Estructuras datos y algoritmos 1.

LABORATORY 3.

Tomas Marin Aristizábal

Colombia

Eafit

tmarina@eafit.edu.co

Juan Andrés Vera

Colombia

Eafit

javeraa@eafit.edu.co

3.1

- ArrayList and LinkedList have a very similar function but in some moments some one is better that the other for example when we want to remove or insert is better LinkedList because we do it with a complex of O(1), in ArrayList all the list have to move to do this so is worst. When you need a specify position is better ArrayList, LinkedList is better to when we have to add or remove something in the head of the list and ArrayList is better for storing and accessing consecutive data.

	ArrayList or vectors	LinkedList
Exercise 1.1	O(n)	O (n^2)
Exercise 2.1	O (n^2)	O(n)

- With 300,000 vertices it consumes a memory of 900 bytes
- The form that we used to solve that problems is with the use of a mapping , we use an array that varies taking different values.

3.3

The complexity of the broken keyboard problem is O (n)

3.4

- a is the string which is made with the broken keyboard

- l are the characters of the string a.

4. mock exam

4.1 A

4.1.2 O(1)

4.4.1 stack.push(token)

4.4.2 O(1)

4.8 C

4.10.1 D

4.10.2 B

4.10.3 B

4.11.1 B

4.11.2 B

4.12.1 s1.isEmpty != null;

4.12.2 s1.pop();

4.12.3 s2.pop;

4.13.1 i

4.13.2 i