

DSA - Seminar 5

Problem 1:

Determine the sum of the largest k elements from a vector containing n distinct numbers.

EX:

[6, 12, 91, 9, 3, 5, 25, 81, 11, 23]

$k = 3$

Result: $91 + 81 + 25 = 197$

Ideas? 😊

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Problem 2:

2.1 Transform an arithmetic expression in the corresponding postfix notation

2.2 Evaluate the expression on the postfix notation

2.1 Transform the expression in postfix notation

Example:

infix	postfix
$2 + 4$	$2\ 4\ +$
$4 * 3 + 6$	
$4 * (3 + 6)$	$4\ 3\ 6\ +\ *$
$(5 + 6) * (4 - 1)$	
	Remark: There are no parentheses

What can we say about ... ?

- Relative order of the operands
- Relative order of the operators

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Problem 3:

Check for Balanced Brackets in an expression
(well-formedness)

Given an expression `expr`, write a program to examine whether the pairs and the orders of “{”, “}”, “(”, “)”, “[”, “]” are correct.