

Forum:[Hack Forums](#)

Thread: [C++ Beginners Tutorial Part I](#)

ryan? - December 31, 2011, 11:16 am

Chapter I - Intro to Programming

Intro:

I'm making this because I'm on my 4th semester of C++ at my university. So, I figured I'd teach some of you the basics of what I know. This will be extremely in-depth and will feature quite a bit of C++ terminology.

What is C++?

It is based of the C language and offers object-oriented features not found in C.

Reasons C++ is useful

C++ is popular because of it's low-level mixtures obtained from C as well as it's high-level features. C++ can also be written on one type of computer and then ran on many other systems. (It will need to be recompiled, but it's essentially the same)

How it works

After you have written a C++ code, it enters the process of converting it to machine language. It begins by going through a preprocessor which reads the code. (This is where special lines of code are used, I.E. #include, #windows.h, etc.) After the code is modified, the compiler goes through the preprocessed code and translates it into machine language. (This is where syntax errors, wrongful use of operators and other problems arise). If everything checks out okay, the compiler stores the machine code, otherwise known as object code, into an object file.

Visual Representation

[img]<http://i.minus.com/jCUS88uvUY62Z.png>[/img]

Writing Your First Source Code

Since this is the beginning of C++, we will start out with simple C++ console code.

[img]<http://i.minus.com/ivE0UNrPp2Ex0.png>[/img]

Although the source is valid and produces no errors, notice how it looks terrible and hard to read? Well this is where we each have our own style of writing. For every person, the style of writing differs. However, it doesn't really matter how you write it unless you're doing a job in which other people will need to see and read your source code.

Below is an example of how I would write this same code.

[img]<http://i.minus.com/juYBn4ZcTOYhU.png>[/img]

When writing C++, spacing does not matter. The compiler basically ignores any white space unless quoted.

Now, to make the output look a bit more presentable, let's play with the code we've already written.

[img]<http://i.minus.com/iN6ZdxoAZJhHA.png>[/img]

Don't like reading? Watch the video below!!

Oh and I'm sick at the moment, so excuse whatever mistakes I make/my voice.

[Video: <http://www.youtube.com/watch?v=MKMqKNyX2tA>]

The next tutorial can be found [here](#).

Bvsed - December 31, 2011, 11:20 am

This is a very nice tutorial for people just starting out on C++. Keep up the good work :)

Han. - December 31, 2011, 11:45 am

Very nice tutorial.

However two things:

- 1) You shouldn't be using void main() it should be int main() as it returns an interger value.
- 2) You should have finished your code with return 0;

ryan? - December 31, 2011, 11:55 am

(Dec 31, 2011 12:45 PM)Heinz Wrote: [\[CITE\]](#) Very nice tutorial.

However two things:

- 1) You shouldn't be using void main() it should be int main() as it returns an interger value.
- 2) You should have finished your code with return 0;
 - 1) I'm not returning a value therefore void will work just fine.
 - 2) Because I use void, I don't have to have a return value, so return 0; is unnecessary and would cause errors. I also save like 2 bits of memory which is EXTREMELY important.
 - 3) If you read through my tutorial, I explain why void is okay to use while int isn't necessary for these purposes.

g4143 - December 31, 2011, 1:04 pm

Someone in their 4th semester of C++ shouldn't be making these rookie mistakes...Main returns an integer.

http://en.wikipedia.org/wiki/Main_function#C_and_C.2B.2B

Wow I had to check to be sure...This is your fourth semester in C++ in university? I thought with these rookie mistakes it would be your four semester in C++ junior high school.

Blackouti386 - December 31, 2011, 1:18 pm

(Dec 31, 2011 12:55 PM)Regios Wrote: [\[CITE\]](#) 1) I'm not returning a value therefore void will work

just fine.

2) Because I use void, I don't have to have a return value, so return 0; is unnecessary and would cause errors. I also save like 2 bits of memory which is EXTREMELY important.

3) If you read through my tutorial, I explain why void is okay to use while int isn't necessary for these purposes.

