Empirical Study project on network flow

Generated by Doxygen 1.8.11

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- static void **main** (String[ ] args) throws Exception
- static String **GetString** () throws IOException
- static int **GetInt** () throws IOException
- static double **GetReal** () throws IOException

The documentation for this class was generated from the following file:

- /home/anisha/AlgoProject/NetworkFlowStudy/src/graphGenerationCode/Bipartite/BipartiteGraph.java

2.2 graphGenerationCode.Random.BuildGraph Class Reference

Static Public Member Functions

- static void main (String[ ] args)

2.2.1 Member Function Documentation

2.2.1.1 static void graphGenerationCode.Random.BuildGraph.main (String[ ] *args*) [inline], [static]

Computes and saves a random graph based on the number of vertices, density of graph, lower bound on capacities, upper bound on capacities and the output file path.

Parameters

args	

The documentation for this class was generated from the following file:

- /home/anisha/AlgoProject/NetworkFlowStudy/src/graphGenerationCode/Random/BuildGraph.java

2.3 graphCode.Edge Class Reference

Public Member Functions

- Edge (Vertex v, Vertex w, Object data, Object name)
- Vertex getFirstEndpoint ()
- Vertex getSecondEndpoint ()
- Object getData ()
- void setData (Object data)
- Object getName ()

2.3.1 Detailed Description

Class that represents an edge in a graph. An object (usually some sort of data) can be associated with the edge.

A label (also represented by an object (e.g., a string) can also be associated with an edge. This could be useful, for example, if you need to mark an edge as being visited in some graph traversal.

Author

edhong

Version

0.0

2.3.2 Constructor & Destructor Documentation

2.3.2.1 graphCode.Edge.Edge (Vertex *v,* Vertex *w,* Object *data,* Object *name*) [inline]

Constructor that allows data and a name to be associated with the edge.

Parameters

v	the first endpoint of this edge
w	the second endpoint of this edge
data	data to be associated with this edge
name	a name to be associated with this edge

2.3.3 Member Function Documentation

2.3.3.1 Object graphCode.Edge.getData ( ) [inline]

Return the data associated with this edge.

Returns

the data of this edge

2.3.3.2 Vertex graphCode.Edge.getFirstEndpoint ( ) [inline]

Return the first endpoint of this edge.

Returns

the first endpoint of this edge

2.3.3.3 Object graphCode.Edge.getName ( ) [inline]

Return the name associated with this edge.

Returns

the name of this edge

2.3.3.4 Vertex graphCode.Edge.getSecondEndpoint ( ) [inline]

Return the second endpoint of this edge.

Returns

the second endpoint of this edge

2.3.3.5 void graphCode.Edge.setData (Object *data*) [inline]

Set the data associated with this edge.

Parameters

data	the data of this edge

The documentation for this class was generated from the following file:

- /home/anisha/AlgoProject/NetworkFlowStudy/src/graphCode/Edge.java

2.4 graphCode.GraphInput Class Reference

Static Public Member Functions

- static Hashtable LoadSimpleGraph (SimpleGraph newgraph)
- static Hashtable LoadSimpleGraph (SimpleGraph newgraph, String pathandfilename)
- static void main (String args[ ])

2.4.1 Detailed Description

A class that can read a graph (in a specific format) from a file.

Author

edhong

Version

0.0

2.4.2 Member Function Documentation

2.4.2.1 static Hashtable graphCode.GraphInput.LoadSimpleGraph (SimpleGraph *newgraph*) [inline], [static]

Load graph data from a text file via user interaction. This method asks the user for a directory and path name. It returns a hashtable of (String, Vertex) pairs. newgraph needs to already be initialized.

Parameters

newgraph	a simple graph

Returns

a hash table of (String, Vertex) pairs

2.4.2.2 static Hashtable graphCode.GraphInput.LoadSimpleGraph (SimpleGraph *newgraph,* String *pathandfilename*) [inline], [static]

Load graph data from a text file. The format of the file is: Each line of the file contains 3 tokens, where the first two are strings representing vertex labels and the third is an edge weight (a double). Each line represents one edge.

This method returns a hashtable of (String, Vertex) pairs.

