ESTRUCTURA DE DATOS 1
Código ST0245

Laboratory practice No. 5

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3) Practice for final project defense presentation

3.1 The code for the first problem, first reads the whole file to check how many connections and how many locations are there then it creates an array the size of locations, and a HashMap with locations as keys and an object class called “Camino” as the value. The class “Camino” consists of: where does each location lead, the name of the road and the size of the road.
A Hasmap was used because it would facilitate the access of each road and it took much less space than a matrix. Thus it was more efficient.
3.2 It would take up approximately 84 gigabytes, since the biggest possible matrix would have a size of 300 000*300 000.
3.3 We used a HashMap with Strings as the keys.
3.4 The data structure used here in the 2nd problem.
3.5 The complexity of the 2nd problem is O(n*m).
3.6 n represents the number of nodes the problem has and, m the number of total connections the problem has.

4) Practice for midterms

4.1

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

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4.2

0 ~> [3,4]
1 ~> [0,2,5]
2 ~> [6,4]
3 ~> [7]
4 ~> [2]
5 ~>
6 ~> [2]
7 ~>

4.3 *B*

4.4

4.4.1 *i*

4.4.2 *i*

4.4.3

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