



Python - Data Analysis Essentials

Exercises about Python Basics, Day 1

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Compute the Average (Light Version)

- Write a program that calculates the average out of the numbers 4, 5, 6, and 9
- Store each of the numbers in a variable
- Compute the average and store it in a separate variable
- Print the result on the screen



Print User Input on the Screen

- Write a program that reads the user's name and prints it on the screen
- *Hint:* `input("Please insert your name:")` is a function that reads keyboard input until the enter key is pressed, and returns the entered string
- Example run:

```
Please insert your name: Giuseppe  
Hey, Giuseppe!
```

OUTPUT



Calculate the Sum of Three Numbers

- Write a function `sum` that computes the sum out of three numbers and returns it
- Function calls and expected return value:

Function call	Return value
<code>summe(1, 2, 3)</code>	6
<code>summe(1, -1, 0)</code>	0
<code>summe(-1, -2, -3)</code>	-6



Compare Numbers

- Write a function `compare` that takes two numbers as its arguments and prints on the screen if the first number is either smaller or greater than the second number, or if both are equal
- Function calls and expected return value:

Function call	Return value
<code>vergleich(1,2)</code>	First number is smaller than second number
<code>vergleich(100,2)</code>	First number is greater than second number
<code>vergleich(123,123)</code>	First number is equal to second number



It's Maybe a Sandwich, Maybe Not

- Write a function `check_if_sandwich` that takes three numbers `x`, `y`, and `z` as its arguments, and returns the string `"It's a sandwich"` if the condition `x <= y <= z` is satisfied; else, it returns `"It's not a sandwich"`
- Function calls and expected return value:

Function call	Return value
<code>check_if_sandwich(3,1,2)</code>	Ist kein Sandwich
<code>check_if_sandwich(1,3,2)</code>	Ist kein Sandwich
<code>check_if_sandwich(1,2,3)</code>	Ist ein Sandwich



Should He Walk, Drive, or Fly?

- Write a program that first asks the user for how many kilometers he wants to travel
- If the user wants to travel
 - less than 3.2 km, the program should tell him to walk the distance
 - more than 3.2 km, but less than 100 km, the program should tell him to travel the distance by car
 - more than 100 km, the program should tell him to travel the distance by plane
- *Hint:* `input()` always evaluates to a string, even if the user enters a number. This means we need a way to convert a string to a float, which can be accomplished with the `float()` function:

```
distance = input("Please enter a distance:")  
distance_in_km = float(eingabe)
```

CODE