Exercises:

1. Strings

Split the string variable called 'Sentence' by using as parameter **whitespace**:

Sentence = 'Python is an interpreted, high-level and general-purpose programming language. Python's design philosophy emphasizes code readability with its notable use of significant whitespace. Its language constructs and object-oriented approach aim to help programmers write clear, logical code for small and large-scale projects.'

2. Lists

For the given list called List_1 = [1,2,3,4,6,7,8,9,20,30]

A) Change the 3rd position value to new value = 0.

B) Define a function which has as inputs List_1 and an integer and returns

- True, if this integer or a multiplier of this integer is in List_1
- False, else.

3. Array

Define a function that get as input a big array and returns running time for: Sum, Maximum and Minimum by using NumPy function.

4. Dictionary

Create a dictionary with names of 10 students from your group, 5 subjects and grade for each of them.

A) By using Pandas create a DataFrame from this dictionary.
B) Save this data frame as CSV file.
C) Import this CSV and insert another column with average grade for each student.

5. Data manipulation and data visualization.

Import dataset called 'Optimization_Algo_Example.csv'.

A) Create a mask to index only the widgets with:
   I. Number of Ts_Clicks > 20
   II. Revenue > 0
   III. Algo Status == 'Running'
B) Save new data in a new variable called data_test and:
   I. Calculate quantile 10% and 90% for Cost.
   II. Create histograms and boxplot for Lp_Clicks.

III. Create a scatter plot for Trk_Clsicks and Lp_Clicks