Parameters

newgraph	a graph to add edges to. newgraph should already be initialized
pathandfilename	the name of the file, including full path.

Returns

a hash table of (String, Vertex) pairs

2.4.2.3 static void graphCode.GraphInput.main (String *args[ ]*) [inline], [static]

Code to test the methods of this class.

The documentation for this class was generated from the following file:

- /home/anisha/AlgoProject/NetworkFlowStudy/src/graphCode/GraphInput.java

2.5 graphCode.KeyboardReader Class Reference

Static Public Member Functions

- static int readInt ()
- static double readDouble ()
- static String readString ()
- static void main (String[ ] args)

Static Public Attributes

- static final int EOI_INT = Integer.MAX_VALUE
- static final double EOI_DOUBLE = Double.MAX_VALUE
- static final String EOI_STRING = "END_OF_INFO_1234"
- static final int ERROR_INT = Integer.MIN_VALUE
- static final double ERROR_DOUBLE = Double.MIN_VALUE
- static final String ERROR_STRING = "I/O_ERROR_1234"
- static boolean ERROR_MESSAGES = true

2.5.1 Detailed Description

A class to read strings and numbers from the keyboard.

This class is intended for beginning Java programmers. It constructs the necessary buffered reader, converts strings to numbers, and handles exceptions.

The methods in this class are **static** methods. This means that they can be invoked using the class name, without needing to create a *KeyboardReader* object.

The following examples illustrate how to use this class to read from the keyboard:

```
int x = KeyboardReader.readInt();         // read an int
double y = KeyboardReader.readDouble();   // read a double
String s = KeyboardReader.readString();     // read a String
```

This class also defines return values to indicate end-of-information (EOI) and data conversion errors.

The default behavior of the *readInt()* and *readDouble()* methods is to write a comment to the screen in response to inappropriate data. This behavior may be controlled by the *ERROR_MESSAGES* field.

Author

Bill Conlen

2.5.2 Member Function Documentation

2.5.2.1 static void graphCode.KeyboardReader.main (String[ ] *args*) [inline], [static]

Tests the KeyboardReader methods.

This method would not normally be invoked by users of the KeyboardReader class.

2.5.2.2 static double graphCode.KeyboardReader.readDouble ( ) [inline], [static]

Reads a line of input and converts it into a *double*.

Returns

the number that the user typed, or EOI_DOUBLE to indicate end-of-information, or ERROR_DOUBLE to indicate a conversion or I/O error.

2.5.2.3 static int graphCode.KeyboardReader.readInt ( ) [inline], [static]

Reads a line of input and converts it into an *int*.

Returns

the integer that the user typed, or EOI_INT to indicate end-of-information, or ERROR_INT to indicate a conversion or I/O error.

2.5.2.4 static String graphCode.KeyboardReader.readString ( ) [inline], [static]

Reads a line of character input.

Returns

the line of input that the user typed, or EOI_STRING to indicate end-of-information, or ERROR_STRING to indicate a conversion or I/O error.

2.5.3 Member Data Documentation

2.5.3.1 final double graphCode.KeyboardReader.EOI_DOUBLE = Double.MAX_VALUE [static]

Returned by the *readDouble()* method to indicate EOI.

2.5.3.2 final int graphCode.KeyboardReader.EOI_INT = Integer.MAX_VALUE [static]

Returned by the *readInt()* method to indicate EOI.

2.5.3.3 final String graphCode.KeyboardReader.EOI_STRING = "END_OF_INFO_1234" [static]

Returned by the *readString()* method to indicate EOI.

2.5.3.4 final double graphCode.KeyboardReader.ERROR_DOUBLE = Double.MIN_VALUE [static]

Returned by the *readDouble()* method to indicate an error.

2.5.3.5 final int graphCode.KeyboardReader.ERROR_INT = Integer.MIN_VALUE [static]

Returned by the *readInt()* method to indicate an error.

2.5.3.6 boolean graphCode.KeyboardReader.ERROR_MESSAGES = true [static]

Controls the output of error messages to the console in response to inappropriate input.

2.5.3.7 final String graphCode.KeyboardReader.ERROR_STRING = "I/O_ERROR_1234" [static]

Returned by the *readString()* method to indicate an error.

