

Programming exercise

1. Structure, variables, operators, basic I/O

Create a program that:

- asks the user to input two natural numbers
- calculate the addition, subtraction and multiplication between the first and second number
- output the resulted addition, subtraction and multiplication

2. Statement, flow control, functions

a. Create a program that:

- asks the user to input two natural numbers
- compares both numbers
- displays which one is the bigger one

b. Create a program that:

- Prompts the user to input one of the following keys: <c>, <s> or <t> (case insensitive)
- Displays the following string depending on the user input
 - c "Start calculation..."
 - s "Start program..."
 - t "Terminate program..."
 - all other keys will produce a "Unspecified input!"

c. Create a function, which adds two double values and gives the result as return-value. Write a *main()* function to test your function.

3. Classes

Create a class *Cuboid* that offers the following functionalities (first implement empty methods):

- Set and get the required parameters height, width and depth, e.g. *SetDimensions()*, *GetDimensions()*, ...
- Calculation of surface area and volume, e.g. *CalculateVolume()*, ...
- Returning of the calculated values, e.g. *GetVolume()*, ...
- Instantiate an object of that class with the help of a test program.

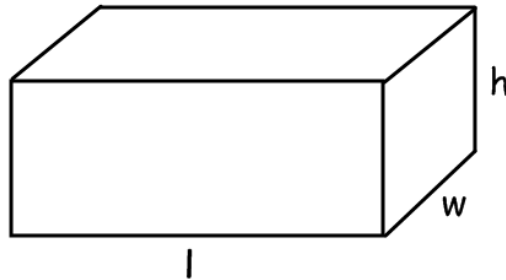


Figure 1: A cuboid.

4. Vector

Create a program that:

- prompts the user to input three float values and stores them in a `std::vector`
- print the values in the reverse order to the screen