

# C++ dasturlash tili.

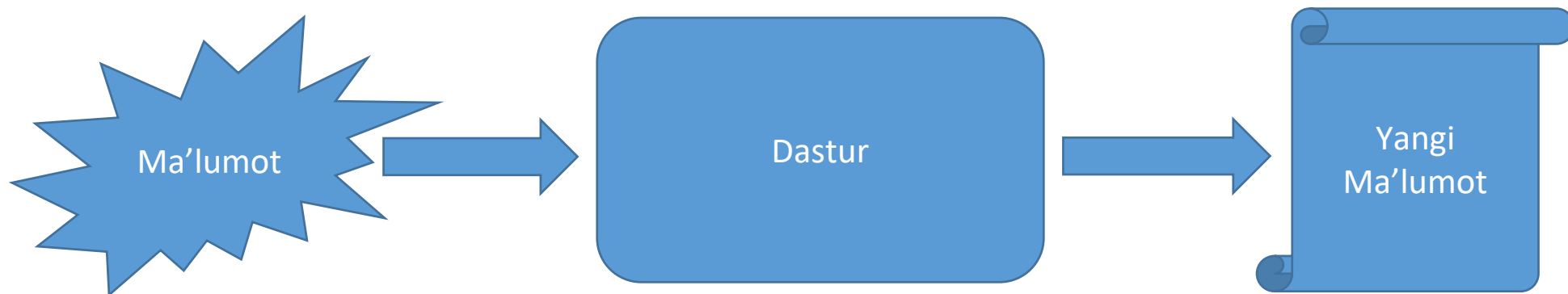
## Dasturlash muhitini sozlash

# Reja:

- Dasturlash haqida
- Dasturlash tillari haqida
- C++ dasturlash tili
- GNU GCC kompilatorini o'rnatish
- Codeblocks ishchi muhitini o'rnatish
- Izohlar

**Dastur nima?**

# Dastur



Kompyuter va boshqa axborot texnologiyalari qurilmalari uchun dastur tuzish jarayoni **dasturlash** deb ataladi.

**Dasturlash tili** – bu dasturchi va kompyuter o'rtasidagi muloqot vositasi hisoblanadi.



Dasturlash tillari 2 ta katta guruhlarga bo'linadi:

- Quyi darajali
- Yuqori darajali



**Quyi darajadagi** dasturlash tillari kompyuter qurilmalari bilan bevosita bogʻliq boʻlib, buyruqlar maxsus raqamlar (kodlar) yordamida yoziladi.



ENIAC – Birinchi EHM

**Yuqori darajali** dasturlash tillaridagi ko'rsatmalar inson tiliga yaqin bo'lgan so'zlar majmuidan iborat.

Bu tilda tuzilgan dasturlarni **translyatorlar** deb nomlanuvchi maxsus dasturlar kompyuterlar bajara olishi uchun raqamli ko'rinishga o'tkazib beradi.



python™



Java™



php



JavaScript

C++



Ruby



Scala



node.js™

C#

# C++

C++ - bu C tilining  
kengaytmasi sifatida  
Bjarne Stroustrup  
tomonidan ishlab  
chiqilgan dasturlash  
tili.



## Summary Table of history of various C++ versions:

Version	Release Date	Major changes
C++98 (ISO/IEC 14882:1998)	October 1998	The first version
C++03 (ISO/IEC 14882:2003)	February 2003	Introduction of value initialization.
C++11	August 2011	Introduction of Lambda Expressions, Delegating Constructors, Uniform Initialization Syntax, nullptr, Automatic Type Deduction and decltype, Rvalue References etc.
C++14	August 2014	Introduction of polymorphic lambdas, digit separators, generalized lambda capture, variable templates, binary integer literals, quoted strings etc.
C++17	December 2017	Introduction of fold expressions, hexadecimal floating point literals, a u8 character literal, selection statements with initializer, inline variables etc.
C++20	2020-2021	Upcoming release



