programming language

[Learn Python](#)

[Python Reference](#)

[Get Certified](#)

Python Example:

```
if 5 > 2:
print("Five is greater than two!")
```

[Try it Yourself](#)

## SQL

A language for accessing databases

[Learn SQL](#)

[SQL Reference](#)

[Get Certified](#)

SQL Example:

```
SELECT * FROM Customers
WHERE Country='Mexico';
```

[Try it Yourself](#)

## PHP

A web server programming language

## Java

A programming language

## jQuery

A JS library for developing web pages

## C++

A programming language

## CSS

A CSS framework for faster and better responsive web pages

## Bootstrap

A CSS framework for designing better web pages

## C

## C#

## R

## Kotlin

## Node.js

## React

## JSON

## Vue

## MySQL

## XML

## Sass

## Icons

## RWD

## Graphics

## SVG

## Canvas

## Raspberry Pi

## Cyber Security

## Colors

## Git

## Matplotlib

## NumPy

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## AppML

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## Django

## MongoDB

## Statistics

## Data Science

## Typing Speed

## HowTo

## Code Game

## Spaces

## PostgreSQL

## Excel

## DSA - Data Structures and Algorithms

## Machine Learning

## Artificial Intelligence

# Code Editor

With our online code editor, you can edit code and view the result in your browser

www.w3schools.com/trial/

Frontend Backend

Run >

Result Size: 456 x 221

```
<!DOCTYPE html>
<html>
<head>
<title>HTML Tutorial</title>
</head>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

I

This is a paragraph.

Try Frontend Editor (HTML/CSS/JS)

Try Backend Editor (Python/PHP/Java/C..)

# Log in

Email

Password

Log in



Continue with Facebook



Continue with Git hub



Continue with Google

# sign up

Email

Password

Sign up



Continue with Facebook



Continue with Git hub



Continue with Google

## HTML Tutorial

### HTML HOME

HTML Introduction

HTML Editors

HTML Basic

HTML Elements

HTML Attributes

HTML Headings

HTML Paragraphs

HTML Styles

HTML Formatting

HTML Quotations

HTML Comments

HTML Colors

HTML CSS

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HTML Classes

HTML Id

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HTML File Paths

HTML Head

HTML Layout

HTML Responsive

HTML Computercode

HTML Semantics

HTML Style Guide

HTML Entities

HTML Symbols

# HTML Tutorial

[Home](#)[Next](#)

HTML is the standard markup language for Web pages.

With HTML you can create your own Website.

HTML is easy to learn - You will enjoy it!

[Study our free HTML Tutorial »](#)

## Easy Learning with HTML "Try it Yourself"

With our "Try it Yourself" editor, you can edit the HTML code and view the result:

### Example

```
<!DOCTYPE html>
<html>
<head>
<title>Page Title</title>
</head>
<body>

<h1>This is a Heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

[Try It Yourself »](#)

Click on the "Try it Yourself" button to see how it works.

## HTML Examples

In this HTML tutorial, you will find more than 200 examples. With our online "Try it Yourself" editor, you can edit and test each example yourself!

[Go to HTML Examples!](#)

## HTML Exercises

### Test Yourself With Exercises

#### Exercise:

Add a "tooltip" to the paragraph below with the text "About W3Schools".

```
<p> = "About W3Schools" >W3Schools is a web developer's site.</p>
```

[Submit Answer »](#)[Start the Exercise](#)

## HTML Quiz Test

Test your HTML skills with our HTML Quiz!

[Start HTML Quiz!](#)

## My Learning

Track your progress with the free "My Learning" program here at W3Schools.

Log in to your account, and start earning points!

This is an optional feature. You can study at W3Schools without using My Learning.

## HTML References

At W3Schools you will find complete references about HTML elements, attributes, events, color names, entities, character-sets, URL encoding, language codes, HTTP messages, browser support, and more:

[HTML Elements](#)[Browser Support](#)[Attributes](#)[Global Attributes](#)[Event Attributes](#)[Color Names](#)[Canvas](#)[Audio/Video DOM](#)[Character Sets](#)[URL Encoding](#)[Language Codes](#)[Country Codes](#)[HTTP Messages](#)[Px to Em Converter](#)[Keyboard Shortcuts](#)[Home](#)[Next](#)



## PHP Tutorial

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[PHP Comments](#)  
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[PHP Echo / Print](#)  
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## PHP Forms

[PHP Form Handling](#)  
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## PHP Advanced

[PHP Date and Time](#)  
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[Do not share my Personal Information](#)

[PHP File Upload](#)

[Try it Yourself »](#)

[Get your own PHP Server](#)

# PHP Tutorial

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## Learn PHP

PHP is a server scripting language, and a powerful tool for making dynamic and interactive Web pages.

PHP is a widely-used, free, and efficient alternative to competitors such as Microsoft's ASP.

[Start learning PHP now »](#)

## Easy Learning with "PHP Tryit"

With our online "PHP Tryit" editor, you can edit the PHP code, and click on a button to view the result.

