

XORNode:

info: TElem

link: \uparrow XORNode

XORList:

head: \uparrow XORNode

tail: \uparrow XORNode

subalgorithm printListForward(xorl) **is:**

//pre: xorl is a XORList

//post: true (the content of the list was printed)

prevNode \leftarrow NIL

currentNode \leftarrow xorl.head

while currentNode \neq NIL **execute**

write [currentNode].info

 nextNode \leftarrow prevNode XOR [currentNode].link

 prevNode \leftarrow currentNode

 currentNode \leftarrow nextNode

end-while

end-subalgorithm

- Complexity: $\Theta(n)$

subalgorithm addToBeginning(xorl, elem) **is:**

//pre: xorl is a XORList

//post: a node with info elem was added to the beginning of the list

newNode \leftarrow allocate()

[newNode].info \leftarrow elem

[newNode].link \leftarrow xorl.head

if xorl.head = NIL **then**

 xorl.head \leftarrow newNode

 xorl.tail \leftarrow newNode

else

 [xorl.head].link \leftarrow [xorl.head].link XOR newNode

 xorl.head \leftarrow newNode

end-if

end-subalgorithm

- Complexity: $\Theta(1)$