The documentation for this class was generated from the following file:

- /home/anisha/AlgoProject/NetworkFlowStudy/src/graphCode/KeyboardReader.java

2.6 networkflowstudy.logging Class Reference

Static Public Member Functions

- static void printGraph (SimpleGraph G)
- static void printEdge (Edge e)
- static void printFlow (LinkedHashMap< Edge, Integer > flow)
- static void printPath (List< Vertex > path)

2.6.1 Detailed Description

Author

anisha

2.6.2 Member Function Documentation

2.6.2.1 static void networkflowstudy.logging.printEdge (Edge *e*) [inline], [static]

Given an edge e, print it's values

Parameters

e	An edge

2.6.2.2 static void networkflowstudy.logging.printFlow (LinkedHashMap< Edge, Integer > *flow*) [inline], [static]

Given an flow, print the value across all the edges

Parameters

flow	Hashmap of flow value for each edge in a graph

2.6.2.3 static void networkflowstudy.logging.printGraph (SimpleGraph *G*) [inline], [static]

Given a graph G, print all the nodes and their incident edges

Parameters

G	Graph

2.6.2.4 static void networkflowstudy.logging.printPath (List< Vertex > *path*) [inline], [static]

Print the vertices in a given path

Parameters

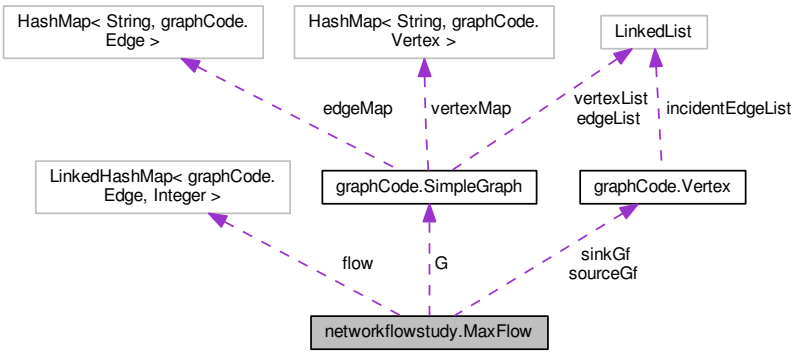
path	List of vertices inclusive of s and t

The documentation for this class was generated from the following file:

- /home/anisha/AlgoProject/NetworkFlowStudy/src/networkflowstudy/logging.java

2.7 networkflowstudy.MaxFlow Class Reference

Collaboration diagram for networkflowstudy.MaxFlow:



Public Member Functions

- **MaxFlow** (SimpleGraph G)
- LinkedHashMap< Edge, Integer > calculateFlow (Vertex sourceG, Vertex sinkG)

2.7.1 Detailed Description

Calculates the max Flow using Ford Fulkerson

Author

bhagatsanchya

2.7.2 Member Function Documentation

2.7.2.1 LinkedHashMap<Edge, Integer> networkflowstudy.MaxFlow.calculateFlow (Vertex *sourceG*, Vertex *sinkG*) [inline]

Calculate flow of a network using Ford fulkerson max- flow algorithm

Parameters

sourceG	vertex sourceG
sinkG	vertex sinkG

Returns

flow

The documentation for this class was generated from the following file:

- /home/anisha/AlgoProject/NetworkFlowStudy/src/networkflowstudy/MaxFlow.java

2.8 graphGenerationCode.Mesh.MeshGenerator Class Reference

Public Member Functions

- void generate ()
- MeshGenerator (String[ ] args)

Static Public Member Functions

- static void main (String[ ] args)

2.8.1 Detailed Description

This class generates text files representing mesh graph flow networks. The mesh graphs have edges from s to each node in the first column, from each internal node to the node on its right, both ways between every internal node and the nodes above and below it, and from the last column nodes to the sink.

The file format is the standard TCSS 343/543 format of 'first vertex' 'second vertex' 'capacity'. The program takes command line arguments. They are: [# of rows] [# of columns][capacity or maximum capacity][filename][-cc flag]. All arguments are optional. If you enter no arguments, you get a 3 x 4 mesh with capacity of 1 on all edges, printed to System.out. The arguments are:

#rows/columns - self-explanatory...defaults to 3x4 if no arguments are given

capacity - defaults to 1(fixed) if $<$3 arguments. Otherwise random on the range 1 to capacity, unless '-cc' set.

filename - the name of file to write to. Defaults to System.out if $<$4 parameters (or if -cc is last parameter)

-cc flag...With at least the first three parameters specified, ending the line with '-cc' will cause edge capacities to have a constant value of c.