## Features of C++

Object-Oriented  
Programming

Machine  
Independent

Simple

High-Level  
Language

Popular

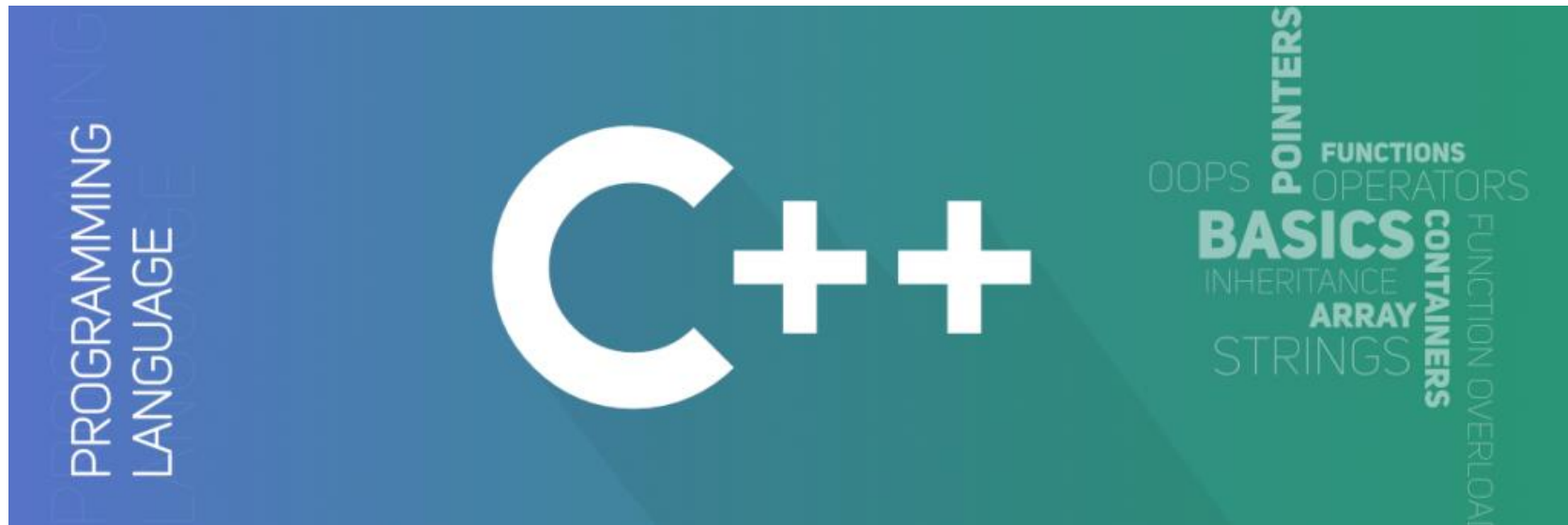
Case-sensitive

Compiler Based

Dynamic Memory  
Allocation

Existence of  
Libraries

Speed



C++ dasturchilarga tizim resurslari va xotirani yuqori darajada boshqarish imkoniyatini beradi.



**Compiler nima?**

**Compiler / interpretator** - dastur kodini ikkilik kodga (mashina tiliga) aylantiradigan vosita (dasturiy ta'minot).



Source Code



Compile





Machine Code

# C++ ni install qilish


mingw



 [Bce](#)

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 [Картинки](#)

 [Новости](#)


 [Книги](#)

 [Ещё](#)

[Настройки](#)

[Инструменты](#)

Результатов: примерно 2 760 000 (0,60 сек.)

<https://sourceforge.net/projects/>  [Перевести эту страницу](#)

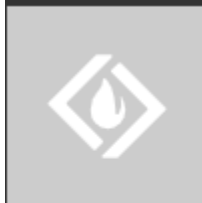
## MinGW - Minimalist GNU for Windows download ...

**MinGW:** A native Windows port of the GNU Compiler Collection (GCC), with freely distributable import libraries and header files for building native Windows applications; includes extensions to the MSVC runtime to support C99 functionality. All of **MinGW's** software will execute on the 64bit Windows platforms.

★★★★★ Рейтинг: 4,1 · 156 голосов · Бесплатно · Windows · Инструменты и утилиты

[Browse /Installer](#) · [MinGW](#) · [Files](#) · [Mingw-get](#)

[Home](#) / [Browse](#) / [Development](#) / [Build Tools](#) / MinGW - Minimalist GNU for Windows



# MinGW - Minimalist GNU for Windows

A native Windows port of the GNU Compiler Collection (GCC)

Brought to you by: [cstrauss](#), [earnie](#), [gressett](#), [keithmarshall](#)



156 Reviews

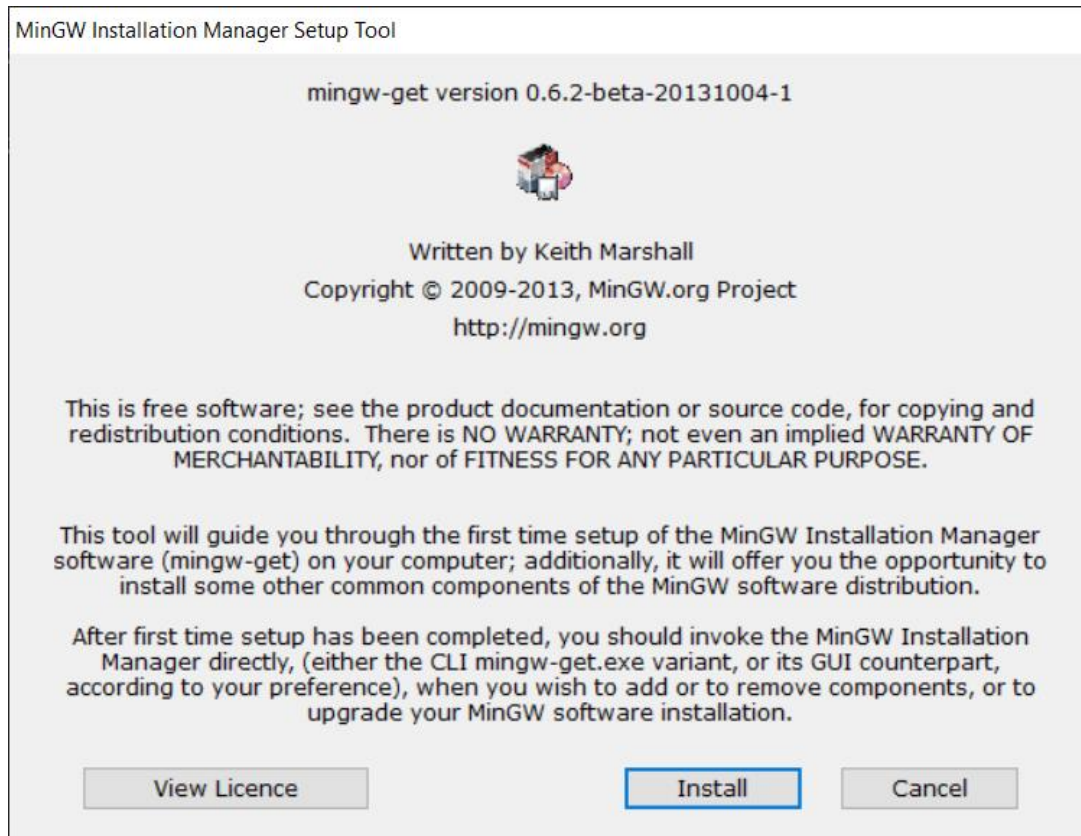
**Downloads:** 2,531,599 This Week



Get Updates

Share This

Windows





mingw-get version 0.6.2-beta-20131004-1



## Step 1: Specify Installation Preferences

## Installation Directory

C:\MinGW

Change

If you elect to change this, you are advised to avoid any choice of directory which includes white space within the absolute representation of its path name.

