Data Structure(Graph)

Graph's Definition:	Graphs are non-linear data structures made up of two major components			
Graph's Components:	1.Vertices:		2.Edges:	
	are entities in a graph		represent the relationship between 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 have a value associated with every edge.	
	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 -> B
A -> C
B -> C
B -> D
C -> D
D -> C
E -> F
F -> C
```