graphs

0.1.0

Generated by Doxygen 1.8.17

1 Class Index 1

1.1 Class List . . . 1

2 File Index 3

2.1 File List . . . 3

3 Class Documentation 5

3.1 Graph Class Reference . . . 5

3.1.1 Detailed Description . . . 5

3.1.2 Constructor & Destructor Documentation . . . 5

3.1.2.1 Graph() . . . 5

3.1.3 Member Function Documentation . . . 6

3.1.3.1 addEdge() . . . 6

3.1.3.2 hasEdge() . . . 6

3.1.3.3 inEdges() . . . 6

3.1.3.4 outEdges() . . . 6

3.1.3.5 printGraph() . . . 7

3.1.3.6 removeEdge() . . . 7

4 File Documentation 9

4.1 /home/benson/CPTR227/HW14---Graphs-1/src/main.cpp File Reference . . . 9

4.1.1 Detailed Description . . . 10

4.1.2 Function Documentation . . . 10

4.1.2.1 main() . . . 10

Index 11

Chapter 1

Class Index

1.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

Graph 5

Chapter 2

File Index

2.1 File List

Here is a list of all files with brief descriptions:

/home/benson/CPTR227/HW14---Graphs-1/src/main.cpp
This is a test of CMake, doxygen, and GitHub 9

Chapter 3

Class Documentation

3.1 Graph Class Reference

Public Member Functions

- Graph (int n0)
- void addEdge (int i, int j)
- void removeEdge (int i, int j)
- bool hasEdge (int i, int j)
- void outEdges (int i, vector< int > &edges)
- void inEdges (int i, vector< int > &edges)
- void printGraph ()

3.1.1 Detailed Description

Definition at line 14 of file main.cpp.

3.1.2 Constructor & Destructor Documentation

3.1.2.1 Graph()

```
Graph::Graph (
            int n0 )  [inline]
```

Definition at line 19 of file main.cpp.

```
19                  {
20         n = n0;
21         for(int i = 0; i < n; i++) {
22             vector <bool> row(n, false);
23             a.push_back(row);
24         }
25     }
```

3.1.3 Member Function Documentation

3.1.3.1 addEdge()

```
void Graph::addEdge (
            int i,
            int j )  [inline]
```

Definition at line 27 of file main.cpp.

```
27                                {
28         a[i][j] = true;
29     }
```

3.1.3.2 hasEdge()

```
bool Graph::hasEdge (
            int i,
            int j )  [inline]
```

Definition at line 35 of file main.cpp.

```
35                                {
36         return a[i][j];
37     }
```

3.1.3.3 inEdges()

```
void Graph::inEdges (
            int i,
            vector< int > & edges )  [inline]
```

Definition at line 43 of file main.cpp.

```
43                                                  {
44         for (int j = 0; j < n; j++)
45             if (a[j][i]) edges.push_back(j);
46     }
```

3.1.3.4 outEdges()

```
void Graph::outEdges (
            int i,
            vector< int > & edges )  [inline]
```

Definition at line 39 of file main.cpp.

```
39                                                   {
40         for (int j = 0; j < n; j++)
41             if (a[i][j]) edges.push_back(j);
42     }
```

3.1.3.5 printGraph()

```
void Graph::printGraph ( )  [inline]
```

Definition at line 48 of file main.cpp.

```
48                      {
49     for (int i = 0; i < n; i++) {
50       cout « i « ":\t";
51       for (int j = 0; j < n; j++){
52         cout « a[i][j] « "\t";
53       }
54       cout « "\n";
55     }
56   }
```

3.1.3.6 removeEdge()

```
void Graph::removeEdge (
            int i,
            int j )  [inline]
```

Definition at line 31 of file main.cpp.

```
31                                      {
32         a[i][j] = false;
33     }
```

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

- /home/benson/CPTR227/HW14---Graphs-1/src/main.cpp

Chapter 4

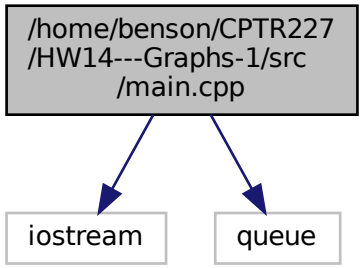
File Documentation

4.1 /home/benson/CPTR227/HW14---Graphs-1/src/main.cpp File Reference

This is a test of CMake, doxygen, and GitHub.

```
#include <iostream>
#include <queue>
```

Include dependency graph for main.cpp:



Classes

- class Graph

Functions

- int main ()

4.1.1 Detailed Description

This is a test of CMake, doxygen, and GitHub.

This is the long brief at the top of main.cpp.

Author

Benson Nyakango

Date

3/30/21

4.1.2 Function Documentation

4.1.2.1 main()

```
int main ( )
```

Definition at line 60 of file main.cpp.

```
60            {
61   Graph g(12);
62
63   g.addEdge(0, 1);
64   g.addEdge();
65
66
67   g.printGraph();
68 }
```

Index

/home/benson/CPTR227/HW14---Graphs-1/src/main.cpp,
9

addEdge
Graph, 6

Graph, 5
addEdge, 6
Graph, 5
hasEdge, 6
inEdges, 6
outEdges, 6
printGraph, 6
removeEdge, 7

hasEdge
Graph, 6

inEdges
Graph, 6

main
main.cpp, 10
main.cpp
main, 10

outEdges
Graph, 6

printGraph
Graph, 6

removeEdge
Graph, 7