Data Analytics with Python

Practice Problem Set 1

This practice is designed to help you understand the material better. You should answer all questions by writing a Python program

Problem 1

- Define a variable called **a** and set its value equal to 5.23. Now, calculate the area of a square with side equal to **a**. The output of your program should be the area.
- Define two variables **a** and **b** and set their values equal to 17 and 10.5 respectively. Now, calculate the area of a rectangle with length equal to **a** and width equal to **b**. The output of your program should be the area.

Problem 2

In the lecture we learned about +, -, *, / and %. Here, we are going to practice a few more symbols that are very important in Python. Run the following commands (one by one) in Jupyter Notebook and see what you get:

- $2 > 3$
- $3 <= 4$
- $5 > 0$
- $0 >= 10$
- $2 == 2$
- $2 == 3$
- $2! = 3$

What do you think is the function of >, <, >=, <=, == and ! = in Python?

Problem 3

In the lecture we saw that if we type something like 3+2 in a cell, then Python prints 5 in the output. Now, type the following commands (all in one cell, back to back) and run the cell and see what happens:

```
3+2
5+6
9-1
```

Do you think you can resolve the issue? (Hint: research about the command **print** in Python and see how it works. We will discuss it soon!)

Problem 4

Define a string called **s** and set its value equal to "I like practicing Python. This is really fun!". Now, answer the following question by writing a code in Python:

- How many characters are there in this sentece?
- How many words are there in this sentence?
- Can you show me the substring from the 10^{th} character to the end of the sentence?