If I recall right the ISO standard for C++ states that typing the words "return 0" is optional, but I think the standard is to still use int for main. In fact I'm pretty sure they threaten to come after your family if you do not use an integer return type for main.

by the way, nice tutorial, stick with it.

ryan? - December 31, 2011, 1:38 pm

(Dec 31, 2011 02:04 PM)g4143 Wrote: [\[CITE\]](#) Someone in their 4th semester of C++ shouldn't be making these rookie mistakes...Main returns an integer.

http://en.wikipedia.org/wiki/Main_function#C_and_C.2B.2B

Wow I had to check to be sure...This is your fourth semester in C++ in university? I thought with these rookie mistakes it would be your four semester in C++ junior high school.

I don't understand why you come on my thread and bash it. I can see you've posted an AMAZING tutorial with NO mistakes. Even so, the use of void isn't a mistake. Like I said before, the function I used doesn't return a value. So rather than waste my time and put...

```
int main()
{
    cout << endl;
    return 0;
}
```

I can just do...

```
void main()
{
    cout << endl;
}
```

You say the function main always has a value? Then why is it that my code worked just fine with no errors?

I'm not an idiot and I know that using void in C++ is frowned upon, but it's called an into to programming meaning it encompasses all aspects that I think are necessary for MY thread. Please get out and don't post unless it's something useful.

(Dec 31, 2011 02:18 PM)Blackouti386 Wrote: [\[CITE\]](#) If I recall right the ISO standard for C++ states that typing the words "return 0" is optional, but I think the standard is to still use int for main. In fact I'm pretty sure they threaten to come after your family if you do not use an integer return type for main.

by the way, nice tutorial, stick with it.

Yeah, this was the only time I was going to use void. It was just to prove a point. If you listen to my video, I talk a bit about it. If I left out the fact returning a value was optional, then it wouldn't really be a full understanding of C++ basics. Thanks for your input though.

g4143 - December 31, 2011, 1:59 pm

(Dec 31, 2011 02:38 PM)Regios Wrote: [\[CITE\]](#) You say the function main always has a value? Then why is it that my code worked just fine with no errors?

I'm not an idiot and I know that using void in C++ is frowned upon, but it's called an into to programming meaning it encompasses all aspects that I think are necessary for MY thread. Please get out and don't post unless it's something useful.

To address your first point. Try compiling using ISO compliant settings on your compiler. Trust me, you'll get warnings and errors.

Your second and further points. I'm not sure if your an idiot but I do know your encouraging non-standard practices which is bad. If your going to put forth the effort to learn C++(or teach it) then do it correctly to promote a consistent language.

ryan? - December 31, 2011, 2:00 pm

(Dec 31, 2011 02:59 PM)g4143 Wrote: [\[CITE\]](#) To address your first point. Try compiling using ISO compliant settings on your compiler. Trust me, you'll get warnings and errors.

Your second and further points. I'm not sure if your an idiot but I do know your encouraging non-standard practices which is bad. If your going to put forth the effort to learn C++(or teach it) then do it correctly to promote a consistency.

So, rather than say that to begin with you start by insulting me and basically tell me I'm stupid?

g4143 - December 31, 2011, 2:08 pm

(Dec 31, 2011 03:00 PM)Regios Wrote: [\[CITE\]](#) So, rather than say that to begin with you start by insulting me and basically tell me I'm stupid?

No I never stated anything of the sort. I just noted that you should teach a consistent language and stay away from language extension that are only available on certain compilers.

ryan? - December 31, 2011, 2:08 pm

(Dec 31, 2011 03:08 PM)g4143 Wrote: [\[CITE\]](#) No I never stated anything of the sort. I just noted that you should teach a consistent language and stay away from language extension that are only available on certain compilers.

Thanks for your input, I'll keep it in mind for my next tutorial.

Grizzly™ - December 31, 2011, 7:25 pm

I think he should use the extensions local to his compiler if he is making a tutorial on that specific compiler, that being stated you should also state that other extensions if they were to use a different compiler. I code myself and I use void main(), due to it working on my compiler.

