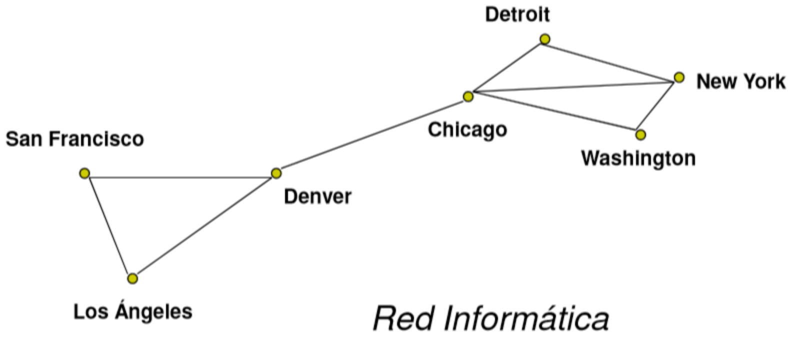
TAD Graph

Simplegraph



Red Informática

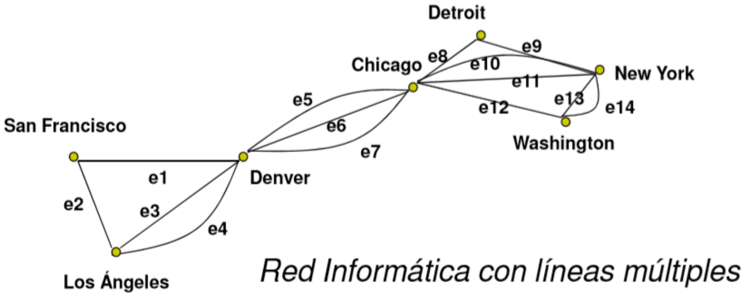
{ inv: the number of edges between two vertex must be one }

Primitive operations:

insertVertex:	Node	-> Graph
insertEdge:	Node1, Node2	-> Graph
deleteVertex:	Node	-> Graph
deleteEgde:	Edge	-> Graph
findVertex:	Node	-> Node
existsConnection:	Node1, Node2	-> Boolean

TAD Graph

Multigraph



Red Informática con líneas múltiples

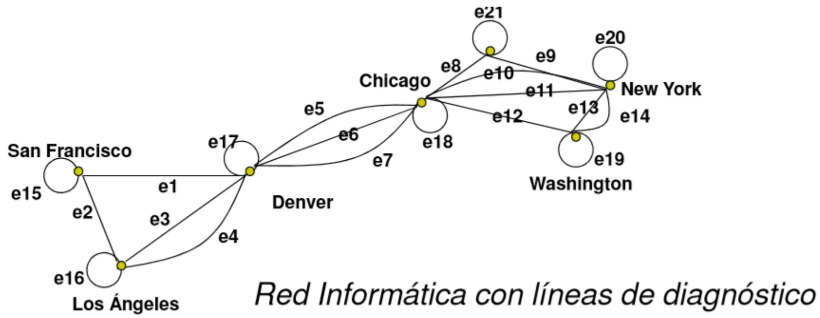
{ inv : a node could have N number of edges}

Primitive operations:

insertVertex:	Node	-> Graph
insertEdge:	Node1, Node2	-> Graph
deleteVertex:	Node	-> Graph
deleteEgde:	Edge	-> Graph
findVertex:	Node	-> Node
existsConnection:	Node1, Node2	-> Boolean

TAD Graph

Pseudograph



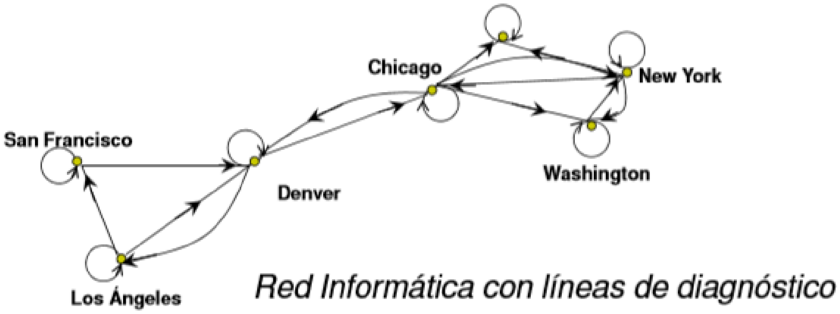
{ inv :a node could have N numbers of edges and a node could have 1 or 0 loop with itself }

Primitive operations:

insertVertex:	Node	-> Graph
insertEdge:	Node1, Node2	-> Graph
deleteVertex:	Node	-> Graph
deleteEgde:	Edge	-> Graph
findVertex:	Node	-> Node
existsConnection:	Node1, Node2	-> Boolean

TAD Graph

Directed graph



{ inv :the egdes have a direction between the nodes, the graph could be simple, multi or pseudo }

Primitive operations:

insertVertex:	Node	-> Graph
insertEdge:	Node1, Node2	-> Graph
deleteVertex:	Node	-> Graph
deleteEgde:	Edge	-> Graph
findVertex:	Node	-> Node
existsConnection:	Node1, Node2	-> Boolean

InsertVertex(node)

“Adds a node to the graph”

{pre: TRUE}

{post: Graph.size = Graph.size +1 } }

deleteVertex(node)

“Deletes a node from the graph”

{pre: TRUE}

{post: Graph.size = Graph.size -1 } }

InsertEgde(node1, node2)

“Creates an Edge between node1 and node2”

{pre: TRUE}

{post: existConnection(node1, node2 == true } }

deleteEdge(Edge)

“Deletes the egde from the nodes that have reference it”

{pre: TRUE}

{post: nodes.list(Edge) == NIL} }

findVertex(node)

“Search the node on the graph”

{pre: TRUE}

{post: return the node if exists, NIL if the opposite} }

existsConnection(node1, node2)

“Tell if node1 have an egde with node2”

{pre: TRUE}

{post: true if exists an edge, false if the opposite} }