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Program: Labels

With the `index` argument, you can name your own labels

```
import pandas as pd
a = [1, 7, 2]
myvar = pd.Series(a, index = ["x", "y", "z"])

print(myvar)
```

Output:

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

DataFrame

A DataFrame is a two-dimensional table-like data structure in pandas, similar to a spreadsheet or SQL table. It consists of rows and columns, where each column can contain data of a different type (e.g. integers, floats, strings).

In a DataFrame, rows are indexed using a range of integers, and columns are labeled with column names. This makes it easy to select, filter, and manipulate data based on specific criteria.

DataFrames can be created in many ways, such as by reading data from a file, by transforming data from an existing DataFrame, or by combining multiple DataFrames together. Once a DataFrame is created, it can be easily modified, queried, and summarized using various pandas methods and functions.

Some common operations performed on a DataFrame include selecting specific columns, filtering rows based on certain criteria, sorting data by a particular column, merging multiple DataFrames together, and calculating summary statistics such as mean, median, and standard deviation.

Example

Program:

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



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```
myvar = pandas.DataFrame(mydataset)
print(myvar)
```

Output:

	cars	passings
0	BMW	3
1	Volvo	7
2	Ford	2

Program: DataFrame

```
import pandas as pd
mydataset = {
    'cars': ["BMW", "Volvo", "Ford"],
    'passings': [3, 7, 2]
}
myvar = pd.DataFrame(mydataset)
print(myvar)
```

Output:

	cars	passings
0	BMW	3
1	Volvo	7
2	Ford	2

Here's an example of creating a simple DataFrame in pandas:

```
import pandas as pd

# create a dictionary of data
data = {'name': ['Alice', 'Bob', 'Charlie', 'David'],
        'age': [25, 30, 35, 40],
        'city': ['New York', 'Paris', 'London', 'San Francisco']}

# create a DataFrame from the dictionary
df = pd.DataFrame(data)

# display the DataFrame
print(df)
```

Output:

	name	age	city
0	Alice	25	New York
1	Bob	30	Paris
2	Charlie	35	London
3	David	40	San Francisco



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In this example, we created a DataFrame by passing a dictionary of data to the `pd.DataFrame()` function. The dictionary contains three keys: 'name', 'age', and 'city', each corresponding to a column in the DataFrame. The values for each key are lists of data, where each item in the list represents a row in the DataFrame.

We then displayed the resulting DataFrame using the `print()` function. The output shows the DataFrame with rows indexed by integers and columns labeled with their respective column names.



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