

Solve simple problems 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

Write an application to deal with all of the requirements below. Implement functions to read data, process data and display output results. Use procedural programming and feature-driven development.

The application should allow the following:

1. Create a list of natural numbers
e.g. my_list = [5, 8, 4, 7]
2. Convert a list of natural numbers to string
3. Determine the sum of elements from the list which are powers of 2
e.g. my_list = [5, 8, 4, 7], then sum is 12 (= 8 + 4)
4. Filter the elements from the list which are not powers of 2
e.g. my_list = [5, 8, 4, 7], then result_list = [5, 7]
5. Delete from the list the sequence starting from the first even number to the last even number in the list.
e.g. my_list = [5, 8, 4, 7, 2, 3] becomes [5, 3]
6. Delete all even numbers in a list.
e.g. my_list = [5, 8, 4, 7, 2, 3] becomes [5, 7, 3]
7. Shift to the beginning of the list the longest sequence of even numbers
e.g. my_list = [5, 2, 4, 7, 6, 8, 4, 3], then result_list = [6, 8, 4, 5, 2, 4, 7, 3]