# Mandatory tasks

1. Write a macro that decides which of the two numbers is larger.

2. Write a macro that prints your parameter. (The parameter is not necessarily a string!)

3. Write a program that calculates the square of a number. Define the calculation of the square in another C file and declare it in a header file! Write include guard in the header file!

4. Rewrite the previous program using a global variable instead of passing parameters.

5. Write a program to calculate the scalar product of two vectors.

6. Write a program to calculate the product of two matrices.

7. Write a function that sums the elements of a vector. Let "zero" be a parameter of the function, as well as a pointer to a function that adds two numbers! Use the same function instead of sum to calculate product!

# Optional tasks

1. Write a macro for iteration on an interval [n, m). For example, FOR (i, 0, 10) could be written instead of for (i = 0; i <10; ++ i).

2. Write a function to calculate the transposition of a matrix.

# Advanced tasks

1. The size of a buffer is determined by a symbolic value specified by # define. Write a program that safely reads a string into such a buffer (that is, does not overwrite the buffer) using the scanf () function.

2. Write a general function that can be used for summation, counting, and minimum / maximum search. Take the function t, which returns the new amount / number / minimum / maximum, via a function pointer.