Author

TCSS 543 group 2: Apaporn Boonyaratta, Richard Hill, Quang Lu, & David Thaler

Version

November 21, 2008

2.8.2 Constructor & Destructor Documentation

2.8.2.1 graphGenerationCode.Mesh.MeshGenerator.MeshGenerator (String[ ] *args*) [inline]

Constructor for mesh generator parses the command line arguments and sets the defaults. See the class comment for arguments/defaults.

Parameters

args	- the command line arguments. See class comment.

2.8.3 Member Function Documentation

2.8.3.1 void graphGenerationCode.Mesh.MeshGenerator.generate ( ) [inline]

The run method.

2.8.3.2 static void graphGenerationCode.Mesh.MeshGenerator.main (String[ ] *args*) [inline], [static]

Parameters

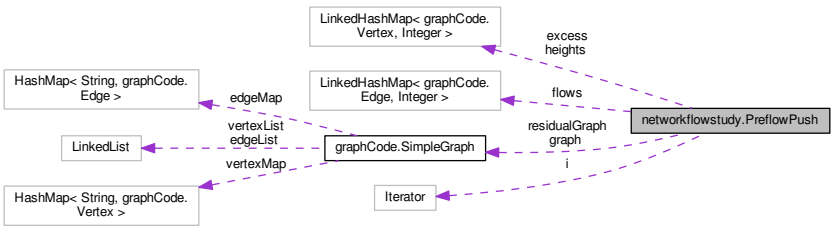
args-	command line args

The documentation for this class was generated from the following file:

- /home/anisha/AlgoProject/NetworkFlowStudy/src/graphGenerationCode/Mesh/MeshGenerator.java

2.9 networkflowstudy.PreflowPush Class Reference

Collaboration diagram for networkflowstudy.PreflowPush:



Public Member Functions

Constructor

Parameters

g	*represents a SimpleGraph to find max flow for.*

- **PreflowPush** (SimpleGraph g)

GetMaxFlow

Returns

the flow of the graph in a linked hash map of Edge to Integer.

- LinkedHashMap< Edge, Integer > **GetMaxFlow** ()

2.9.1 Detailed Description

Author

jason

The documentation for this class was generated from the following file:

- /home/anisha/AlgoProject/NetworkFlowStudy/src/networkflowstudy/PreflowPush.java

2.10 RandomGraph Class Reference

Static Public Member Functions

- static void main (String[ ] args)
- static StringBuffer graphBuilder (int v, int e, int min, int max)

2.10.1 Member Function Documentation

2.10.1.1 static StringBuffer RandomGraph.graphBuilder (int *v,* int *e,* int *min,* int *max*) [inline], [static]

This method creates a 3 token representation of a graph.

Parameters

v	The number of vertices in the graph
e	The number of edges leaving each vertice
min	The lowerbound on the capacity value of each edge
max	The upperbound on the capacity value of each edge

Returns

A string buffer, each line contains 3 tokens corresponding to a directed edge: the tail, the head, and the capacity.

2.10.1.2 static void RandomGraph.main (String[ ] *args*) [inline], [static]

Entrance point for the program. java RandomGraph v, e, m, f

Parameters

v	- the number of vertices
e	- the number of edges leaving each node
min	- the lower bound on the edge capacities
max	- the upper bound on the edge capacities
f	- path and file name for saving the graph

The documentation for this class was generated from the following file:

- /home/anisha/AlgoProject/NetworkFlowStudy/src/graphGenerationCode/FixedDegree/RandomGraph.java

2.11 networkflowstudy.SaveOutput Class Reference

Static Public Member Functions

- static void **writeToCSV** (String graphType, String algorithmName, int numberOfVertices, long runningTime, int maxFlow) throws IOException
- static void **writeToCSV** (String graphType, String algorithmName, int numberOfVertices, long runningTime, int maxFlow, int capacity) throws IOException

