

7. Algorithmisation Practice #2

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Exercises

- 1 Write a function that computes the lowest common denominator of two integers (Euclid's algorithm)
- 2 Write a function that shuffles a vector (swaps a reasonable number of random elements)
- 3 Write a function that erases elements with a certain value from a vector
- 4 Use `std::sort` to sort a vector of vectors, vector with lowest number of elements goes first

Advanced Exercises

- 1 Write a function that computes the determinant of a matrix
- 2 Write a function that takes one argument `mult` and returns a lambda that multiplies its argument by `mult`
- 3 Create a function that can print a function of type `int` `somebodyDoSomething(int val)` by printing its x and $f(x)$ from 0 to 10
- 4 Write a function that computes the eigenvalues of a matrix

Exercises #2

- 1 Write a function that takes three arguments by reference and shuffles them
- 2 Write a function that computes the area of an ellipse using the Monte Carlo method
- 3 Create operators $-$, $*$, $/$ and $^$ that work on strings interpreted as numbers

Homework

- Write a program that reads a file containing a table where one column is x and the other column is $f(x)$ and writes a file that adds lines with values of x that were missing in the original one and interpolated values of $f(x)$
- You have two weeks to do it