

Exercise sheet 14

To be corrected in tutorials in the week from 10.02 to 14.02.2020

Exercise 1 [*Remembering values, exam like assignment*]

Implement a function

```
int PartialSum(double newTerm)
```

which, at each call, **without using global variables**,

- increments the result of the previous call with the `newTerm` and print the partial sum to the output;
- returns how many terms were summed.

Exercise 2 [*Exam like assignment*]

Implement a function for each of the following tasks. State which header files need to be included to compile them.

- Check if an array of real numbers is sorted in ascending order and return `true` if so. Return `false` otherwise.
- Given an integer number N , calculate the factorial $N! = \prod_{k=1}^N k$.
- Given two strings, print to the output a statement to say if they are identical or not.

Exercise 3 [*Exam like assignment*]

Write a program that

- interactively gets a positive integer number N from the user;
- dynamically allocates memory to store N real numbers;
- initializes it to $\frac{2\pi}{N-k}$, with $k \in [0, N)$;
- print the array to the screen;
- frees the memory before terminating.