# Laboratory practice No. 3 Linked Lists, Dynamic Vectors and Hash Tables

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## 3) Practice for final project defense presentation

**3.1**

|  | ArrayList | LinkedList |
|---|---|---|
| **Exercise 1.1** | **O(n)** | **O(n'2)** |

**3.3** $T(n) = O(n^2)$
**3.4** n is the size of the list

## 4) Practice for midterms

**4.1**   **4.1.1** b) "Suponiendo que l1 y l2 están ordenadas, una nueva lista con los elementos de ambas listas ordenados"
**4.1.2** b) O(n+m)

**4.2**   c) O(n)

**4.3**   **4.3.1** b) "que inician con la misma letra colisionan"
**4.3.2** d) O(1)

**4.4**   **4.4.1** output.append(stack.pop()).append(' ');
**4.4.2** c)O(1)

**4.5**  a)  [7,8,3,1,2,9]

**4.6** a) O(n^3)

**4.7** c) O(n)

**4.8**   **4.8.1** a) O(k)

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**4.8.2** c) 12
**4.8.3** b) O(n)

**4.9**    **4.9.1** c) O(n^2)
**4.9.2** a) 6
**4.9.3** b) O(n)

**4.10**   **4.10.1** c) O(max(list)*n^2)
**4.10.2** b) O(n)

**4.11**   **4.11.1** s2.isEmpty(e);
**4.11.2** s2.push(e);
**4.11.3** return s2;

**4.12**   **4.12.1 iv)** 0, 2, 4, 6, 8, 10
**4.12.2 i)** O(1)

**4.13**   **4.13.1 iv)** O(n^3)
**4.13.2 iii)** O(n^2)

**4.14**  **iii)** 2, 3, 4, 5

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