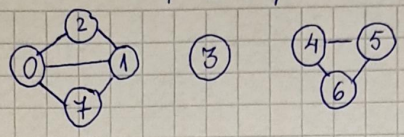
Manual Executions - Connected Components using DFS

Fintină O.
913

Subject: Step 1: The Graphs / Step 2: The Computation Date: ...../...../.....

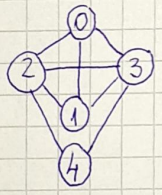
Graph 1:



A_{out} : { 0: [1, 2, 7], 4: [5, 6],
1: [0, 2, 7], 5: [4, 6],
2: [0, 1], 6: [4, 5],
3: [ ], 7: [0, 1] }

	Current Vertex	Queue	Accessed	Visited	Next (Updated Queue)
DFS(0) →	0	0	0		1, 2, 7
	1	2, 7	0, 1		2, 7
	2	7	0, 1, 2		7
	7	∅	0, 1, 2, 7	{0, 1, 2, 7}	∅
DFS(3) →	3	∅	3	{3}	∅
DFS(4) →	4	∅	4		5, 6
	5	6	4, 5		6
	6	∅	4, 5, 6	{4, 5, 6}	∅

Graph 2:



A_{out} : { 0: [1, 2, 3],
1: [0, 3, 2],
2: [0, 1, 3, 4],
3: [0, 1, 2, 4],
4: [2, 3] }

	Current Vector	Queue	Accessed	Visited	Next (Updated Queue)
DFS(0) →	0	0	0		1, 2, 3
	1	2, 3,	0, 1		2, 3, 4
	2	3, 4	0, 1, 2		3, 4
	3	4	0, 1, 2, 3		4
	4	∅	0, 1, 2, 3, 4	{0, 1, 2, 3, 4}	∅