2.11.1 Detailed Description

Author

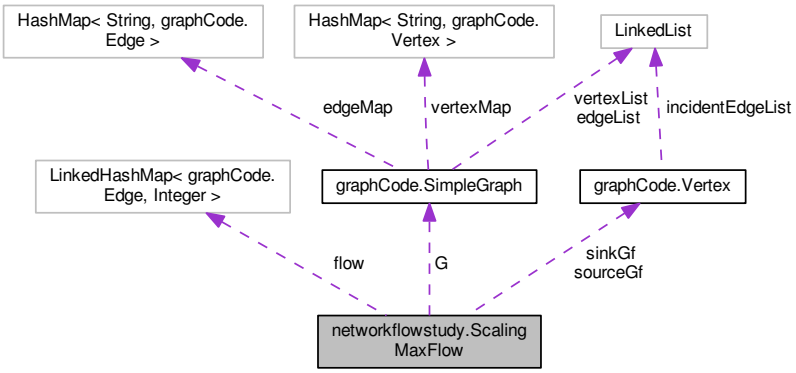
anisha

The documentation for this class was generated from the following file:

- /home/anisha/AlgoProject/NetworkFlowStudy/src/networkflowstudy/SaveOutput.java

2.12 networkflowstudy.ScalingMaxFlow Class Reference

Collaboration diagram for networkflowstudy.ScalingMaxFlow:



Public Member Functions

- ScalingMaxFlow (SimpleGraph G)
- LinkedHashMap< Edge, Integer > calculateFlow (Vertex sourceG, Vertex sinkG)
- int getDelta (Vertex source)

2.12.1 Detailed Description

Calculates and returns flow using Scaling max Flow algorithm

Author

anisha

2.12.2 Constructor & Destructor Documentation

2.12.2.1 networkflowstudy.ScalingMaxFlow.ScalingMaxFlow (SimpleGraph *G*) [inline]

Constructor to initialize the flow along all edges and create the corresponding graph

Parameters

G	

2.12.3 Member Function Documentation

2.12.3.1 LinkedHashMap<Edge, Integer> networkflowstudy.ScalingMaxFlow.calculateFlow (Vertex *sourceG,* Vertex *sinkG*) [inline]

Calculate flow of a network using Scaling max- flow algorithm

Parameters

source	vertex sourceG
sink	vertex sinkG

Returns

flow

2.12.3.2 int networkflowstudy.ScalingMaxFlow.getDelta (Vertex *source*) [inline]

calculate delta for a residual graph G

Parameters

source	vertex in residual graph

Returns

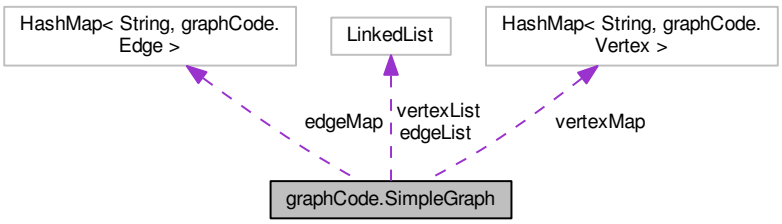
delta

The documentation for this class was generated from the following file:

- /home/anisha/AlgoProject/NetworkFlowStudy/src/networkflowstudy/ScalingMaxFlow.java

2.13 graphCode.SimpleGraph Class Reference

Collaboration diagram for graphCode.SimpleGraph:



Public Member Functions

- Iterator vertices ()
- Iterator edges ()
- HashMap getVertexMap ()
- HashMap getEdgeMap ()
- Iterator incidentEdges (Vertex v)
- Vertex aVertex ()
- Vertex insertVertex (Object data, Object name)
- Edge insertEdge (Vertex v, Vertex w, Object data, Object name)
- Vertex opposite (Vertex v, Edge e)
- Vertex tail (Vertex v, Edge e)
- int numVertices ()
- int numEdges ()
- Vertex getVertex (String vertexName)

Static Public Member Functions

- static void main (String[ ] args)

2.13.1 Detailed Description

A class that represents a graph.

