



Programação

2020/2021

Project 2

Data limite de entrega: 15 de março, 23h:59m; Peso de 1 valor em 20 valores na nota final

Exercise 1

Consider the quantitative statistical variable related to the salaries of employees in a company. Assume that only the following salary brackets exist: 1000 Euros, 1500 Euros, 2000 Euros, 2500 Euros, 3000 Euros.

Develop, in Python, a program that allows the user to input the statistical data of this variable (the salaries of the different employees of the company) and that ultimately presents a brief report with the following statistical information:

1. Average salary
2. Minimum
3. Maximum
4. Range
5. Frequency table of absolute frequencies
6. Frequency table of absolute frequencies
7. Mode

Exercise 2

Write a Python function to calculate the following series:

$$\frac{y}{1 + yz^2} \sum_{i=0}^{100} \left(\frac{1 + y\sqrt{z}}{1 + y} \right)^i$$

The function should have two input parameters, z and y , both integers between 0 and 20, and they should be requested from the user with proper validation.

Grading

The maximum grade for the practical assignment is 1 point (out of 20 points). Each group (two students) should work on a solution and submit it on Inforestudante by 11:59 PM on March 15, 2021. They should submit a .zip file containing a .py or .ipynb file and a .pdf of the code.

There are three levels of grading:

- 0: The solution is incorrect.
- 0.5: Intermediate situation, meaning the solution is partially incorrect or the result is incorrect, but the algorithm is very close to being correct.
- 0.75: Intermediate situation, meaning the solution is correct, but the code is not optimized or doesn't make appropriate use of the topics covered in class.
- 1: The solution is correct, with optimized code, and makes appropriate use of the knowledge taught in class.

Rules for defenses:

Each assignment will be defended, with each member of the group capable of explaining the solution and answering questions from the instructors. Defenses take place during the last class dedicated to the topic, according to the course schedule.

After the defense, each student's grade may be lower than the assignment grade, depending on individual performance during the defense.