

Philip Pesic

Week 8

October 9 2022

Week 8 Prog 4

Write and run the following code.

`** Explain correctly and fully how fun1 and fun1 pointer arguments works.. // use comments  
on each line..`

`//`

`// main.cpp`

`// Week 8 Prog 4`

`//`

`// Created by Pippo Pesic on 10/5/22.`

`//`

`#include <iostream>`

`using namespace std;`

`#include <string>`

`class myClass {`

`private:`

`int x;`

`public:`

`myClass( ) { x = 0; }`

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```
        myClass( int inX ) { x = inX; }

        int getX( ) { return x; }

        void setX( int inX ) { x = inX; }

};

void fun1( myClass & inC1) //Declares inC1 as pointer to myClass

{

    inC1.setX(42); //Sets C1 X to 42

}

void fun2( myClass * inC2)

{

    inC2->setX(66);

}

int main()

{

    std::string name;

    std::cout << "What is your name? ";

    getline (std::cin, name);

    std::cout << "Hello friend, " << name << "!\n";
```

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```
myClass mainC1;  
  
cout << mainC1.getX() << endl;  
  
fun1( mainC1 ); //Calls fun1 with the object mainC1 as a parameter, pointer gives mainC1  
value 42  
  
cout << mainC1.getX() << endl; //Returns the value that it recieved from pointer  
  
fun2 ( &mainC1 );  
  
cout << mainC1.getX() << endl;  
  
cout << "Philip Pesic 10/9/22" << endl;  
  
    return 0;  
  
}
```

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```
1 //
2 // main.cpp
3 // Week 8 Prog 4
4 //
5 // Created by Pippo Pesic on 18/5/22.
6 //
7
8 #include <iostream>
9 using namespace std;
10 #include <string>
11
12 class myClass {
13 private:
14     int x;
15 public:
16     myClass() { x = 0; }
17     myClass( int inX ) { x = inX; }
18     int getX() { return x; }
19     void setX( int inX ) { x = inX; }
20 };
21
22 void fun1( myClass & inC1 ) //Declares inC1 as pointer to myClass
23 {
24     inC1.setX(42); //Sets C1 X to 42
25 }
26
27 void fun2( myClass * inC2 )
28 {
29     inC2->setX(46);
30 }
31
32 int main()
33 {
34     std::string name;
35     std::cout << "What is your name? ";
36     getline (std::cin, name);
37     std::cout << "Hello friend, " << name << "\n";
38
39     myClass mainC1;
40     cout << mainC1.getX() << endl;
41     fun1( mainC1 ); //Calls fun1 with the object mainC1 as a parameter, pointer gives mainC1 value 42
42     cout << mainC1.getX() << endl; //Returns the value that it recieved from pointer
43     fun2 ( &mainC1 );
44     cout << mainC1.getX() << endl;
45     cout << "Philip Pesic 18/9/22" << endl;
46     return 0;
47 }
48
```

What is your name? Philip  
Hello friend, Philip!  
0  
42  
46  
Philip Pesic 18/9/22  
Program ended with exit code: 0

I learned: how to recognize pointers in existing code

|   |
|---|
| myClass   |
| -x: int   |
| +myClass()<br>+myclass(inX: int)<br>+getX() int<br>+setX(inX: int) void |