Author

edhong

Version

0.0

2.13.2 Member Function Documentation

2.13.2.1 Vertex graphCode.SimpleGraph.aVertex ( ) [inline]

Return an arbitrary vertex of this graph

Returns

some vertex of this graph

2.13.2.2 Iterator graphCode.SimpleGraph.edges ( ) [inline]

Return the edge list of this graph.

Returns

edge list of this graph

2.13.2.3 HashMap graphCode.SimpleGraph.getEdgeMap ( ) [inline]

get graph edge hashMap

Returns

edgeMap

2.13.2.4 Vertex graphCode.SimpleGraph.getVertex (String *vertexName*) [inline]

Returns the vertex in a given SimpleGraph object

Parameters

vertexName	

Returns

source vertex

2.13.2.5 HashMap graphCode.SimpleGraph.getVertexMap ( ) [inline]

get graph vertex hashMap

Returns

vertexMap

2.13.2.6 Iterator graphCode.SimpleGraph.incidentEdges (Vertex *v*) [inline]

Given a vertex, return an iterator to the edge list of that vertex

Parameters

v	a vertex

Returns

an iterator to the edge list of that vertex

2.13.2.7 Edge graphCode.SimpleGraph.insertEdge (Vertex *v,* Vertex *w,* Object *data,* Object *name*) [inline]

Add an edge to this graph.

Parameters

v	the first endpoint of the edge
w	the second endpoint of the edge
data	data to be associated with the new edge
name	name to be associated with the new edge

Returns

the new edge

2.13.2.8 Vertex graphCode.SimpleGraph.insertVertex (Object *data,* Object *name*) [inline]

Add a vertex to this graph.

Parameters

data	an object to be associated with the new vertex
name	a name to be associated with the new vertex

Returns

the new vertex

2.13.2.9 static void graphCode.SimpleGraph.main (String[ ] *args*) [inline], [static]

Code to test the correctness of the SimpleGraph methods.

2.13.2.10 int graphCode.SimpleGraph.numEdges ( ) [inline]

Return the number of edges in this graph.

Returns

the number of edges

2.13.2.11 int graphCode.SimpleGraph.numVertices ( ) [inline]

Return the number of vertices in this graph.

Returns

the number of vertices

2.13.2.12 Vertex graphCode.SimpleGraph.opposite (Vertex *v*, Edge *e*) [inline]

Given a vertex and an edge, if the vertex is one of the endpoints of the edge, return the other endpoint of the edge. Otherwise, return null.

Parameters

v	a vertex
e	an edge

Returns

the other endpoint of the edge (or null, if v is not an endpoint of e)

2.13.2.13 Vertex graphCode.SimpleGraph.tail (Vertex *v*, Edge *e*) [inline]

Given a vertex and an edge, if the vertex is the head of the edge, return the other endpoint (tail) of the edge. Otherwise, return null.

Parameters

v	a vertex
e	an edge

Returns

the other endpoint of the edge (or null, if v is not an endpoint of e)

2.13.2.14 Iterator graphCode.SimpleGraph.vertices ( ) [inline]

Return the vertex list of this graph.

Returns

vertex list of this graph

The documentation for this class was generated from the following file:

- /home/anisha/AlgoProject/NetworkFlowStudy/src/graphCode/SimpleGraph.java

2.14 networkflowstudy.tcss543 Class Reference

Static Public Member Functions

- static void main (String[ ] args) throws IOException

2.14.1 Detailed Description

Author

anisha

2.14.2 Member Function Documentation

2.14.2.1 static void networkflowstudy.tcss543.main (String[ ] *args*) throws IOException [inline], [static]

Parameters

args	the command line arguments

The documentation for this class was generated from the following file:

- /home/anisha/AlgoProject/NetworkFlowStudy/src/networkflowstudy/tcss543.java

2.15 networkflowstudy.utils Class Reference

Static Public Member Functions

- static LinkedHashMap< Edge, Integer > initFlow (SimpleGraph G)
- static SimpleGraph createResidualGraph (SimpleGraph G, LinkedHashMap< Edge, Integer > flow)
- static List< Vertex > getSTPath (SimpleGraph Gf, Vertex Sink, Vertex Source)
- static List< Vertex > getSTPath (SimpleGraph Gf, Vertex sink, Vertex source, int delta)
- static int get_bottleneck (SimpleGraph Gf, List< Vertex > st_path)
- static void augment (SimpleGraph G, SimpleGraph Gf, LinkedHashMap< Edge, Integer > flow, List< Vertex > path)

