

# 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:

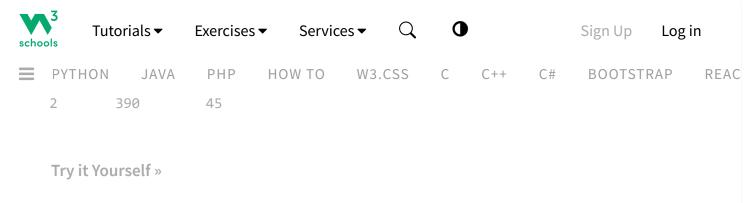
```
import pandas as pd

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

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

print(df)
```

## Result



## 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.



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

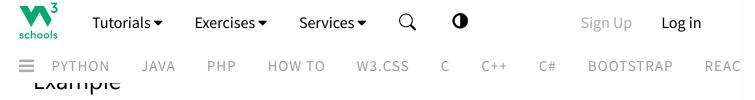
## Result

```
calories duration
0 420 50
1 380 40
```

Try it Yourself »

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

## Named Indexes



Add a list of names to give each row a name:

```
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":



## Result

```
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

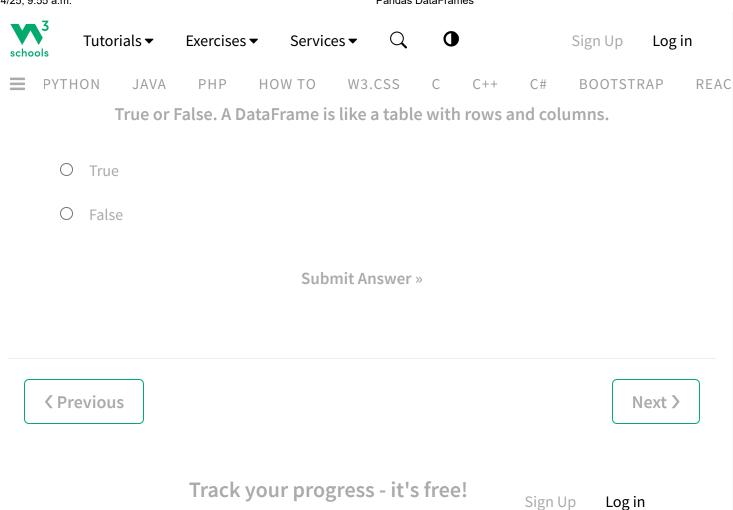
Load a comma separated file (CSV file) into a DataFrame:

```
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.





Tutorials **▼** 

Exercises **▼** 

Services **▼** 



0

Sign Up

Log in

**PYTHON** 

JAVA

PHP

HOW TO

W3.CSS

C++

C#

BOOTSTRAP

REAC



**COLOR PICKER** 













schools

PLUS

SPACES

**GET CERTIFIED** 

**FOR TEACHERS** 



#### **Top Tutorials**

HTML Tutorial
CSS Tutorial
JavaScript Tutorial
How To Tutorial
SQL Tutorial
Python Tutorial
W3.CSS Tutorial
Bootstrap Tutorial
PHP Tutorial
Java Tutorial
c++ Tutorial
jQuery Tutorial

#### **Top References**

HTML Reference
CSS Reference
JavaScript Reference
SQL Reference
Python Reference
W3.CSS Reference
Bootstrap Reference
PHP Reference
HTML Colors
Java Reference
Angular Reference
jQuery Reference

#### Top Examples

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

#### **Get Certified**

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 ACADEMY

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