

CSC 530/730

W6 Exercise 2

Expression Tree

Problem 1

Show the expression trees for the following algebraic expressions:

- a) $a + b - c + d$
- b) $a \times b / (c + d \times e)$
- c) $5 + 6 / 3 \times 4 - 7$

Problem 2

Consider the expression tree from problem c) above.

- a) Show the resulting expression based on the preorder traversal.
- b) Show the resulting expression based on the postorder traversal.
- c) Show the resulting expression based on the inorder traversal.

Problem 3

In example project *Example15ExpressionTree*, add a function in class `ExpressionTree` to evaluate the algebraic expression represented by the expression tree. Hint: Borrow ideas from function `infix(TreeNode tn)`.

Submission

NO submission is needed.