



# Pandas DataFrames

[< Previous](#)[Next >](#)

## What is a DataFrame?

A Pandas DataFrame is a 2 dimensional data structure, like a 2 dimensional array, or a table with rows and columns.

## Example

[Get your own Python Server](#)

Create a simple Pandas DataFrame:

```
import pandas as pd

data = {
    "calories": [420, 380, 390],
    "duration": [50, 40, 45]
}

#load data into a DataFrame object:
df = pd.DataFrame(data)

print(df)
```

## Result

[Tutorials ▼](#)[Exercises ▼](#)[Services ▼](#)[Sign Up](#)[Log in](#)

≡ [Python](#) [CSS](#) [JAVASCRIPT](#) [SQL](#) [PYTHON](#) [JAVA](#) [PHP](#) [HOW TO](#) [W3.CSS](#) [C](#)

2 390 45

[Try it Yourself »](#)

## Locate Row

As you can see from the result above, the DataFrame is like a table with rows and columns.

Pandas use the `loc` attribute to return one or more specified row(s)

### Example

Return row 0:

```
#refer to the row index:  
print(df.loc[0])
```

## Result

```
calories    420  
duration     50  
Name: 0, dtype: int64
```

[Try it Yourself »](#)

**Note:** This example returns a Pandas **Series**.

[Tutorials ▼](#)[Exercises ▼](#)[Services ▼](#)[Sign Up](#)[Log in](#)[≡](#) [CSS](#) [JAVASCRIPT](#) [SQL](#) [PYTHON](#) [JAVA](#) [PHP](#) [HOW TO](#) [W3.CSS](#) [C](#)

```
#use a list of indexes:  
print(df.loc[[0, 1]])
```

## Result

	calories	duration
0	420	50
1	380	40

[Try it Yourself »](#)

**Note:** When using `[]`, the result is a Pandas **DataFrame**.

## Get Certified!

Complete the Pandas modules, do the exercises, take the exam, and you will become w3schools certified!

\$10 ENROLL



## Named Indexes

With the `index` argument, you can name your own indexes.



```
import pandas as pd

data = {
    "calories": [420, 380, 390],
    "duration": [50, 40, 45]
}

df = pd.DataFrame(data, index = ["day1", "day2", "day3"])

print(df)
```

## Result

	calories	duration
day1	420	50
day2	380	40
day3	390	45

[Try it Yourself »](#)

## Locate Named Indexes

Use the named index in the `loc` attribute to return the specified row(s).

### Example

Return "day2":

```
#refer to the named index:
print(df.loc["day2"])
```

[Tutorials ▼](#)[Exercises ▼](#)[Services ▼](#)[Sign Up](#)[Log in](#)[≡](#) [.](#) [CSS](#) [JAVASCRIPT](#) [SQL](#) [PYTHON](#) [JAVA](#) [PHP](#) [HOW TO](#) [W3.CSS](#) [C](#)

calories 380

duration 40

Name: day2, dtype: int64

[Try it Yourself »](#)

## Load Files Into a DataFrame

If your data sets are stored in a file, Pandas can load them into a DataFrame.

### Example

Load a comma separated file (CSV file) into a DataFrame:

```
import pandas as pd

df = pd.read_csv('data.csv')

print(df)
```

[Try it Yourself »](#)

You will learn more about importing files in the next chapters.

## Test Yourself With Exercises

[Tutorials ▼](#)[Exercises ▼](#)[Services ▼](#)[Sign Up](#)[Log in](#)[≡](#) [.](#) [CSS](#) [JAVASCRIPT](#) [SQL](#) [PYTHON](#) [JAVA](#) [PHP](#) [HOW TO](#) [W3.CSS](#) [C](#)

Insert the correct Pandas method to create a DataFrame.

pd. (data)

[Submit Answer »](#)

[Start the Exercise](#)

[◀ Previous](#)

[Next ▶](#)

**W3schools Pathfinder**

Track your progress - it's free!

[Sign Up](#)[Log in](#)

ADVERTISEMENT

[Tutorials ▼](#)[Exercises ▼](#)[Services ▼](#)[Sign Up](#)[Log in](#)[CSS](#) [JAVASCRIPT](#) [SQL](#) [PYTHON](#) [JAVA](#) [PHP](#) [HOW TO](#) [W3.CSS](#) [C](#)

COLOR PICKER

[Tutorials ▼](#)[Exercises ▼](#)[Services ▼](#)[Sign Up](#)[Log in](#)[CSS](#)[JAVASCRIPT](#)[SQL](#)[PYTHON](#)[JAVA](#)[PHP](#)[HOW TO](#)[W3.CSS](#)[C](#)

ADVERTISEMENT

ADVERTISEMENT





Tutorials ▼

Exercises ▼

Services ▼



Sign Up

Log in

- ☰
- CSS
- JAVASCRIPT
- SQL
- PYTHON
- JAVA
- PHP
- HOW TO
- W3.CSS
- C

ADVERTISEMENT



SPACES

UPGRADE

AD-FREE

NEWSLETTER

GET CERTIFIED

REPORT ERROR

Top Tutorials

- HTML Tutorial
- CSS Tutorial
- JavaScript Tutorial
- How To Tutorial
- SQL Tutorial
- Python Tutorial
- W3.CSS Tutorial
- Bootstrap Tutorial

Top References

- HTML Reference
- CSS Reference
- JavaScript Reference
- SQL Reference
- Python Reference
- W3.CSS Reference
- Bootstrap Reference
- PHP Reference

W<sup>3</sup>  
schools

Tutorials ▼

Exercises ▼

Services ▼

🔍

🌙

Sign Up

Log in

☰

CSS

JAVASCRIPT

SQL

PYTHON

JAVA

PHP

HOW TO

W3.CSS

C

HTML Examples

CSS Examples

JavaScript Examples

How To Examples

SQL Examples

Python Examples

W3.CSS Examples

Bootstrap Examples

PHP Examples

Java Examples

XML Examples

jQuery Examples

HTML Certificate

CSS Certificate

JavaScript Certificate

Front End Certificate

SQL Certificate

Python Certificate

PHP Certificate

jQuery Certificate

Java Certificate

C++ Certificate

C# Certificate

XML Certificate



FORUM

ABOUT

W3Schools is optimized for learning and training. Examples might be simplified to improve reading and learning.  
Tutorials, references, and examples are constantly reviewed to avoid errors, but we cannot warrant full correctness of all content. While using W3Schools, you agree to have read and accepted our [terms of use](#), [cookie and privacy policy](#).

Copyright 1999-2024 by Refsnes Data. All Rights Reserved. [W3Schools is Powered by W3.CSS](#).