## User Interface Options

Both command line and graphical options are available. The command line interface is always supported; the alternative only if you choose the following option to ...

☒ ... also install support for the graphical user interface.

Program shortcuts for launching the graphical user interface should be installed ...

☒ ... just for me (the current user), or ... ☐ ... for all users \* ...

☒ ... in the start menu, and/or ... ☒ ... on the desktop.

\* selection of this option requires administrative privilege.

View Licence

Continue

Cancel



## MinGW Installation Manager Setup Tool

mingw-get version 0.6.2-beta-20131004-1



## Step 2: Download and Set Up MinGW Installation Manager

## Download Progress

Updating catalogue: mingw32-mpfr.xml

Processed 26

of

38 items

:

68 %

## Details

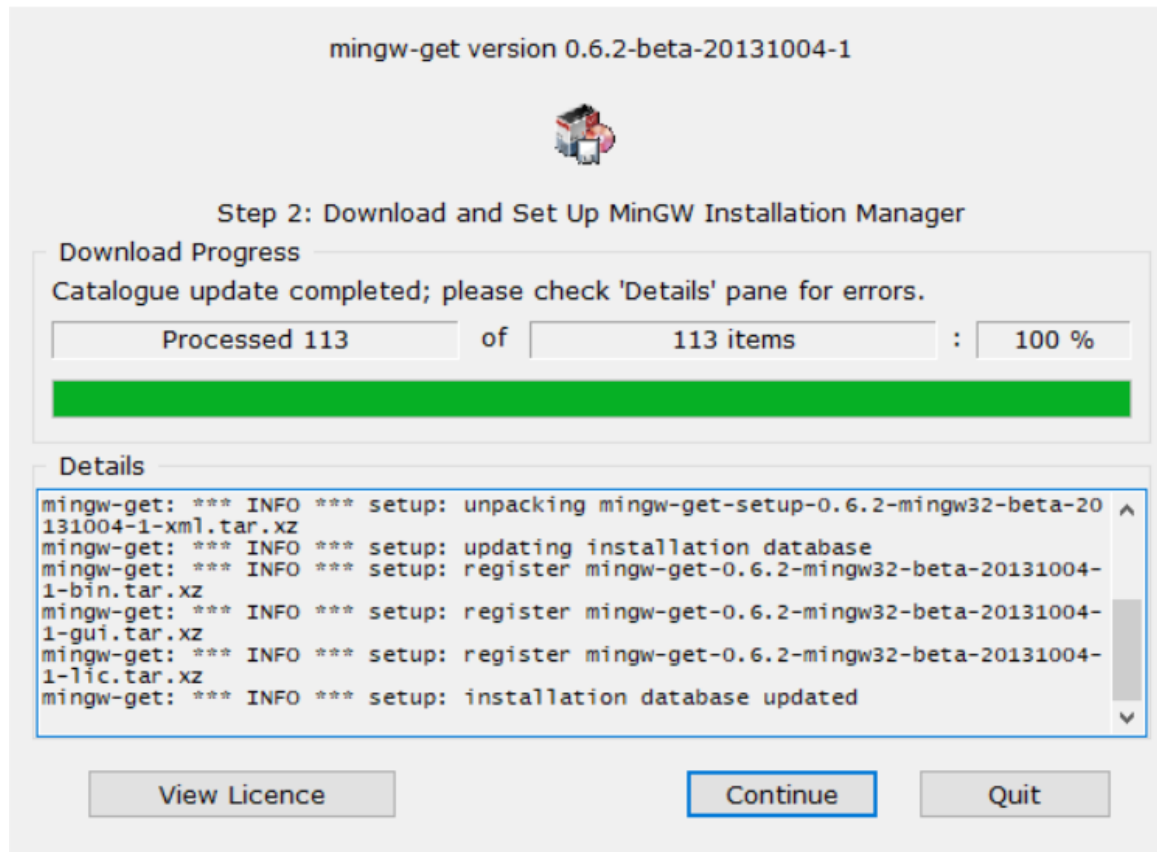
```
mingw-get: *** INFO *** setup: unpacking mingw-get-setup-0.6.2-mingw32-beta-20131004-1-xml.tar.xz
mingw-get: *** INFO *** setup: updating installation database
mingw-get: *** INFO *** setup: register mingw-get-0.6.2-mingw32-beta-20131004-1-bin.tar.xz
mingw-get: *** INFO *** setup: register mingw-get-0.6.2-mingw32-beta-20131004-1-gui.tar.xz
mingw-get: *** INFO *** setup: register mingw-get-0.6.2-mingw32-beta-20131004-1-lic.tar.xz
mingw-get: *** INFO *** setup: installation database updated
```

View Licence

Continue

Quit

## MinGW Installation Manager Setup Tool



MinGW Installation Manager

Installation Package Settings Help

Basic Setup  
All Packages

Package	Class	Installed Version	Repository Version	Description
<input type="checkbox"/> mingw-developer-toolkit	bin		2013072300	An MSYS Installation for MinGW Developers (meta)
<input type="checkbox"/> mingw32-base	bin		2013072200	A Basic MinGW Installation
<input type="checkbox"/> mingw32-gcc-ada	bin		6.3.0-1	The GNU Ada Compiler
<input type="checkbox"/> mingw32-gcc-fortran	bin		6.3.0-1	The GNU FORTRAN Compiler
<input type="checkbox"/> mingw32-gcc-g++	bin		6.3.0-1	The GNU C++ Compiler
<input type="checkbox"/> mingw32-gcc-objc	bin		6.3.0-1	The GNU Objective-C Compiler
<input type="checkbox"/> msys-base	bin		2013072300	A Basic MSYS Installation (meta)

