aardvark

0.3.0

Generated by Doxygen 1.8.17

Chapter 1

Class Index

1.1 Class List

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

Chapter 2

File Index

2.1 File List

Here is a list of all files with brief descriptions:

Chapter 3

Class Documentation

3.1 AdjacencyMatrix Class Reference

Public Member Functions

- AdjacencyMatrix (int Size)
- void addEdge (int i, int j)
- void removeEdge (int i, int j)
- bool hasEdge (int i, int j)
- vector< int > outEdges (int i)
- vector< int > inEdges (int i)
- int nVertices ()
- void printGraph ()

Protected Attributes

- int n
- bool ** MatrixChecker

3.1.1 Detailed Description

Definition at line 15 of file main.cpp.

3.1.2 Constructor & Destructor Documentation

3.1.2.1 AdjacencyMatrix()

```
AdjacencyMatrix::AdjacencyMatrix (
            int Size )  [inline]
```

Definition at line 21 of file main.cpp.

```
21                              {
22         n = Size;
23         MatrixChecker = new bool*[n];
24         for (int i = 0; i < n; i++)
25             MatrixChecker[i] = new bool[n];
26         for (int i = 0; i < n; i++)
27             for (int j = 0; j < n; j++)
28                 MatrixChecker[i][j] = false;
29     };
```

3.1.3 Member Function Documentation

3.1.3.1 addEdge()

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

Definition at line 32 of file main.cpp.

```
32                              {
33         MatrixChecker[i][j] = true;
34     }
```

3.1.3.2 hasEdge()

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

Definition at line 42 of file main.cpp.

```
42                              {
43         return MatrixChecker[i][j];
44     }
```

3.1.3.3 inEdges()

```
vector<int> AdjacencyMatrix::inEdges (
            int i )  [inline]
```

Definition at line 55 of file main.cpp.

```
55                              {
56         vector<int> inEdges;
57         for (int j = 0; j < n; j++)
58             if (MatrixChecker[j][i]) inEdges.push_back(j);
59         return inEdges;
60     }
```

3.1.3.4 nVertices()

```
int AdjacencyMatrix::nVertices ( )  [inline]
```

Definition at line 62 of file main.cpp.

```
62                      {
63         return n;
64     }
```

3.1.3.5 outEdges()

```
vector<int> AdjacencyMatrix::outEdges (
            int i )  [inline]
```

Definition at line 47 of file main.cpp.

```
47                                  {
48         vector<int> outEdges;
49         for (int j = 0; j < n; j++)
50             if (MatrixChecker[i][j]) outEdges.push_back(j);
51         return outEdges;
52     }
```

3.1.3.6 printGraph()

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

This code comes almost line for line from here: https://www.programiz.com/dsa/graph-adjacency-matrix

Definition at line 69 of file main.cpp.

```
69                          {
70     cout « "T : ";
71     for (int i = 1; i < n; i++) {
72       cout « i « " ";
73     }
74     cout « endl;
75     for (int i = 0; i < n; i++) {
76       cout « i « " : ";
77       for (int j = 0; j < n; j++)
78         cout « MatrixChecker[i][j] « " ";
79       cout « endl;
80         }
81     cout « endl;
82     }
```

3.1.3.7 removeEdge()

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

Definition at line 37 of file main.cpp.

```
37                                  {
38         MatrixChecker[i][j] = false;
39     }
```

3.1.4 Member Data Documentation

3.1.4.1 MatrixChecker

```
bool** AdjacencyMatrix::MatrixChecker  [protected]
```

Definition at line 18 of file main.cpp.

3.1.4.2 n

```
int AdjacencyMatrix::n  [protected]
```

Definition at line 17 of file main.cpp.

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

- /home/lee/Leecmake/Project-XIV-1/src/main.cpp

Chapter 4

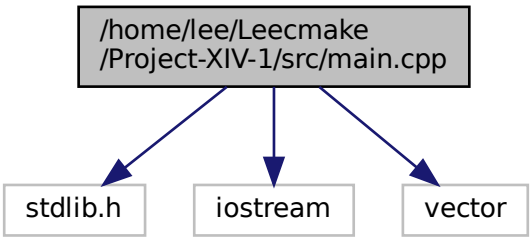
File Documentation

4.1 /home/lee/Leecmake/Project-XIV-1/src/main.cpp File Reference

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

```
#include <stdlib.h>
#include <iostream>
#include <vector>
```

Include dependency graph for main.cpp:



Classes

- class AdjacencyMatrix

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. I used code from the book and used this website for their print function and to figure out how to work this guys code https://www.programiz.com/dsa/graph-adjacency-matrix, an additional website I used to understand the concept better: https://www.softwaretestinghelp.com/graph-implementation-cpp/

Author

Seth McNeill

Date

1/28/2021

4.1.2 Function Documentation

4.1.2.1 main()

```
int main ( )
```

Definition at line 122 of file main.cpp.

```
122          {
123     AdjacencyMatrix Test(12);
124     Test.addEdge(0,1);
125     Test.addEdge(1,0);
126     Test.addEdge(1,2);
127     Test.addEdge(2,1);
128     Test.addEdge(2,3);
129     Test.addEdge(3,2);
130     Test.addEdge(3,7);
131     Test.addEdge(7,3);
132     Test.addEdge(0,4);
133     Test.addEdge(4,0);
134     Test.addEdge(4,5);
135     Test.addEdge(5,4);
136     Test.addEdge(1,5);
137     Test.addEdge(5,1);
138     Test.addEdge(1,6);
139     Test.addEdge(6,1);
140     Test.addEdge(2,5);
141     Test.addEdge(6,7);
142     Test.addEdge(7,6);
143     Test.addEdge(4,8);
144     Test.addEdge(8,4);
145     Test.addEdge(8,9);
146     Test.addEdge(9,8);
147     Test.addEdge(9,10);
148     Test.addEdge(10,9);
149     Test.addEdge(10,11);
150     Test.addEdge(11,10);
151     Test.addEdge(11,7);
152     Test.addEdge(7,11);
153     Test.printGraph();
154 }
```

Index