

## Pandas DataFrames



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## 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:

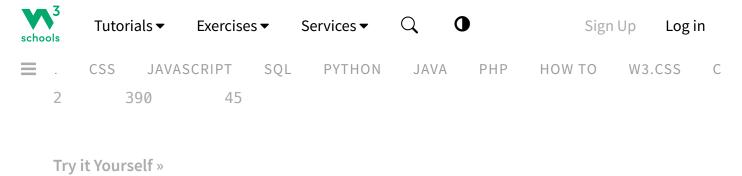
```
import pandas as pd

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
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```

**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

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

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## 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

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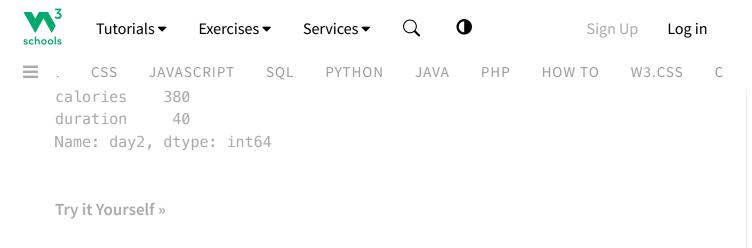
#### **Locate Named Indexes**

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"])
```



## 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



Insert the correct Pandas method to create a DataFrame.

(data) pd.

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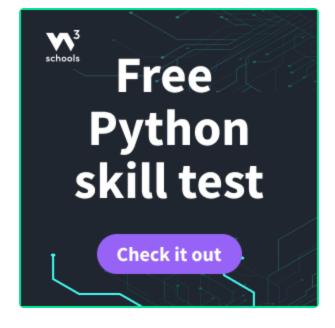
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