ESTRUCTURA DE DATOS 1
Código ST0245

Laboratorio Nro. 5
grafos

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3) Simulacro de preguntas de sustentación de Proyectos

- **3.1)** Using Adjacency lists, we created 3 ArrayLists, 1 to store the vertices with the name, the second to store the arc with the IDs as the source and destination and the last one for the distance.
- **3.2)** Two raised to the Nth power (N=number of vertices).
- **3.3)** Starting the vertices in 1.
- **3.4)** We used Adjacency lists with an additional ArrayList to store the "color" of each vertex. The Adjacency list had methods to get the weights, add arcs, get a vertex color and also change it and finally a method to get successors. To solve the problem, we "colored" the first vertex using the number 1, and all its successors as 2 and repeated the process with each vertex (using 1 or 2 depending the situation). If one vertex was colored with 1 and 2, the graph wouldn't be bi-colorable.
- **3.5)** O(n*m)
- **3.6)** n=number of vertex and m=number of successors.

4) Simulacro de Parcial

Punto 4.1

	0	1	2	3	4	5	6	7
0				1	1			
1	1		1			1		
2		1			1		1	
3								1
4			1					
5								
6			1					
7								

Punto 4.2
        1 -> [3,4]
        2 -> [0,2,5]

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3 -> [1,6,4]
4 -> [2]
5 -> []
6 -> [2]
7 -> []

Punto 4.3

b

Punto 4.4

4.4.1 ii

4.4.2 i

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