

Matrices

```
In [7]: import numpy as np
import pandas as pd

In [2]: matriz = np.array([
    [10, 20],
    [30, 40]
])
matriz

Out[2]: array([[10, 20],
               [30, 40]])

In [3]: matriz[0][0] # fila 0 columna 0

Out[3]: 10

In [5]: matriz[0][1] # fila 0 columna 1

Out[5]: 20
```

SET

```
In [6]: listado = [10, 10, 20, 30, 40, 40, 50]
listado

Out[6]: [10, 10, 20, 30, 40, 40, 50]

In [8]: df = pd.DataFrame({"listado": listado})
df

Out[8]:
   listado
0         10
1         10
2         20
3         30
4         40
5         40
6         50

In [10]: df.listado.value_counts()

Out[10]:
40     2
10     2
20     1
30     1
50     1
Name: listado, dtype: int64

In [11]: set(listado)

Out[11]: {10, 20, 30, 40, 50}

In [12]: listado2 = ["casa", "casa"]
set(listado2)

Out[12]: {'casa'}
```

```
In [13]: listado3 = ["Casa", "casa"]
set(listado3)

Out[13]: {'Casa', 'casa'}
```

```
In [14]: listado4 = list((10, 10, 10, 10, 10, 10, 10))
listado4

Out[14]: [10, 10, 10, 10, 10, 10, 10]

In [15]: set(listado4)

Out[15]: {10}

In [16]: type(set(listado4))

Out[16]: set

In [17]: listado5 = list(set(listado4))

In [18]: listado5

Out[18]: [10]
```

Lectura de un archivo (.csv) con Pandas

```
In [29]: df = pd.read_csv("iris.csv")
df

Out[29]:
   sepal_length  sepal_width  petal_length  petal_width  species
0             5.1           3.5           1.4           0.2   setosa
1             4.9           3.0           1.4           0.2   setosa
2             4.7           3.2           1.3           0.2   setosa
3             4.6           3.1           1.5           0.2   setosa
4             5.0           3.6           1.4           0.2   setosa
...           ...           ...           ...           ...     ...
145            6.7           3.0           5.2           2.3  virginica
146            6.3           2.5           5.0           1.9  virginica
147            6.5           3.0           5.2           2.0  virginica
148            6.2           3.4           5.4           2.3  virginica
149            5.9           3.0           5.1           1.8  virginica

150 rows x 5 columns

In [30]: df.head()

Out[30]:
   sepal_length  sepal_width  petal_length  petal_width  species
0             5.1           3.5           1.4           0.2   setosa
1             4.9           3.0           1.4           0.2   setosa
2             4.7           3.2           1.3           0.2   setosa
3             4.6           3.1           1.5           0.2   setosa
4             5.0           3.6           1.4           0.2   setosa

In [31]: df.tail()

Out[31]:
   sepal_length  sepal_width  petal_length  petal_width  species
145            6.7           3.0           5.2           2.3  virginica
146            6.3           2.5           5.0           1.9  virginica
147            6.5           3.0           5.2           2.0  virginica
148            6.2           3.4           5.4           2.3  virginica
149            5.9           3.0           5.1           1.8  virginica

In [32]: df.describe()

Out[32]:
   sepal_length  sepal_width  petal_length  petal_width
count  150.000000   150.000000   150.000000   150.000000
mean     5.843333     3.054000     3.758667     1.198667
std     0.828066     0.433594     1.764420     0.763161
min     4.300000     2.000000     1.000000     0.100000
25%     5.100000     2.800000     1.600000     0.300000
50%     5.800000     3.000000     4.350000     1.300000
75%     6.400000     3.300000     5.100000     1.800000
max     7.900000     4.400000     6.900000     2.500000

In [33]: len(df), df.shape

Out[33]: (150, (150, 5))

In [34]: type(df)

Out[34]: pandas.core.frame.DataFrame

In [36]: df.species.value_counts()

Out[36]:
virginica      50
versicolor     50
setosa          50
Name: species, dtype: int64

In [ ]:
```