2.15.1 Detailed Description

Author

anisha

2.15.2 Member Function Documentation

2.15.2.1 static void networkflowstudy.utils.augment (SimpleGraph *G,* SimpleGraph *Gf,* LinkedHashMap< Edge, Integer > *flow,* List< Vertex > *path*) [inline], [static]

Calculates the increase in flow using get_bottleneck() and updates the flow LinkedHashmap

Parameters

G	
Gf	
flow	
path	

2.15.2.2 static SimpleGraph networkflowstudy.utils.createResidualGraph (SimpleGraph *G,* LinkedHashMap< Edge, Integer > *flow*) [inline], [static]

Create a residual graph based on a network flow G=(V,E)

Parameters

G	a simple graph G
flow	flow across the edges

Returns

Residual Graph Gf

2.15.2.3 static int networkflowstudy.utils.get_bottleneck (SimpleGraph *Gf,* List< Vertex > *st_path*) [inline], [static]

Returns bottleneck for the given s-t path of graph Gf

Parameters

Gf	
st_path	

Returns

b_neck

2.15.2.4 static List<Vertex> networkflowstudy.utils.getSTPath (SimpleGraph *Gf,* Vertex *Sink,* Vertex *Source*) [inline], [static]

Returns s-t path of graph Gf, if there is no simple path , returns 0

Parameters

Gf	
Source	
Sink	

Returns

null if no s-t path else valid s-t path

2.15.2.5 static List<Vertex> networkflowstudy.utils.getSTPath (SimpleGraph *Gf,* Vertex *sink,* Vertex *source,* int *delta*) [inline], [static]

Return s-t path for a graph Gf based on the limiting capacity delta

Parameters

Gf	
sink	
source	
delta	

Returns

2.15.2.6 static LinkedHashMap<Edge, Integer> networkflowstudy.utils.initFlow (SimpleGraph *G*) [inline], [static]

Initialize the flow LinkedHashmap for the graph G

Parameters

G	simple graph G

Returns

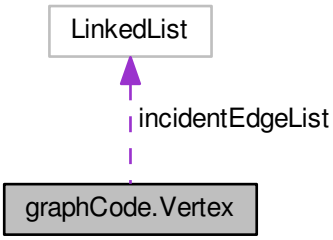
LinkedHashmap containing <Edge, flow value> pairs

The documentation for this class was generated from the following file:

- /home/anisha/AlgoProject/NetworkFlowStudy/src/networkflowstudy/utils.java

2.16 graphCode.Vertex Class Reference

Collaboration diagram for graphCode.Vertex:



Public Member Functions

- Vertex (Object data, Object name)
- Object getName ()
- Object getData ()
- void setData (Object data)

2.16.1 Detailed Description

Class that represents a vertex in a graph. A name (usually a string, but it can be an arbitrary object) can be associated with the vertex.

Data (also represented by an object (e.g., a string)) can also be associated with a vertex. This could be useful, for example, if you need to mark a vertex as being visited in some graph traversal.

Author

edhong

Version

0.0

2.16.2 Constructor & Destructor Documentation

2.16.2.1 graphCode.Vertex.Vertex (Object *data,* Object *name*) [inline]

Constructor that allows data and a name to be associated with the vertex.

Parameters

data	an object to be associated with this vertex
name	a name to be associated with this vertex

2.16.3 Member Function Documentation

2.16.3.1 Object graphCode.Vertex.getData ( ) [inline]

Return the data associated with this vertex.

Returns

the data of this vertex

2.16.3.2 Object graphCode.Vertex.getName ( ) [inline]

Return the name associated with this vertex.

Returns

the name of this vertex

2.16.3.3 void graphCode.Vertex.setData (Object *data*) [inline]

Set the data associated with this vertex.

Parameters

data	the data of this vertex

The documentation for this class was generated from the following file:

- /home/anisha/AlgoProject/NetworkFlowStudy/src/graphCode/Vertex.java

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