UFPE – CENTRO DE INFORMÁTICA
ESTRUTURAS DE DADOS ORIENTADAS A OBJETOS
ATIVIDADE PRÁTICA

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Exercícios selecionados de: KIRCH-PRINZ, U., PRINZ, P.
A Complete Guide to Programming in C++.
1a Edição. Editora Jones & Bartlett Learning, 2001.

Exercise 1

Write a C++ program to initialize a string `s1` with the string "`As time by ...`" and a second string `s2` with the string "`goes`",

- insert string `s2` in front of "`by`" in string s1,
- erase the remainder of string `s1` after the substring "`by`",
- replace the substring "`time`" in `s1` with "`Bill`".

In each case, your program should determine the position of the substring. Output string s1 on screen at the beginning of the program and after every modification

Exercise 2

Write a C++ program that reads a word from the keyboard, stores it in a string, and checks whether the word is a palindrome.A palindrome reads the same from left to right as from right to left.The following are examples of palindromes:“OTTO, ” “deed, ” and “level.” Use the subscript operator []. Modify the program to continually read and check words.

Exercise 3

Write a function to calculate the factorial of a number.

- Argument: A number n of type unsigned int.
- Returns: The factorial n! of type long double.

Formulate two versions of the function, where the factorial is

- calculated using a loop
- calculated recursively

Test both functions by outputting the factorials of the numbers 0 to 20.

Exercise 4

To be defined.