General

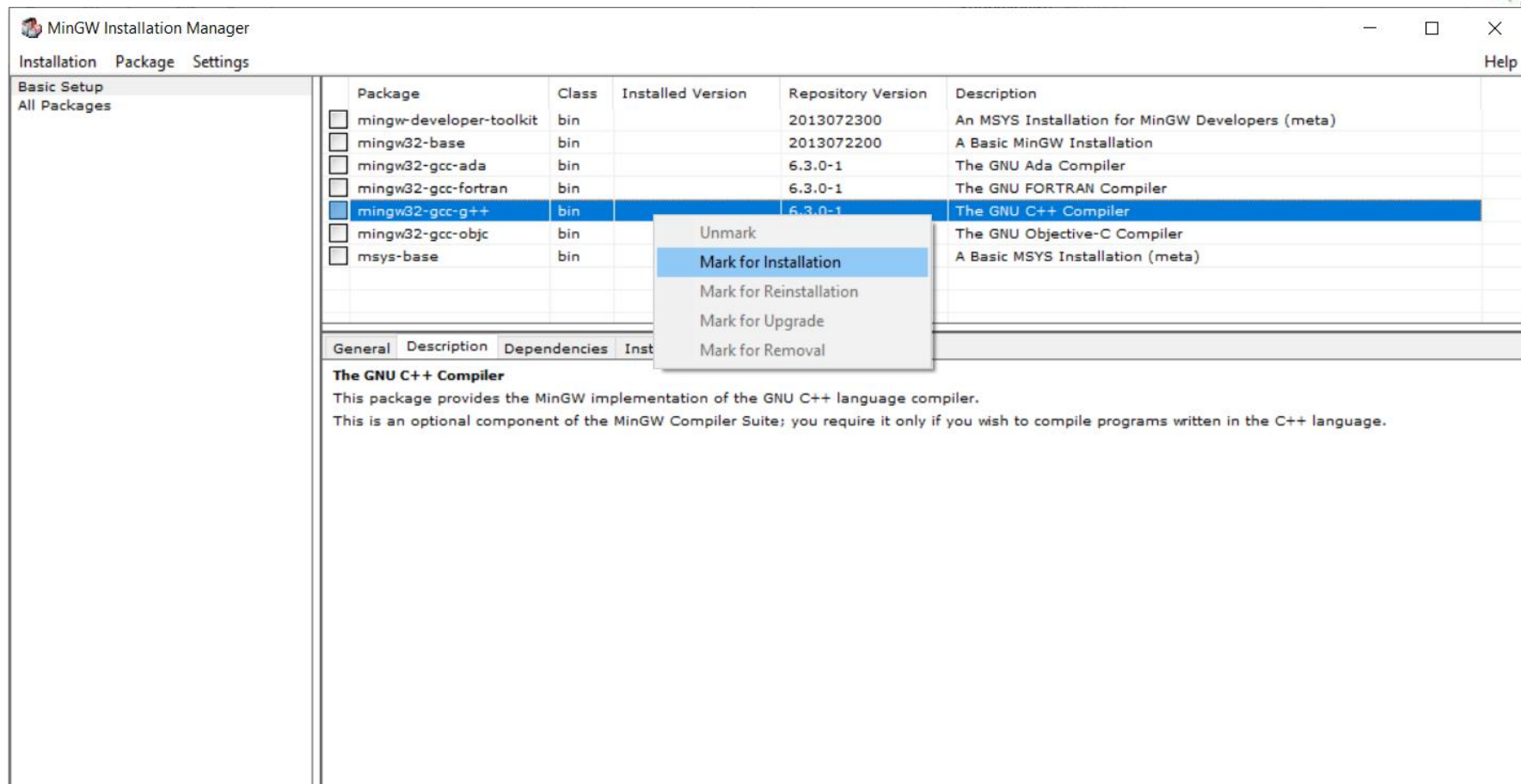
Description

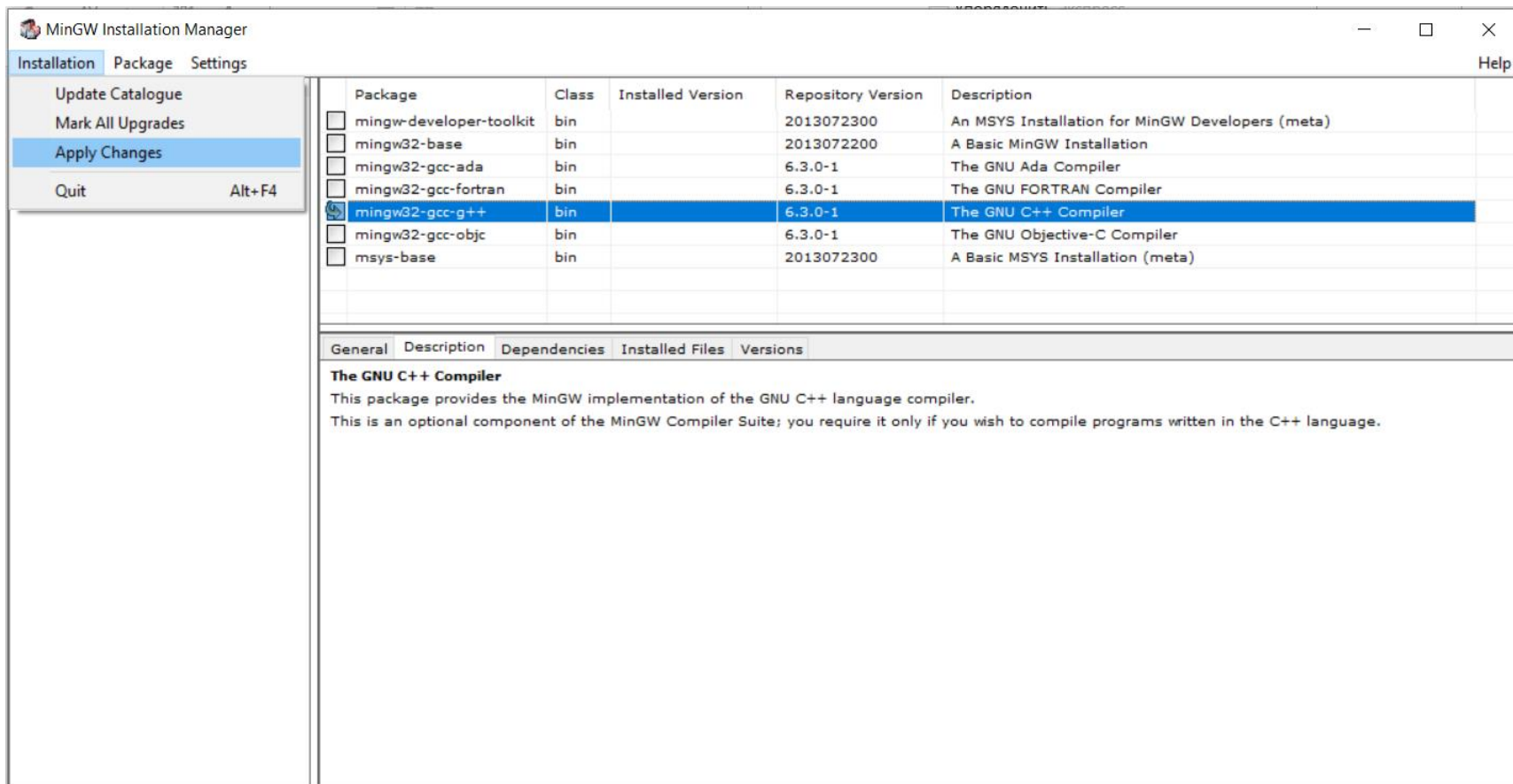
Dependencies

Installed Files

Versions

No package selected.  
Please select a package from the list above, to view related data.





## Schedule of Pending Actions

Okay to proceed?

The package changes itemised below will be implemented when you choose "Apply"

Apply

Defer

Discard

0 installed packages will be removed

0 installed packages will be upgraded

114 new/upgraded packages will be installed

msysCORE-1.0.19-1-msys-1.0.19-doc.tar.xz  
