

## Laboratory practice No. 3: LinkedList and ArrayList

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- 1)
- 2)
- 3) Practice for final project defense presentation

### 3.1

ArrayList	LinkedList
$O(n) = n$	$O(n) = n^3$

### 3.2

2.1  $O(n) = n^3 * m^2$

### 3.3 Answer 2.1

The code of the problem posed in point 2.1 consists in a linked list, a problem caused by a bad keyboard must be solved which does not type in the correct way although it follows a pattern of behavior when displaying what is written as "[" means that the following is at the beginning of the word and "]" means that the preceding is at the end of the word.

With that information, a search (route) is implemented asking if the character (char) is a "[" or "]" symbol taking into account the position, and if so, we will go through the following or subsequent characters until we

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## ESTRUCTURA DE DATOS 1

### Código ST0245

find another starting symbol and finally to know what specific characters should move

Example:

**Input:**

[[[choco[Life\_[late\_]is\_][a\_box\_of  
know[never\_]\_what][You\_  
\_get[[[might[[[You\_

**1 Output:**

late_chocolateLife_is_a_box_of	X
_whatknownever_You_	X
_getmightYou_	X

**2 Output:**

Life_is_a_box_of_chocolate	V
You_never_know_what	V
You_might_get	V

- 3.4** 2.1: “n” it's a "for" cycle  
“m” it is a "if" question string

#### 4) Practice for midterms

**4.1** c

**4.2** c

**4.3** Answers:

**4.3.1** q.size() > 1

**4.3.2** <=

**4.3.3** q.remove()

**4.3.4** q.remove()

**4.4** Answers:

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**ESTRUCTURA DE DATOS 1**  
**Código ST0245**

**4.4.1** lista.size()

**4.4.2** lista.addLast(auxiliar.pop())

**4.5** Answers:

**4.5.1** auxiliar1.size() > 0

**4.5.2** auxiliar2.size() > 0

**4.5.3** personas.offer(edad)

**4.6** Let imprimir function be print (Exercise is a bit ambiguous):

a

**4.7** c

**4.8** Answers:

**4.8.1** a

**4.8.2** c

**4.8.3** c

**4.9** Answers:

**4.9.1** d

**4.9.2** a

**4.9.3** b

**4.10** Answers:

**4.10.1** b

**4.10.2** b

**4.11** Answers:

**4.11.1** s1.size() > 1

**4.11.2** s1.pop()

**4.11.3** s2

**4.12** Answers:

**4.12.1** iv

**4.12.2** ii

**4.13** Answers:

**4.13.1** i

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ESTRUCTURA DE DATOS 1  
Código ST0245

4.13.2 i

4.14 iv

**5) Recommended reading (optional)**

We made the conceptual map via Prezi:

[https://prezi.com/8sftcgghaux\\_c/?utm\\_campaign=share&utm\\_medium=copy](https://prezi.com/8sftcgghaux_c/?utm_campaign=share&utm_medium=copy)

**6) Team work and gradual progress (optional)**

We meet once only. This is the record:

This is the progress report with github commits and Kanban board screenshots

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