ALG01-semProject

1.0

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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 Map Class Reference

`#include <Map.h>`

Public Member Functions

- Map (int rows, int cols)
- ~Map ()
- Point * GetStart ()
- Point * GetFinish ()
- void AddPoint (Point *point)
- Point * GetPoint (int x, int y)
- std::string PrintMap ()
- void CalculatePath ()
- std::vector< Point * > GetPath ()

Static Public Member Functions

- static Map * LoadFromFile (const std::string &filename)

3.1.1 Constructor & Destructor Documentation

3.1.1.1 Map()

```
Map::Map (
            int rows,
            int cols )
```

3.1.1.2 ~Map()

```
Map::~Map ( )
```

3.1.2 Member Function Documentation

3.1.2.1 AddPoint()

```
void Map::AddPoint (
            Point * point )
```

3.1.2.2 CalculatePath()

```
void Map::CalculatePath ( )
```

3.1.2.3 GetFinish()

```
Point * Map::GetFinish ( )
```

3.1.2.4 GetPath()

```
std::vector< Point * > Map::GetPath ( )
```

3.1.2.5 GetPoint()

```
Point * Map::GetPoint (
            int x,
            int y )
```

3.1.2.6 GetStart()

```
Point * Map::GetStart ( )
```

3.1.2.7 LoadFromFile()

```
Map * Map::LoadFromFile (
            const std::string & filename )  [static]
```

3.1.2.8 PrintMap()

```
std::string Map::PrintMap ( )
```

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

- Map.h
- Map.cpp

3.2 Point Class Reference

```
#include <Point.h>
```

Public Member Functions

- Point (int x, int y, char level)
- ~Point ()
- int GetX ()
- int GetY ()
- int GetDistance ()
- char GetLevel ()
- char PrintLevel ()
- void SetDistance (int distance)
- void AddPrevious (Point *point)
- Point * GetPrevious ()

3.2.1 Constructor & Destructor Documentation

3.2.1.1 Point()

```
Point::Point (
            int x,
            int y,
            char level )
```

3.2.1.2 ~Point()

```
Point::~Point ( )
```

3.2.2 Member Function Documentation

3.2.2.1 AddPrevious()

```
void Point::AddPrevious (
            Point * point )
```

3.2.2.2 GetDistance()

```
int Point::GetDistance ( )
```

3.2.2.3 GetLevel()

```
char Point::GetLevel ( )
```

3.2.2.4 GetPrevious()

```
Point * Point::GetPrevious ( )
```

3.2.2.5 GetX()

```
int Point::GetX ( )
```

3.2.2.6 GetY()

```
int Point::GetY ( )
```

3.2.2.7 PrintLevel()

```
char Point::PrintLevel ( )
```

3.2.2.8 SetDistance()

```
void Point::SetDistance (
            int distance )
```

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

- Point.h
- Point.cpp

Chapter 4

File Documentation

4.1 ALG01-semProject.cpp File Reference

```
#include <iostream>
#include <fstream>
#include <string>
#include "Map.h"
```

Functions

- int main ()

4.1.1 Function Documentation

4.1.1.1 main()

```
int main ( )
```

4.2 Map.cpp File Reference

```
#include "Map.h"
#include <iostream>
#include <queue>
```

4.3 Map.h File Reference

```
#include "Point.h"
#include <string>
#include <vector>
#include <iostream>
#include <fstream>
```

Classes

- class Map

4.4 Map.h

Go to the documentation of this file.

```
00001 #pragma once
00002 #include "Point.h"
00003 #include <string>
00004 #include <vector>
00005 #include <iostream>
00006 #include <fstream>
00007 class Map
00008 {
00009 private:
00010     std::vector<Point*> mapArray;
00011     Point* start = nullptr;
00012     Point* finish = nullptr;
00013     int rows;
00014     int cols;
00015     Point* ProcessPoint(Point* actual, Point* next);
00016 public:
00017     Map(int rows, int cols);
00018     ~Map();
00019     Point* GetStart();
00020     Point* GetFinish();
00021     void AddPoint(Point* point);
00022     Point* GetPoint(int x, int y);
00023     std::string PrintMap();
00024     void CalculatePath();
00025     std::vector<Point*> GetPath();
00026     static Map* LoadFromFile(const std::string& filename);
00027
00028
00029 };
```

4.5 Point.cpp File Reference

```
#include "Point.h"
```

4.6 Point.h File Reference

Classes

- class Point

4.7 Point.h

Go to the documentation of this file.

```
00001 #pragma once
00002 class Point
00003 {
00004 private:
00005     int x;
00006     int y;
00007     char level;
00008     int distance = 2147483647;//int maxvalue
00009     Point* previous = nullptr;
00010 public:
```

```
00011     Point(int x, int y, char level);
00012     ~Point();
00013     int GetX();
00014     int GetY();
00015     int GetDistance();
00016     char GetLevel();
00017     char PrintLevel();
00018     void SetDistance(int distance);
00019     void AddPrevious(Point* point);
00020     Point* GetPrevious();
00021
00022
00023 };
```

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