termcap-0.20050421\_1-2-msys-1.0.13-bin.tar.lzma  
libguile-1.8.7-2-msys-1.0.15-rtm.tar.lzma  
libregex-1.20090805-2-msys-1.0.13-dll-1.tar.lzma  
libtermcap-0.20050421\_1-2-msys-1.0.13-dll-0.tar.lzma  
libpopt-1.15-2-msys-1.0.13-dll-0.tar.lzma



Download Package

msysCORE-1.0.19-1-msys-1.0.19-bin.tar.xz

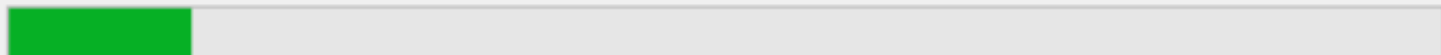
480.00 kB

of

615.50 kB

:

77 %



## Applying Scheduled Changes

All changes were applied successfully; you may now close this dialogue.

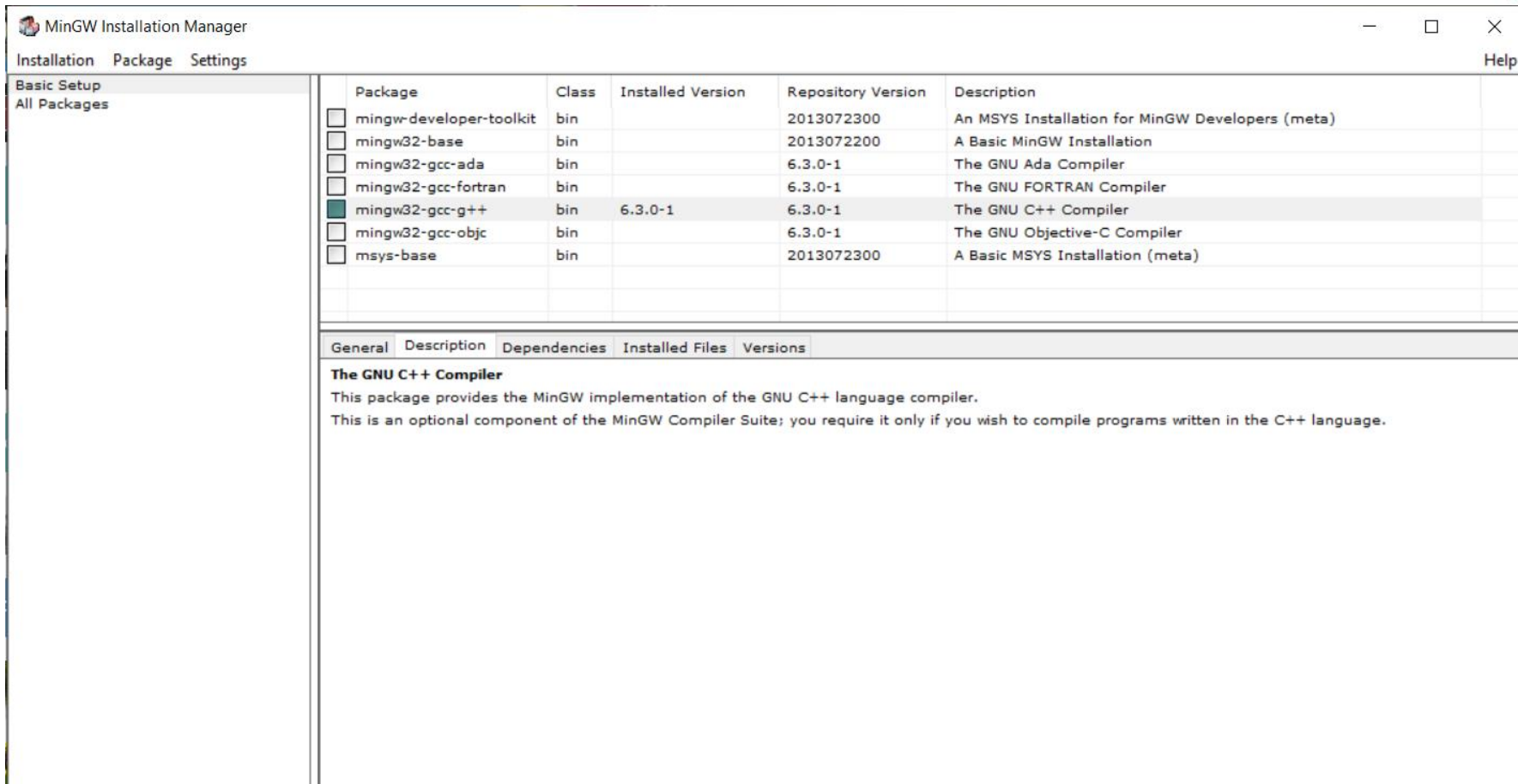
☐ Close dialogue automatically, when activity is complete.

