Programação

2020/2021

Trabalho Prático 3

Data limite de entrega: 25 de março, 23h:59m; Peso de 1 valor em 20 valores na nota final

Exercise 1

Write a program that allows encoding a message (a string of unaccented characters) based on the following procedure: (i) for each vowel, a unique code is generated which is the index of its first occurrence in the string multiplied by a random integer between 1 and 4; (ii) the encoded message results from replacing in the original all occurrences of the vowels with their respective generated codes. At the end, the program should print the original message, the new message, and the encryption key. This key should be a string of characters in the format: "<vowel>:<code>; <vowel>:<code>;...". For each vowel not present in the message, the code should correspond to -1. Example of the program output:

Original message: O teste e facil
Encrypted message: 0 t6st6 6 f11c14l
Encryption code: a:11;e:6;i:14;o:0;u:-1

Grading

The maximum grade for the practical work is 1 point (out of 20 points). Each group (two students) must work on a solution and submit it on Infores-

tudante, by 11:59 PM on March 25, 2021. They must submit a .zip file containing a .py or .ipynb file and a .pdf of the code.

There are four levels of grading:

0 – the solution is incorrect;

0.5 - intermediate situation, i.e., a solution with a partially incorrect result, or with an incorrect result, but with an algorithm very close to being correct;

0.75 - intermediate situation, i.e., a solution with a correct result but with unoptimized code or that does not make adequate use of the materials taught in class;

1 - the solution is correct, with optimized code and makes appropriate use of the knowledge taught in class. Rules of the defenses:

each work is subject to a defense, and each member of the group must be able to explain the solution and answer questions from the teachers;

the defenses take place in the last class dedicated to the topic, according to the course plan;

in online classes, students must have their camera and sound activated during the defense;

after the defense, the grade awarded to each student may be lower than the grade for the work, depending on individual performance during the defense.