

Debugging

Episode I
Let the Hunt Begin

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Debugging Compilation Errors in C/C++ Programs

- Thumb Rules

- ☐ Always concentrate on the first error

- ☐ The next errors are many times not accurate. They are based on assumptions, made by the compiler, on what the first error was and how to fix it!

- ☐ Remember, when it comes to debugging, “Google is your friend”

Debugging Example

```
#include <iostream>
```

```
int main()
```

```
{
```

```
    cout << "!!!Hello World!!!" << endl;
```

```
    return 0
```

```
}
```

* File name is: helloWorldDbg.cpp

Compile Program

- Running: `g++ helloWorldDbg.cpp`
- Produces the following output:

`helloWorldDbg.cpp: In function 'int main()':`

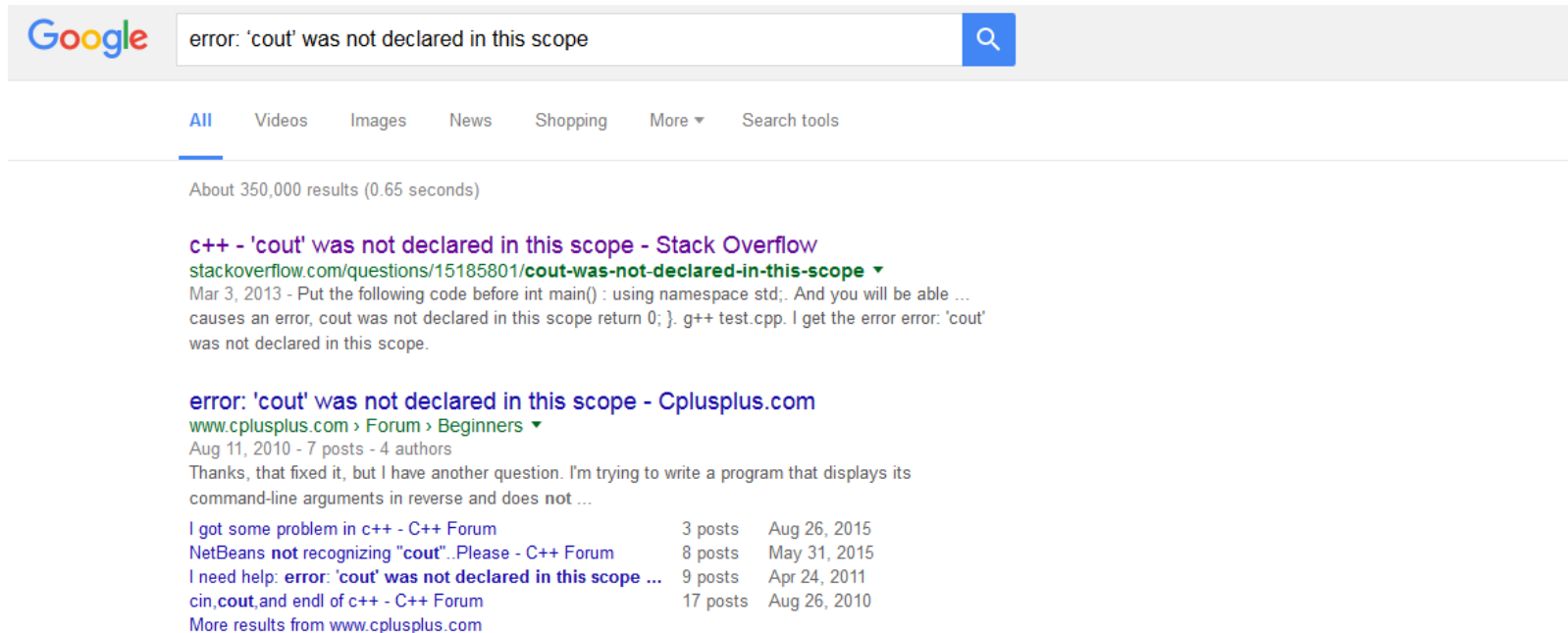
`helloWorldDbg.cpp:6: error: 'cout' was not declared in this scope`

`helloWorldDbg.cpp:6: error: 'endl' was not declared in this scope`

`helloWorldDbg.cpp:8: error: expected ';' before '}' token`

Analyze and Fix First Error

- error: 'cout' was not declared in this scope



The screenshot shows a Google search interface with the query "error: 'cout' was not declared in this scope" entered in the search bar. Below the search bar, there are tabs for "All", "Videos", "Images", "News", "Shopping", "More", and "Search tools". The search results are displayed below the tabs, showing "About 350,000 results (0.65 seconds)".

The first search result is from Stack Overflow, titled "c++ - 'cout' was not declared in this scope - Stack Overflow". The URL is stackoverflow.com/questions/15185801/cout-was-not-declared-in-this-scope. The snippet shows a question from March 3, 2013, asking for help with a C++ program that causes an error: "error: 'cout' was not declared in this scope".

The second search result is from Cplusplus.com, titled "error: 'cout' was not declared in this scope - Cplusplus.com". The URL is www.cplusplus.com/forum/beginners. The snippet shows a forum post from August 11, 2010, with 7 posts and 4 authors. The post asks for help with a C++ program that causes an error: "error: 'cout' was not declared in this scope".

Below the second result, there is a table of related search results:

Search Result	Posts	Date
I got some problem in c++ - C++ Forum	3 posts	Aug 26, 2015
NetBeans not recognizing "cout"..Please - C++ Forum	8 posts	May 31, 2015
I need help: error: 'cout' was not declared in this scope ...	9 posts	Apr 24, 2011
cin,cout,and endl of c++ - C++ Forum	17 posts	Aug 26, 2010

More results from www.cplusplus.com

Read the Questions and Answers Carefully

2 Answers

active

oldest

votes



Put the following code before `int main()` :

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```
using namespace std;
```



And you will be able to use `cout` .



For example:

```
#include<iostream>
using namespace std;
int main(){
    char t = 'f';
    char *t1;
    char **t2;
    cout<<t;
    return 0;
}
```

Now take a moment and read up on what `cout` is and what is going on here: <http://www.cplusplus.com/reference/iostream/cout/>

share improve this answer

edited Jul 1 '13 at 14:29



Eric Leschinski

45.3k ● 23 ● 217 ● 184

answered Mar 3 '13 at 14:08



rafalon

677 ● 5 ● 8

Compilation Debugging Loop

While your code has errors, **Try to fix the first error and recompile the code.** Repeat until your program compiles successfully!

Alternatively in C/C++ while loop style ->

```
While(errors exist in your code)
{
    try to fix first error
    recompile code
}
```

Class Assignment I

- Fix the code that will be given to you
- Compile the program
- Hand in the corrected program and program output

Code

```
#include <iostream>
const float MyConstantValue = 9.9
int testFunc1()
{
    return MyConstantValue * 2;
}
int testFunc2(int val)
{
    return val*testFunc1();
}
int testFunc3(int y)
{
    int x = 4;
    return testFunc2(x)*testFunc2(y);
}
int main()
{
    cout << "!!!Hello Errors!!!" << endl;
    int result = testFunc3(10);
    cout << "Result="<<result<<endl;
    return 0;
}
```