Close

## Details

```
install: w32api-5.0.2-mingw32-dev.tar.xz
installing w32api-5.0.2-mingw32-dev.tar.xz
install: mingwrt-5.0.2-mingw32-dev.tar.xz
installing mingwrt-5.0.2-mingw32-dev.tar.xz
install: binutils-2.28-1-mingw32-bin.tar.xz
installing binutils-2.28-1-mingw32-bin.tar.xz
install: libatomic-6.3.0-1-mingw32-dll-1.tar.xz
installing libatomic-6.3.0-1-mingw32-dll-1.tar.xz
install: libz-1.2.8-1-mingw32-dll-1.tar
installing libz-1.2.8-1-mingw32-dll-1.tar
install: gdb-7.6.1-1-mingw32-bin.tar.lzma
installing gdb-7.6.1-1-mingw32-bin.tar.lzma
install: make-3.82.90-2-mingw32-cvs-20120902-bin.tar.lzma
installing make-3.82.90-2-mingw32-cvs-20120902-bin.tar.lzma
install: gcc-6.3.0-1-mingw32-lic.tar.xz
installing gcc-6.3.0-1-mingw32-lic.tar.xz
install: gcc-core-6.3.0-1-mingw32-bin.tar.xz
installing gcc-core-6.3.0-1-mingw32-bin.tar.xz
install: mingw32-base-2013072200-mingw32-bin.meta
installing mingw32-base-2013072200-mingw32-bin.meta
install: gcc-c++-4.8.2-mingw32-dev.tar.meta
installing gcc-c++-4.8.2-mingw32-dev.tar.meta
install: gcc-c++-6.3.0-1-mingw32-bin.tar.xz
installing gcc-c++-6.3.0-1-mingw32-bin.tar.xz
```





MinGW Installation Manager

Installation Package Settings Help

Basic Setup  
All Packages

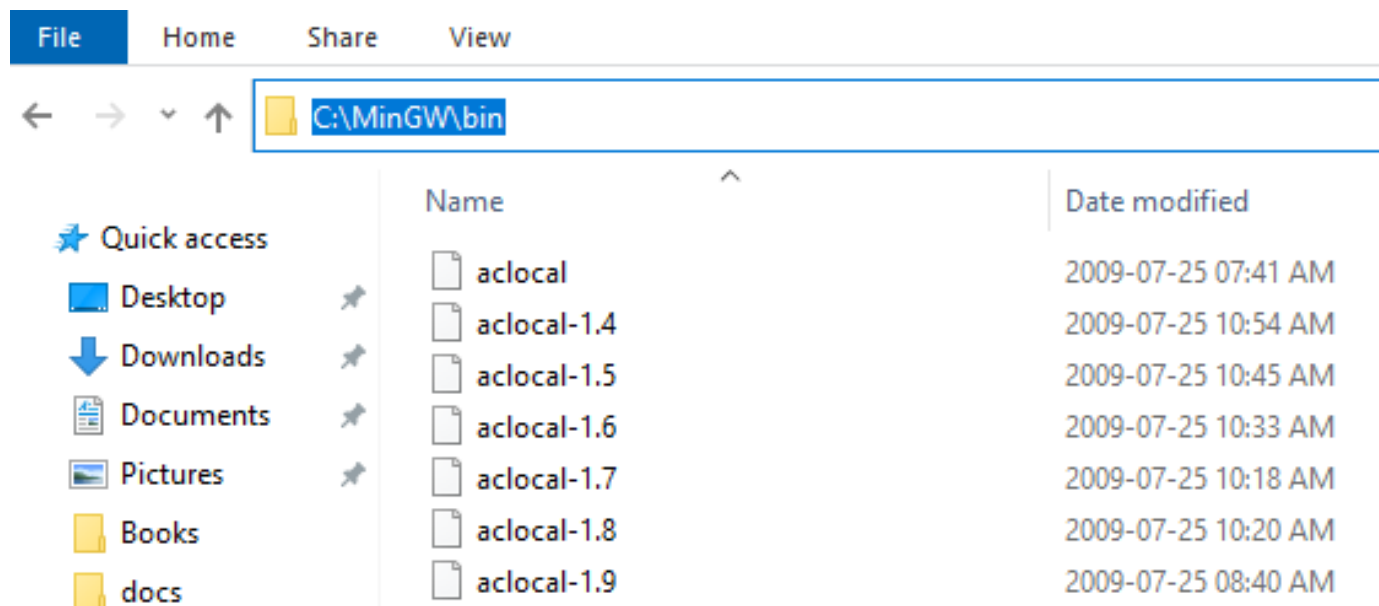
Package	Class	Installed Version	Repository Version	Description
<input type="checkbox"/> mingw-developer-toolkit	bin		2013072300	An MSYS Installation for MinGW Developers (meta)
<input type="checkbox"/> mingw32-base	bin		2013072200	A Basic MinGW Installation
<input type="checkbox"/> mingw32-gcc-ada	bin		6.3.0-1	The GNU Ada Compiler
<input type="checkbox"/> mingw32-gcc-fortran	bin		6.3.0-1	The GNU FORTRAN Compiler
<input checked="" type="checkbox"/> mingw32-gcc-g++	bin	6.3.0-1	6.3.0-1	The GNU C++ Compiler
<input type="checkbox"/> mingw32-gcc-objc	bin		6.3.0-1	The GNU Objective-C Compiler
<input type="checkbox"/> msys-base	bin		2013072300	A Basic MSYS Installation (meta)

