

Solving simple problems with functions in Python



Objectives

Using Python to solve simple problems

- Implement simple programs using Python
- Solve simple problems using read/write instructions, conditional, loops
- Implement functions



Requirements

Solve the following problems using procedural programming. Identify features and write functions (with documentation) for reading the data, processing the data and displaying the result. Test the functions using assertions.

- 1) Compute the sum of n numbers given as a list. Modify the function to exclude number 12 from the sum.
- 2) Find the minimum and maximum of a list.
- 3) Transform an array into a set.
- 4) Given two integers, verify if they are “friends”. Two numbers are friends if each number equals the sum of divisors of the other number. Example: 220 and 284 are friends because $1 + 2 + 4 + 5 + 10 + 11 + 20 + 22 + 44 + 55 + 110 = 284$ and $1 + 2 + 4 + 71 + 142 = 220$
- 5) Determine the k -th element of the sequence 1, 2, 2, 3, 3, 3, 4, 4, 4, 4, 5, 5, 5, 5, 5,