Laboratory practice No. 5: Implementation of Graphs

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3) Practice for final project defense presentation

3.1) We used adjacency list because we think that is easier and the consume of memory is less that using another data structure, we used arrays and arraylists too,this is because one of these data structures can be helpful depending if we have to add ,sort or delete an element in the adjacency list of our graph

3.2) Nearly of 300.000*300.000 megabytes that are 90.000.000.000 gigabytes

3.3) Using arraylists.

3.4) The structure of the data used for this exercise is the list of adjacent activities in order to draw the graph more easily. The algorithm travelProfunidad receives a node which is taken as a root and a part to the other nodes to know if there is a way to reach all of them, if the path is greater than or equal to 5 there is no error and if it is not A) Yes. The root and the arrangement have been visited. The profession and the brand have also been used.

3.5) The complexity of the algorithm for point 2.1 is O (n).

3.6) n is the number of elements in the array, and the number of vertices in the graph.

4) Practice for midterms

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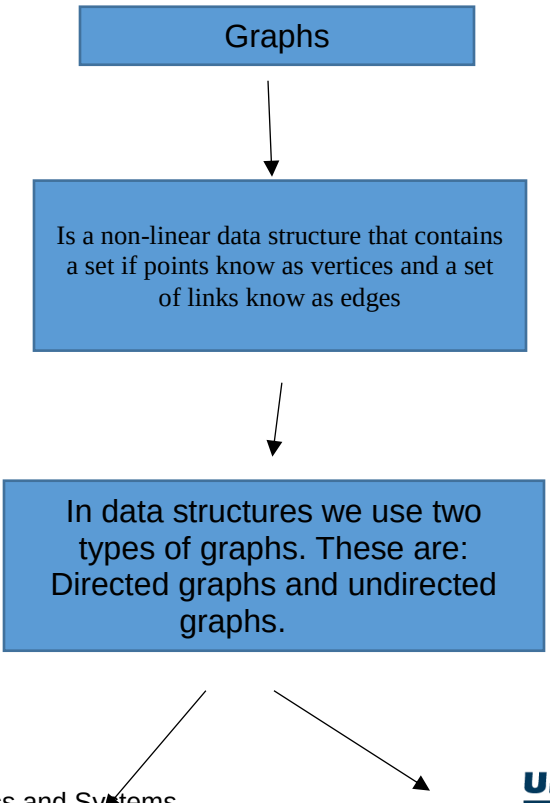
4.1
4.2 *0 ->[3,4]*
1->[0,5,2]
2->[6,4]
3->[7]
4->[2]
5->[]
6->[2]
7->[]

4.3 O(n^2)

5) Recommended reading (optional)

- Graphs: In computer science we can define a graph as an abstract data type that consist in vertices and edges, In Computer science graphs are used to represent the flow of computation

Concept map about reading



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Directed graphs:	Undirected graphs
Is a graph that is made up of a set of vertices connected by edges,where the edges have a direction associated with them.	Have connections between nodes with a simple or a double direction

6) Team work and gradual progress (optional)

In this laboratory all the members worked.

6.1 Meeting minutes

Team Work		
Date	Time	Description
28.04.2019	2 hours	Distribution of all the work
2.05.2019	2 hours	Making code of exercise 1
3.05.2019	1 hour	Building report of laboratory
4.05.2019	1 hour and 30 minutes	Conversation about who was going to upload the report.
5.05.2019	2 hours	Final corrections

6.2 History of changes of the code

Member	Description	Date
Juan Andrés Arroyave	Begin to solve point 1 of laboratory	04.05.2019

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	Do recommended reading about Graphs and concept map	04.05.2019
	Adjoin all the points and upload to the repository	05.05.2019
Juan Camilo Iguaran	Begin to solve point 2 and 4 of laboratory number 5	03.05.2019
	Solve point 2 of laboratory about colorable and not colorable	05.05.2019
	Solve point 2 of laboratory and upload to GitHub.	05.05.2019
Gustavo Lopez Garcia	Begin to solve point 3 of laboratory	05.05.2019
	Do recommended reading	04.05.2019
	Solve point 3 of laboratory	05.05.2019

6.3 History of changes of the report

Date	*Description*	*Change*
3.05.2019	*Adjoin point 3 to the laboratory*	*Begin to make the report*
4.05.2019	*Adjoin point 4 to the laboratory*	*Second change to the report*
5.05.2019	*Adjoin concept map, team work and translate the laboratory*	*Third change to the report*

Team Work

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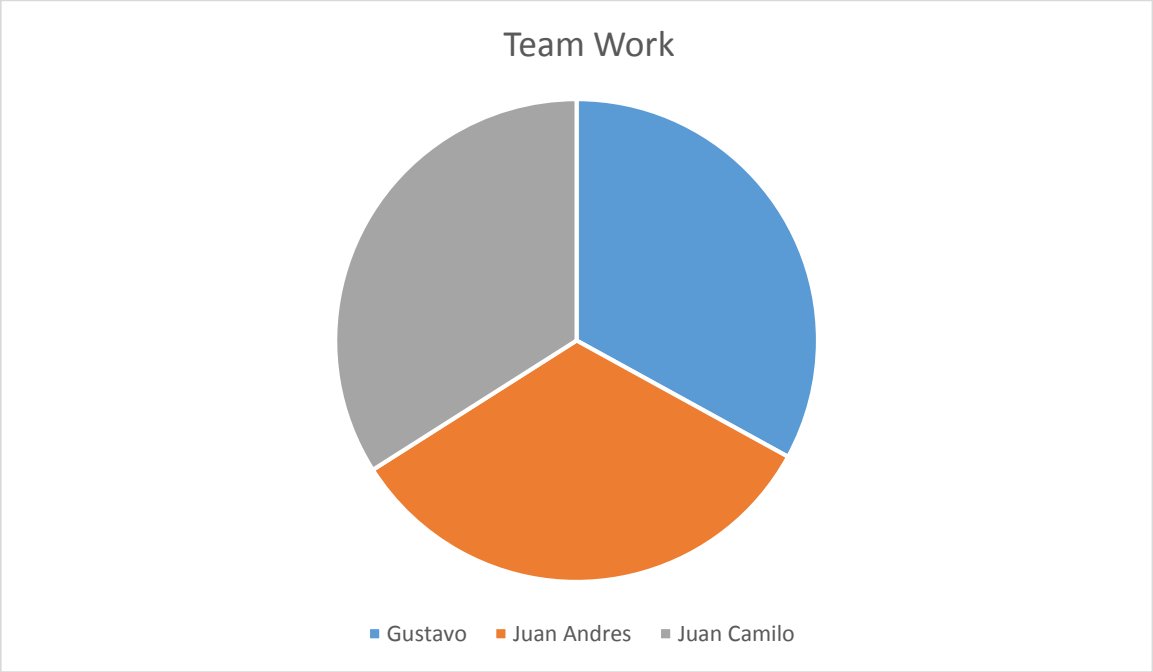

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