### Example

```
<!DOCTYPE html>
<html>
<body>

<?php
echo "My first PHP script!";
?>

</body>
</html>
```

[Try it Yourself »](#)

Click on the "Try it Yourself" button to see how it works.

## PHP Exercises

### Test Yourself With Exercises

#### Exercise:

Insert the missing part of the code below to output "Hello World".

"Hello World";

[Submit Answer »](#)

[Start the Exercise](#)

## PHP Examples

Learn by examples! This tutorial supplements all explanations with clarifying examples.

[See All PHP Examples](#)

## PHP Quiz Test

Learn by taking a quiz! This quiz will give you a signal of how much you know, or do not know, about PHP.

[Start PHP Quiz!](#)

## My Learning

Track your progress with the free "My Learning" program here at W3Schools.

Log in to your account, and start earning points!

This is an optional feature. You can study at W3Schools without using My Learning.

## PHP References

W3Schools' PHP reference contains different categories of all PHP functions, keywords and constants, along with examples.

Array	Calendar	Date	Directory	Error
Exception	Filesystem	Filter	FTP	JSON
Keywords	Libxml	Mail	Math	Misc
MySQLi	Network	Output	RegEx	SimpleXML
Stream	String	Var Handling	XML Parser	Zip
Timezones				

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## JS Tutorial

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JS Number Methods  
JS Number Properties  
JS Arrays  
JS Array Methods  
JS Array Search  
JS Array Sort  
JS Array Iteration  
JS Array Const  
JS Dates  
JS Date Formats  
JS Date Get Methods  
JS Date Set Methods

[Do not share my Personal Information](#)

[JS Random](#)

## JavaScript Tutorial

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JavaScript is the world's most popular programming language.

JavaScript is the programming language of the Web.

JavaScript is easy to learn.

This tutorial will teach you JavaScript from basic to advanced.

[Start learning JavaScript now »](#)

### Examples in Each Chapter

With our "Try it Yourself" editor, you can edit the source code and view the result.

#### Example

##### My First JavaScript

[Click me to display Date and Time](#)[Try it Yourself »](#)

### Use the Menu

We recommend reading this tutorial, in the sequence listed in the menu.

If you have a large screen, the menu will always be present on the left.

If you have a small screen, open the menu by clicking the top menu sign ≡.

### Learn by Examples

Examples are better than 1000 words. Examples are often easier to understand than text explanations.

This tutorial supplements all explanations with clarifying "Try it Yourself" examples.

If you try all the examples, you will learn a lot about JavaScript, in a very short time!

[JavaScript Examples »](#)

### Why Study JavaScript?

JavaScript is one of the **3 languages** all web developers **must** learn:

1. [HTML](#) to define the content of web pages
2. [CSS](#) to specify the layout of web pages
3. [JavaScript](#) to program the behavior of web pages

This tutorial covers every version of JavaScript:

The Original JavaScript ES1 ES2 ES3 (1997-1999)  
The First Main Revision ES5 (2009)  
The Second Revision ES6 (2015)  
The Yearly Additions (2016, 2017 ... 2021, 2022)

### Learning Speed

In this tutorial, the learning speed is your choice.

Everything is up to you.

If you are struggling, take a break, or re-read the material.

**Always** make sure you understand **all** the "Try-it-Yourself" examples.

The only way to become a clever programmer is to: Practice. Practice. Practice. Code. Code. Code !

### Test Yourself With Exercises

#### Exercise:

Create a variable called `carName` and assign the value `Volvo` to it.

```
var [REDACTED] = " [REDACTED]";
```

[Submit Answer »](#)[Start the Exercise](#)

### Commonly Asked Questions

How do I get JavaScript?  
Where can I download JavaScript?  
Is JavaScript Free?

**You don't have to get or download JavaScript.**

JavaScript is already running in your browser on your computer, on your tablet, and on your smart-phone.

JavaScript is free to use for everyone.

### My Learning

Track your progress with the free "My Learning" program here at W3Schools.

Log in to your account, and start earning points!

This is an optional feature. You can study at W3Schools without using My Learning.

### JavaScript References

W3Schools maintains a complete JavaScript reference, including all HTML and browser objects.

The reference contains examples for all properties, methods and events, and is continuously updated according to the latest web standards.

[Complete JavaScript Reference »](#)

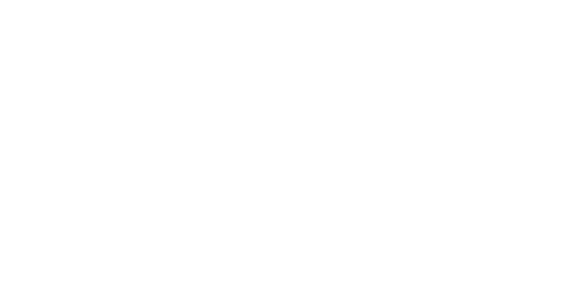
### JavaScript Quiz Test

Test your JavaScript skills at W3Schools!

[Start JavaScript Quiz!](#)

## Kickstart your career

## Get certified by completing the JavaScript course

[Get certified](#)[Home](#)[Next](#)

# SQL Tutorial

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SQL is a standard language for storing, manipulating and retrieving data in databases.

