In [1]:

```
What is Pandas?
Pandas is a Python library used for working with data sets.

It has functions for analyzing, cleaning, exploring, and manipulating data.

The name "Pandas" has a reference to both "Panel Data", and "Python Data Analysis" and w

Why Use Pandas?
Pandas allows us to analyze big data and make conclusions based on statistical theories.

Pandas can clean messy data sets, and make them readable and relevant.

Relevant data is very important in data science.
```

```
  File "<ipython-input-1-61dac6ec0ce4>", line 2
    Pandas is a Python library used for working with data sets.
               ^
SyntaxError: invalid syntax
```

In [2]:

```
What Can Pandas Do?
Pandas gives you answers about the data. Like:

Is there a correlation between two or more columns?
What is average value?
Max value?
Min value?
Pandas are also able to delete rows that are not relevant, or contains wrong values, lik

Where is the Pandas Codebase?
The source code for Pandas is located at this github repository https://github.com/panda

github: enables many people to work on the same codebase.
```

```
  File "<ipython-input-2-7c5d5389bd9f>", line 2
    Pandas gives you answers about the data. Like:
           ^
SyntaxError: invalid syntax
```

In [3]:

```
import pandas
```

In [4]:

```
import pandas

mydataset =
{
  'cars': ["BMW", "Volvo", "Ford"],
  'passings': [3, 7, 2]
}

myvar = pandas.DataFrame(mydataset)

print(myvar)
```

```
    cars  passings
0    BMW         3
1  Volvo         7
2   Ford         2
```

In [5]:

```
import pandas as pd
```

In [6]:

```
import pandas as pd

mydataset = {
  'cars': ["BMW", "Volvo", "Ford"],
  'passings': [3, 7, 2]
}

myvar = pd.DataFrame(mydataset)

print(myvar)
```

```
    cars  passings
0    BMW         3
1  Volvo         7
2   Ford         2
```

In [7]:

```
import pandas as pd

print(pd.__version__)
```

```
1.2.4
```

In [8]:

```
'''What is a Series?
A Pandas Series is like a column in a table.

It is a one-dimensional array holding data of any type.

Example
Create a simple Pandas Series from a list:'''

import pandas as pd

a = [1, 7, 2]

myvar = pd.Series(a)

print(myvar)
```

```
0    1
1    7
2    2
dtype: int64
```

In [11]:

```
#Example
#Return the first value of the Series:

print(myvar[0])
```

```
1
```

In [12]:

```
#Example
#Create you own labels:

import pandas as pd

a = [1, 7, 2]

myvar = pd.Series(a, index = ["x", "y", "z"])

print(myvar)
```

```
x    1
y    7
z    2
dtype: int64
```

In [13]:

```
#Example
#Return the value of "y":

print(myvar["y"])
```

```
7
```

In [14]:

```
'''Key/Value Objects as Series
You can also use a key/value object, like a dictionary, when creating a Series.

Example
Create a simple Pandas Series from a dictionary:'''

import pandas as pd

calories = {"day1": 420, "day2": 380, "day3": 390}

myvar = pd.Series(calories)

print(myvar)
```

```
day1    420
day2    380
day3    390
dtype: int64
```

In [15]:

```
#Example
#Create a Series using only data from "day1" and "day2":

import pandas as pd

calories = {"day1": 420, "day2": 380, "day3": 390}

myvar = pd.Series(calories, index = ["day1", "day2"])

print(myvar)
```

```
day1    420
day2    380
dtype: int64
```

In [16]:

```
DataFrames
Data sets in Pandas are usually multi-dimensional tables, called DataFrames.

Series is like a column, a DataFrame is the whole table.
```

```
  File "<ipython-input-16-6d46eca2fda8>", line 2
    Data sets in Pandas are usually multi-dimensional tables, called DataF
rames.
         ^
SyntaxError: invalid syntax
```

In [17]:

```
#Example
#Create a DataFrame from two Series:

import pandas as pd

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

myvar = pd.DataFrame(data)

print(myvar)
```

```
   calories  duration
0       420        50
1       380        40
2       390        45
```

In [18]:

```
What is a DataFrame?
A Pandas DataFrame is a 2 dimensional data structure, like a 2 dimensional array, or a t
```

```
  File "<ipython-input-18-d0a9a83e6ea1>", line 2
    A Pandas DataFrame is a 2 dimensional data structure, like a 2 dimensi
onal array, or a table with rows and columns.
      ^
SyntaxError: invalid syntax
```

In [19]:

```
#Example
#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)
```

```
   calories  duration
0       420        50
1       380        40
2       390        45
```

In [ ]:

```

```