

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:

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Chapter 2

File Index

2.1 File List

Here is a list of all files with brief descriptions:

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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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