Mizz Blaise - December 31, 2011, 8:15 pm

@ Regios:

Keep making tutorials. Don't worry about ignorant members here on the forum. YOU are contributing useful information even if it is towards beginners. What are they doing? See my point. I'd like to see more tutorials on C++. Hopefully higher difficulty tutorials if you can. I try to read a few different materials on the same subject (ex: on for loops, on arrays, etc...) so I can get a complete understanding of it.

ryan? - December 31, 2011, 8:25 pm

(Dec 31, 2011 09:15 PM)Mizz Blaise Wrote: [\[CITE\]](#) @ Regios:

Keep making tutorials. Don't worry about ignorant members here on the forum. YOU are contributing useful information even if it is towards beginners. What are they doing? See my point. I'd like to see more tutorials on C++. Hopefully higher difficulty tutorials if you can. I try to read a few different materials on the same subject (ex: on for loops, on arrays, etc...) so I can get a complete understanding of it.

Yeah definitely, I'll go over them in my next tutorial. Thanks!

2me4u - January 7, 2012, 1:20 pm

nice beginner tutorial, keem 'em coming!

rootkit - January 7, 2012, 3:33 pm

Very detailed and HQ tutorial, this is really good for beginners.

But you should use `int main()` instead of `void main()`.

Penar - January 7, 2012, 6:08 pm

Sounds, great. Thanks.

Longer Message.

??????? - January 7, 2012, 9:39 pm

thank u man very much i read this tutorial and i take some note thanks

ryan? - January 7, 2012, 10:21 pm

(Jan 7, 2012 10:39 PM)? ? ? ? ? Wrote: [\[CITE\]](#) thank u man very much i read this tutorial and i take some note thanks

No problem, I'm glad you enjoyed. I'm actually in the process of finishing the second one. Look forward to it!

Sniped M8 - January 7, 2012, 10:27 pm

ye thanks i was getting into C++ recently

ryan? - January 14, 2012, 12:33 am

I just wanted to apologize for taking forever to put up the next tutorial. I've been super busy getting everything ready and traveling, I'm working on this right now as well as a few other tutorials so please be patient. Thanks for understanding!

Mizz Blaise - January 14, 2012, 6:33 pm

(Jan 14, 2012 01:33 AM)Regios Wrote: [\[CITE\]](#) I just wanted to apologize for taking forever to put up the next tutorial. I've been super busy getting everything ready and traveling, I'm working on this right now as well as a few other tutorials so please be patient. Thanks for understanding!

Estimated time of arrival?... ?

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Estimated time of arrival?... ?

d4rkj4y - January 14, 2012, 7:22 pm

Why don't you include what IDE to use, such as code::blocks or microsoft visual C++?

Ohh, if you use code::blocks and the minGW compiler, `void main()` will not work, as it is not standard C++ practise to use `void main()`.

ryan? - January 15, 2012, 3:13 pm

Went ahead and posted the next tutorial. I'll start working on the third tomorrow. Updated OP with link.

BigDomePiece - January 15, 2012, 3:44 pm

Very detailed, and discriptive, I'll probably use this, Keep up the great work and son't stop making these.

Triangle - January 15, 2012, 10:08 pm

(Dec 31, 2011 03:08 PM)g4143 Wrote: [\[CITE\]](#) No I never stated anything of the sort. I just noted that you should teach a consistent language and stay away from language extension that are only available on certain compilers.

^ People like you ruin the "computer" ^

<https://hackforums.net/member.php?action=profile&uid=1103896> Yeah This Will Seriously Benefit People who Are unknown Too Win32 viruses

Haa I have So Many Tutorials From My CISI Classes!!!

ryan? - January 16, 2012, 1:31 am

(Jan 15, 2012 11:08 PM)Sk33t3r Wrote: [\[CITE\]](#) ^ People like you ruin the "computer" ^

<https://hackforums.net/member.php?action=profile&uid=1103896> Yeah This Will Seriously Benefit People who Are unknown Too Win32 viruses

Haa I have So Many Tutorials From My CISI Classes!!!

