

Visual C++ 6.0 Compiler Problem with Optimizations Switched On !!

Source: <http://www.tech-archive.net/Archive/VC/microsoft.public.vc.language/2006-01/msg00974.html>

- *From:* "Bojan" <Bojan@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>
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Dear all!

Recently I observed quite strange behavior of the MSVC++ 6.0 original compiler. Namely, if one compiles the source code attached below in the Debug mode or in the Release mode without optimizations, it works like predicted. See the standard output of the command prompt (compare the values with the code below):

```
D:\Bojan\Research\IHNE\DEBUG1\Release>ihne.exe
```

```
The value of 'temp' should be 100: 100  
The value of 'Index' should be 100: 100
```

```
This value should be 100, but we get the following: 100  
This value should be 100, but we get the following: 112
```

However, if one compiles the same source code in Release mode with Maximize Speed OR with Minimize Size , then an unpredicted behavior can be achieved. After invocation of the program in the command prompt the following standard output is produced.

```
D:\Bojan\Research\IHNE\DEBUG1\Release>ihne.exe
```

```
The value of 'temp' should be 100: 100  
The value of 'Index' should be 100: 100
```

```
This value should be 100, but we get the following: 4223344  
This value should be 100, but we get the following: 4223356
```

Please, pay attention on the strange values of the variable counter !!

What could be a problem here? Is something wrong with the code or it is the optimization problem of the Microsoft Visual Studio (Visual C++) 6.0?

Best regards

Bojan
University of Maribor

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Slovenia

```
#include <math.h>
#include <stdlib.h>
#include <string.h>
#include <stdio.h>
#include <fstream.h>

int ReturnInt1()
{
int Pitch=100;
return Pitch;
}

int main()
{
int j;
int index;
int counter;

int array[2000];
int temp=0;

// 1. The problem is in this case:
temp=ReturnInt1();

printf("\nThe value of 'temp' should be 100: %d\n",temp);
fflush(stdout);

index=temp;

printf("The value of 'Index' should be 100: %d\n",index);
fflush(stdout);

counter=0;
for (j=0;j<index;j++)
{
array[j]=60;
counter++;
}

printf("\nThis value should be 100, but we get the following: %d
\n",counter);
fflush(stdout);

printf("This value should be 100, but we get the following: %d
```

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```
\n",counter+12);  
fflush(stdout);
```

```
return 0;  
}
```

- **Follow-Ups:**

- ◆ **[Re: Visual C++ 6.0 Compiler Problem with Optimizations Switched On !!](#)**
 ◇ From: Frédéric Fuzier
- ◆ **[Re: Visual C++ 6.0 Compiler Problem with Optimizations Switched On !!](#)**
 ◇ From: Aslan

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