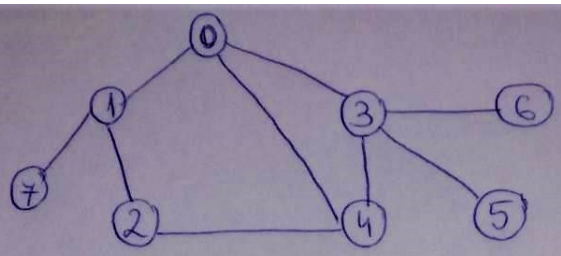
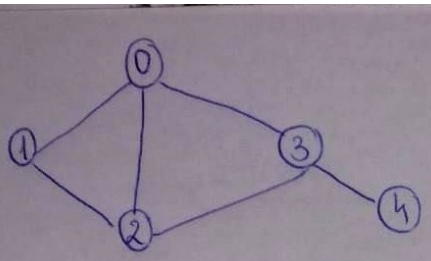


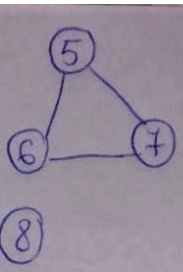
	x	y	stack	accessible	visited
call DFS(0)			0		{0}
	0			[0]	
		1	1	[0]	{0,1}
		3	3 1	[0]	{0,1,3}
		4	4 3 1	[0]	{0,1,3,4}
	4		3 1	[0,4]	
		2	2 3 1	[0,4]	{0,1,3,4,2}
	2		3 1	[0,4,2]	
	3		1	[0,4,2,3]	
		5	5 1	[0,4,2,3]	{0,1,3,4,2,5}
		6	6 5 1	[0,4,2,3]	{0,1,3,4,2,5,6}
	6		5 1	[0,4,2,3,6]	
	5		1	[0,4,2,3,6,5]	
	1			[0,4,2,3,6,5,1]	
		7	7	[0,4,2,3,6,5,1]	{0,1,3,4,2,5,6,7}
	7			[0,4,2,3,6,5,1,7]	

empty stack + no unvisited neighbour => stop DFS(0)

=> Component nr. 1 : [0,4,2,3,6,5,1,7]

all the vertices were visited => stop.





8

	x	y	stack	accessible	visited
					{ }
call DFS(0)			0	[0]	
	0			[0]	{0}
		1	1		
		2	2 1		
		3	3 2 1		{0,1,2,3}
	3		2 1	[0,3]	
		4	4 2 1		{0,1,2,3,4}
	4		2 1	[0,3,4]	
	2		1	[0,3,4,2]	
	1			[0,3,4,2,1]	{0,1,2,3,4}
	stack is empty + no unvisited neighbours => => Stop DFS(0) => Component nr. 1 : [0,3,4,2,1]				
call DFS(5)			5	[ ]	{0,1,2,3,4,5}
	5			[5]	
		6	6	[5]	
		7	7 6	[5]	{0,1,2,3,4,5,6,7}
	7		6	[5,7]	
	6			[5,7,6]	{0,1,2,3,4,5,6,7}
	stack is empty + no unvisited neighbours => stop DFS(5) => Component nr. 2 : [5,7,6]				
call DFS(8)			8	[ ]	{0,1,2,3,4,5,6,7,8}
	8			[8]	
	Stack is empty + no adjacent node => stop DFS(8) => Component nr. 3 : [8]				

all the vertices were visited => stop