

Estructuras datos y algoritmos 1.

LABORATORY 4.

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3.2 in memory spend $O(n^2)$, that is $O(300.000^2)$ which gives a total of 90.000.000.000

3.5 the complexity for the worst case is $O(|E| + |V| / \log |V|)$

3.6

The V is equivalent to the nodes or objects that are in the network.

The E is equivalent to the actions, the part where you check if it is "Bicolorable" or "Not Bicolorable".

N equals the rows of the matrix and M equals the columns of the matrix.

4.

4.2

0 -> [3,4]

1->[5,0]

2->[6,4]

3->[7]

4->[2]

5->[]

6->[2]

7->[]

4.3 $O(n^2)$

4.4

4.4.1 **ii.** 1,4,5,0,2,3

4.4.2 **i.** 1,4,5,0,2,3