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Tutorial exercises
Objektorientierte Programmierung: Wintersemester 2021/2022
Nr. 5

Task 5.1: Free samples!

A computer samples a mathematical function each interval. The sampled values can be found in an array formatted like this:

double[] points = {x1,y1,x2,y2,...}

Write a method **double**[] computeIncline(**double**[] points) that computes the incline between every point and returns the result as an array. Use a *for*-loop to iterate the array.

Test your implementation with enough test-calls.

Attention: You may assume that the given array is correctly formatted and always even.

Task 5.2: Looper

Reimplement the following method in such a way that
  a) a *for*-loop is used instead of a *while*-loop
  b) a *forEach*-loop is used instead of a *while*-loop

Test your implementations with suitable values.

```
1  int countWordsBeginningWith(char c, String[] words){
2    int counter = 0;
3    int i = 0;
4    while(i<words.length){
5      String word = words[i];
6      if(word.toUpperCase().charAt(0) == c ||
       ↪  word.toLowerCase().charAt(0) == c){
7        counter++;
8      }
9      i++;
10   }
11   return counter;
12 }
```