General Description Dependencies Installed Files Versions

**The GNU C++ Compiler**

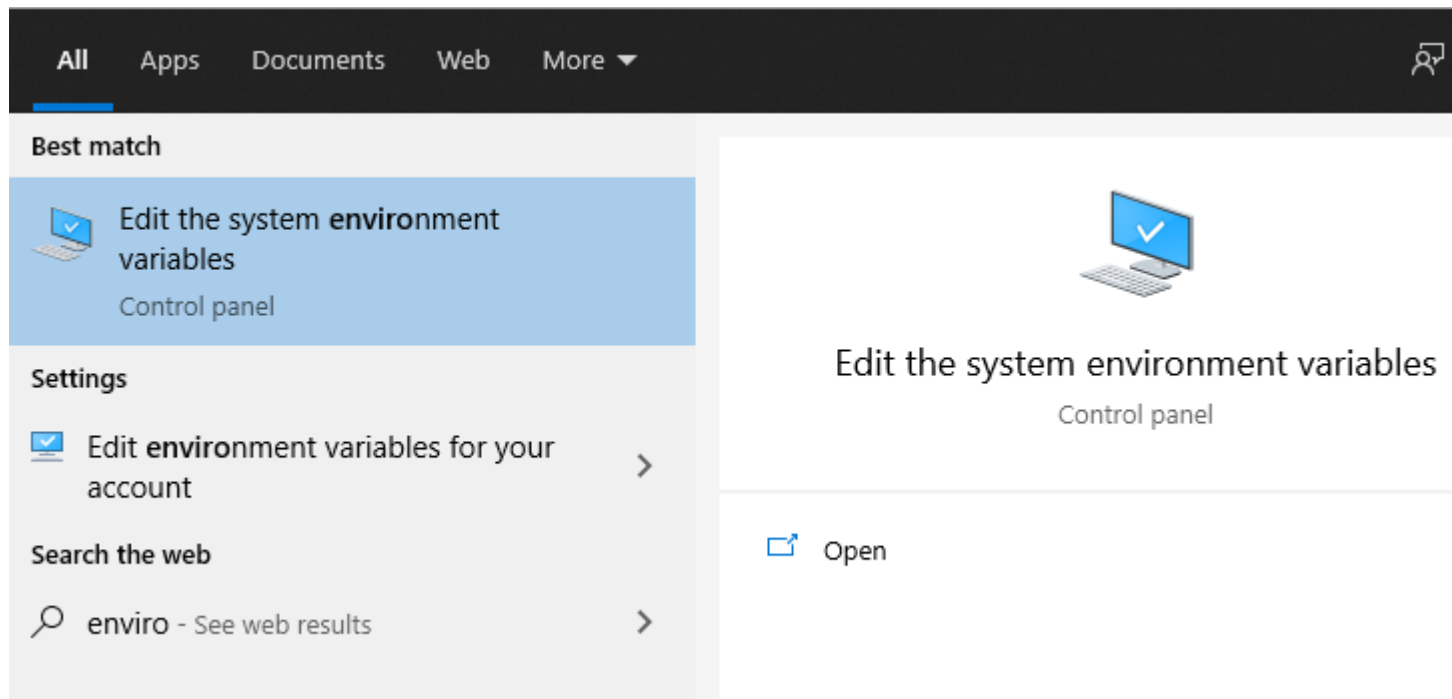
This package provides the MinGW implementation of the GNU C++ language compiler.

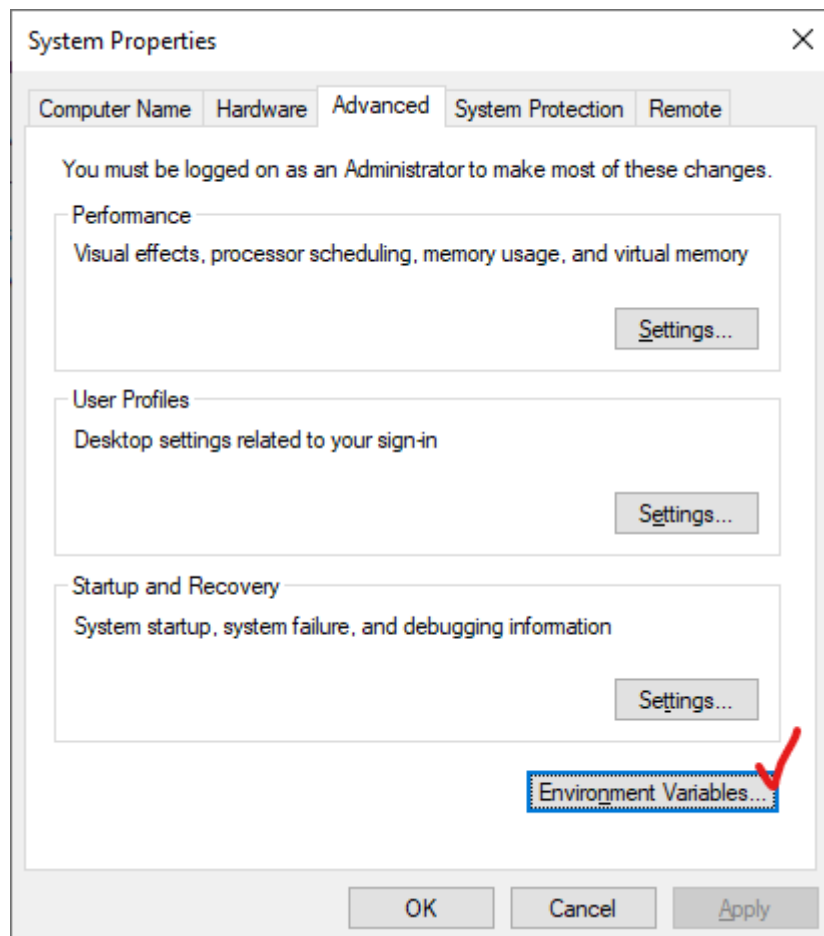
This is an optional component of the MinGW Compiler Suite; you require it only if you wish to compile programs written in the C++ language.

