## Data Structure(Graph)2 Cheat Sheet by mahmoudkamal via cheatography.com/144768/cs/31153/

## Cheatography

Data Structure(Graph)							
Graph's Definition:	Graphs are non-linear data structures made up of two major components						
Graph's Compon- ents:	1.Vertices:		2.Edges:				
	are entities in a graph		represent the relationship betweer	the vertices in the graph			
Graph's Goal:	Used to visualize organized data and to represent places and the distance between them.						
Types of Graphs:	1.Based on Direction:	Undirected Graphs: edge(x,y) == edge(y,x)	Directed Graphs: edge(x,y) != edge(y,x)				
	2.Based on Weights:	Weighted Graphs: every edge has a value	Unweighted Graphs: does not hav every edge.	e a value associated with			
	3.Special Graphs:	Trees	Directed Acyclic Graphs	Complete Graphs			
Implementation:	Graphs are easily built out of lists and dictionaries as in figure(1).						
	This graph has six nodes (A-F) and eight edges as in figure(2).						

## figure(1)

graph = { 'A':	['B', 'C'],
'B':	['C', 'D'],
'C':	['D'],
'D':	['C'],
'E':	['F'],
'F':	['C']}

figure(2)

A	->	В	
Α	->	С	
В	->	С	
В	->	D	
С	->	D	
D	->	С	
Е	->	F	
F	->	С	



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