Class Graph

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| **Constructor** | | |
| Graph() | O(1) | Creates an empty **Graph** object. |
| **Methods** | | |
| addEdge(***v1***, ***v2***)  addEdge(***edge***) | O(log V + log E) | Adds an edge to the graph. |
| addVertex(***v***) | O(log V) | Adds a vertex to the graph. |
| clear() | O(V + E) | Removes all vertexes and edges from the graph. |
| containsEdge(***v1***, ***v2***) containsEdge(***edge***) | O(log E) | Returns whether the graph has an edge between the given two vertexes. |
| containsVertex(***v***) [containsVertex(***name***)](https://stanford.edu/~stepp/cppdoc/BasicGraph-class.html#Method:containsVertex) | O(log V) | Returns whether the graph has an edge between the given two vertexes. |
| getEdge(***v1***, ***v2***) | O(log V + log E) | Returns the edge between the given two vertexes. |
| getNeighbors(***v***) | O(log V) | Returns the set of vertexes that are neighbors of the specified vertex |
| getVertex(***name***) | O(log V) | Looks up a vertex in the name table attached to the graph |
| isEmpty() | O(1) | Returns **true** if the graph contains no vertexes or edges. |
| [size()](https://stanford.edu/~stepp/cppdoc/BasicGraph-class.html#Method:size) | O(1) | Returns the number of vertexes in the graph. |
| removeEdge(***v1***, ***v2***) removeEdge(***name1***, ***name2***) removeEdge(***edge***) | O(E + log V) | Removes an edge from the graph |
| removeVertex(***vertex***)  removeVertex(***name***) | O(E + log V) | Removes a vertex from the graph |