I'm going to be honest with you, I have NO clue what the fuck you just said, but thank you. ?

Xyled - January 16, 2012, 2:40 am

I actually learned some C++

Thanks for this man.

sanoonas - January 16, 2012, 11:20 am

So, this is most likely something stupid, but when i run in, it pops up and goes back down, and in the bottom box it says stuff about not being able to find the pbd files?

Thanks to any help.

ryan? - January 16, 2012, 11:22 am

(Jan 16, 2012 12:20 PM)sanoonas Wrote: [\[CITE\]](#) So, this is most likely something stupid, but when i run in, it pops up and goes back down, and in the bottom box it says stuff about not being able to find the pbd files?

Thanks to any help.

What program are you using? I forgot to mention, but one of the nice things about MVS is that it'll pause the console for you, but on other programs you actually have to put the pause in yourself.

sanoonas - January 16, 2012, 2:42 pm

(Jan 16, 2012 12:22 PM)Regios Wrote: [\[CITE\]](#) What program are you using? I forgot to mention, but one of the nice things about MVS is that it'll pause the console for you, but on other programs you actually have to put the pause in yourself.

im using exactly what your using, visual studio 10, use the first option as a new project, and then i hit the add new file C++.

So, i don't know whats going wrong >.<

ryan? - January 16, 2012, 2:54 pm

(Jan 16, 2012 03:42 PM)sanoonas Wrote: [\[CITE\]](#) im using exactly what your using, visual studio 10, use the first option as a new project, and then i hit the add new file C++.

So, i don't know whats going wrong >.<

Do you have TeamViewer? You can try watching the YouTube video and follow exactly what I do. Make sure all your file locations are in the correct place as well.

sanoonas - January 16, 2012, 3:27 pm

Yea i have teamviewer, and i did watch the video.

Sports. - January 16, 2012, 3:59 pm

(Jan 16, 2012 12:20 PM)sanoonas Wrote: [\[CITE\]](#) So, this is most likely something stupid, but when i run in, it pops up and goes back down, and in the bottom box it says stuff about not being able to find the pbd files?

Thanks to any help.

I am having the same exact problem, also I have teamviewer

ryan? - January 16, 2012, 4:23 pm

For those of you encountering the problem, send me a PM with your Skype (or TeamViewer info if I'm online) and I'll be glad to help you out.

Clitcoin - January 25, 2012, 8:17 pm

Hey guy's was having this problem too, you know to save and close VS and run VS as administrator, It's because your running a win32 application on windows 7 and you need administrator privileges to access the WoW64 folder in your system files I'M PRETTY SURE... Lol

BTW, Very nice tut Regios would +rep but.... yeah lol

ryan? - January 25, 2012, 8:42 pm

(Jan 25, 2012 09:17 PM)lanrunzu Wrote: [\[CITE\]](#) Hey guy's was having this problem too, you know to save and close VS and run VS as administrator, It's because your running a win32 application on windows 7 and you need administrator privileges to access the WoW64 folder in your system files I'M PRETTY SURE... Lol

BTW, Very nice tut Regios would +rep but.... yeah lol

Lol, no worries I didn't make this for rep. I'm glad you found out how to fix your problem!

magaitinamu - January 25, 2012, 9:42 pm

Great 1st lesson mate.

I don't know anything about programming, and thanks to your tutorial, I have!

Please keep up the good work and keep the tutorials coming! GREAT WORK!

Thanks also to G4143 for the constructive criticism. It makes sense to do things the right way, but if you know why it was done in the other "particular" way then you'll realise that it's OK!

Thank you!

ryan? - June 13, 2012, 10:14 pm

Sorry, about completely stopping with these tutorials. I had a load of personal problems I had to deal with, but I guess I'm back now. Would you guys like me to keep going with these tutorials or should I just close them and leave them for whoever?