Our SQL tutorial will teach you how to use SQL in: MySQL, SQL Server, MS Access, Oracle, Sybase, Informix, Postgres, and other database systems.

[Start learning SQL now »](#)

## Examples in Each Chapter

With our online SQL editor, you can edit the SQL statements, and click on a button to view the result.

### Example

[Get your own SQL Server](#)

```
SELECT * FROM Customers;
```

[Try it Yourself »](#)

Click on the "Try it Yourself" button to see how it works.

## SQL Exercises

### Test Yourself With Exercises

#### Exercise:

Insert the missing statement to get all the columns from the `Customers` table.

```
* FROM Customers;
```

[Submit Answer »](#)
[Start the Exercise](#)

ADVERTISEMENT

## SQL Examples

Learn by examples! This tutorial supplements all explanations with clarifying examples.

[See All SQL Examples](#)

## SQL Quiz Test

Test your SQL skills at W3Schools!

[Start SQL Quiz!](#)

## My Learning

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This is an optional feature. You can study at W3Schools without using My Learning.

## SQL References

At W3Schools you will find a complete reference for keywords and function:

[SQL Keyword Reference](#)
[MySQL Functions](#)
[SQLServer Functions](#)
[MS Access Functions](#)
[SQL Quick Reference](#)

## SQL Data Types

Data types and ranges for Microsoft Access, MySQL and SQL Server.

[SQL Data Types](#)

## Kickstart your career

Get certified by completing the SQL course

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## Java Tutorial

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### Learn Java

Java is a popular programming language.

Java is used to develop mobile apps, web apps, desktop apps, games and much more.

[Start learning Java now »](#)

### Examples in Each Chapter

Our "Try it Yourself" editor makes it easy to learn Java. You can edit Java code and view the result in your browser.

#### Example

[Get your own Java Server](#)

```
public class Main {  
    public static void main(String[] args) {  
        System.out.println("Hello World");  
    }  
}
```

[Try it Yourself »](#)

Do not share my Personal Information

Click on the "Run example" button to see how it works.

We recommend reading this tutorial, in the sequence listed in the left menu.

Java is an object oriented language and some concepts may be new. Take breaks when needed, and go over the examples as many times as needed.

### Java Exercises

#### Test Yourself With Exercises

##### Exercise:

Insert the missing part of the code below to output "Hello World".

```
public class MyClass {  
    public static void main(String[] args) {  
        . . . ("Hello World");  
    }  
}
```

[Submit Answer »](#)[Start the Exercise](#)

### Java Quiz

Test your Java skills with a quiz.

[Start Java Quiz](#)

### Learn by Examples

Learn by examples! This tutorial supplements all explanations with clarifying examples.

[See All Java Examples](#)

### My Learning

Track your progress with the free "My Learning" program here at W3Schools.

Log in to your account, and start earning points!

This is an optional feature. You can study at W3Schools without using My Learning.

### Java Reference

[Java Keywords](#)[Java String Methods](#)[Java Math Methods](#)

### Download Java

Download Java from the official Java web site: <https://www.oracle.com>

## Kickstart your career

### Get certified by completing the JAVA course

[Get certified](#)[Home](#)[Next](#)

## Python Tutorial

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### Learn Python

Python is a popular programming language.

Python can be used on a server to create web applications.

[Start learning Python now »](#)

### Learning by Examples

With our "Try it Yourself" editor, you can edit Python code and view the result.

#### Example

[Get your own Python Server](#)

```
print("Hello, World!")
```

[Try it Yourself »](#)

Click on the "Try it Yourself" button to see how it works.

### Python File Handling

In our File Handling section you will learn how to open, read, write, and delete files.

[Python File Handling](#)

### Python Database Handling

In our database section you will learn how to access and work with MySQL and MongoDB databases:

[Python MySQL Tutorial](#)[Python MongoDB Tutorial](#)

### Python Exercises

#### Test Yourself With Exercises

##### Exercise:

Insert the missing part of the code below to output "Hello World".

```
("Hello World")
```

[Submit Answer »](#)[Start the Exercise](#)

### Python Examples

Learn by examples! This tutorial supplements all explanations with clarifying examples.

[See All Python Examples](#)

### Python Quiz

Test your Python skills with a quiz.

[Python Quiz](#)

### My Learning

Track your progress with the free "My Learning" program here at W3Schools.

Log in to your account, and start earning points!

This is an optional feature. You can study at W3Schools without using My Learning.

### Python Reference

You will also find complete function and method references:

[Reference Overview](#)[Built-in Functions](#)[String Methods](#)[List/Array Methods](#)[Dictionary Methods](#)[Tuple Methods](#)[Set Methods](#)[File Methods](#)[Python Keywords](#)[Python Exceptions](#)[Python Glossary](#)[Random Module](#)[Requests Module](#)[Math Module](#)[CMath Module](#)

### Download Python

Download Python from the official Python web site: <https://python.org>

## Kickstart your career

### Get certified by completing the PYTHON course

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