电子信息与工程学院

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代码

```cpp
1   #include <iostream>
2   #include <math.h>
3   using namespace std;
4
5   class Dot
6   {
7   public:
8       Dot(double a,double b):x(a),y(b){}
9       void display()
10      {
11          cout << "x= " << x << endl;
12          cout << "y= " << y << endl;
13      }
14      double getx(){return x;}
15      double gety(){return y;}
16  protected:
17      double x;
18      double y;
19  };
20
21  class Line:public Dot
22  {
23  private:
24      Dot dot1,dot2;
25  public:
26      Line(double a,double b,double c,double d):Dot((a+c)*0.5,(b+d)*0.5),dot1(a,b),dot2(c,d){}
27      double Length()
28      {
29          double x = pow((dot1.getx() - dot2.getx()),2),y = pow((dot1.gety() - dot2.gety()),2);
30          return sqrt(x+y);
31      }
32      void show()
33      {
34          cout << "Midpoint coordinates are : " << "(" << x << "," << y << ")" << endl;
35      }
36  };
```

```
37
38  int main()
39  {
40      double a,b,c,d;
41      cout << "X coordinate of Dot1: " << endl;
42      cin >> a ;
43      cout << "Y coordinate of Dot1: " << endl;
44      cin >> b ;
45      cout << "X coordinate of Dot2: " << endl;
46      cin >> c ;
47      cout << "Y coordinate of Dot2: " << endl;
48      cin >> d ;
49      Line line(a,b,c,d);
50      cout << "Length is :" << line.Length() << endl;
51      line.show();
52      return 0;
53  }
```

运行结果截图

```
X coordinate of Dot1:
2
Y coordinate of Dot1:
3
X coordinate of Dot2:
3
Y coordinate of Dot2:
2
Length is :1.41421
Midpoint coordinates are : (2.5,2.5)

Process returned 0 (0x0)    execution time : 12.227 s
Press any key to continue.
```