

DataFrame-

- A Pandas object that is used to store a dataset
- Information is organized in rows and columns
- Dataframes simplify common operations, like sorting data.

Series-

- A pandas object used to store a dataset
- Seen as a one-dimensional lost of data
- Think of it as a single column in a dataframe;

Indexing into Dataframes

Main Techniques:

1. [df.loc\[\]](#)
2. [df.iloc\[\]](#)

Name	Indexing Pattern
loc	name.loc[row_label, col_label]
iloc	name.iloc[row_index, col_index]

```
>>> df = pd.DataFrame([[1, 2], [4, 5], [7, 8]],
...                    index=['cobra', 'viper', 'sidewinder'],
...                    columns=['max_speed', 'shield'])
>>> df
```

	max_speed	shield
cobra	1	2
viper	4	5
sidewinder	7	8

Single label. Note this returns the row as a Series.

```
>>> df.loc['viper']
max_speed    4
shield       5
Name: viper, dtype: int64
```

Selection

The Process of accessing a subset of a dataframe. You can select subsets using loc and iloc

Filtering

Selecting values of a dataset where certain conditions are true

Three Techniques:

Concatenate: Naively combines along an axis

Merge: Combine through shared column

Join: Combine using shared indices