

Branch: master ECE252 / ICE03 / RightTriangleTest.cpp

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70 lines (58 sloc) 1.45 KB

```
1  #include<iostream>
2  #include<math.h>
3
4  using namespace std;
5
6  class RightTriangle {
7
8      private:
9          float a;
10         float b;
11         float c;
12
13     public:
14         RightTriangle();
15         RightTriangle(int x, int y, int hypotenuse);
16         void printValues();
17         bool isHypotenuseCorrect();
18         void fixHypotenuse();
19         void setHypotenuse(float x);
20         float getHypotenuse();
21
22 };
23
24
25 int main () {
26     RightTriangle* myTriangle = new RightTriangle(5, 12, 13);
27     myTriangle->printValues();
28     cout << "Hypotenuse correct? " << myTriangle->isHypotenuseCorrect() << endl;
29     myTriangle->setHypotenuse(20);
30     myTriangle->printValues();
31     cout << "Hypotenuse correct? " << myTriangle->isHypotenuseCorrect() << endl;
32     myTriangle->fixHypotenuse();
33     myTriangle->printValues();
34     cout << "Hypotenuse correct? " << myTriangle->isHypotenuseCorrect() << endl;
35     cout << "Hypotenuse: " << myTriangle->getHypotenuse() << endl;
36     return 0;
37 }
38
39 RightTriangle::RightTriangle() {
40 }
41
42 RightTriangle::RightTriangle(int x, int y, int hypotenuse) {
43     a = x;
44     b = y;
45     c = hypotenuse;
46 }
47 bool RightTriangle::isHypotenuseCorrect(){
48     if (fabs(a*a + b*b - c*c) < 0.0001){
49         //cout << "1" << endl;
50         return true;
51     } else {
52         //cout << "0" << endl;
53         return false;
54     }
55 }
56
```

```
57 void RightTriangle::fixHypotenuse(){
58     c=sqrt(a*a+b*b);
59 }
60
61 void RightTriangle::printValues(){
62     cout << "side 1: " << a << ", side 2: " << b << ", hypotenuse: " << c << endl;
63 }
64 void RightTriangle::setHypotenuse(float x){
65     c = x;
66 }
67 float RightTriangle::getHypotenuse(){
68     return c;
69 }
```