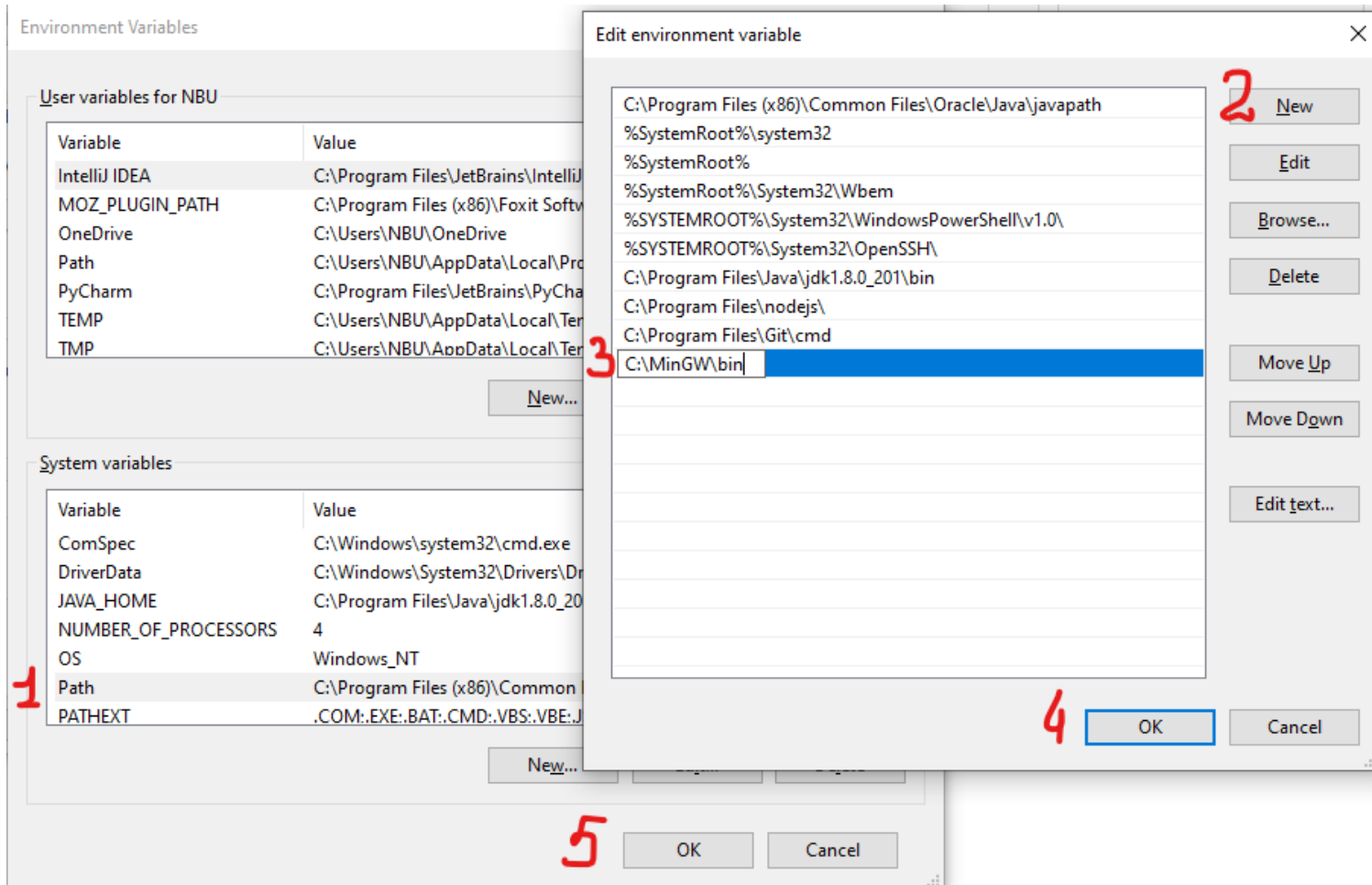


The screenshot shows a Windows File Explorer window with the address bar set to `C:\MinGW\bin`. The left sidebar displays the 'Quick access' section with links to Desktop, Downloads, Documents, Pictures, Books, and docs. The main pane shows a list of files with columns for Name and Date modified.

Name	Date modified
aclocal	2009-07-25 07:41 AM
aclocal-1.4	2009-07-25 10:54 AM
aclocal-1.5	2009-07-25 10:45 AM
aclocal-1.6	2009-07-25 10:33 AM
aclocal-1.7	2009-07-25 10:18 AM
aclocal-1.8	2009-07-25 10:20 AM
aclocal-1.9	2009-07-25 08:40 AM








# g++ --version

Administrator: Command Prompt

Microsoft Windows [Version 10.0.19041.985]  
(c) Microsoft Corporation. All rights reserved.

```
C:\Users\NBU>g++ --version
g++ (MinGW.org GCC-6.3.0-1) 6.3.0
Copyright (C) 2016 Free Software Foundation, Inc.
This is free software; see the source for copying conditions. There is NO
warranty; not even for MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
```


# Birinchi C++ dasturimizni yozamiz

 \*hello - NotepadFile Edit Format View Help

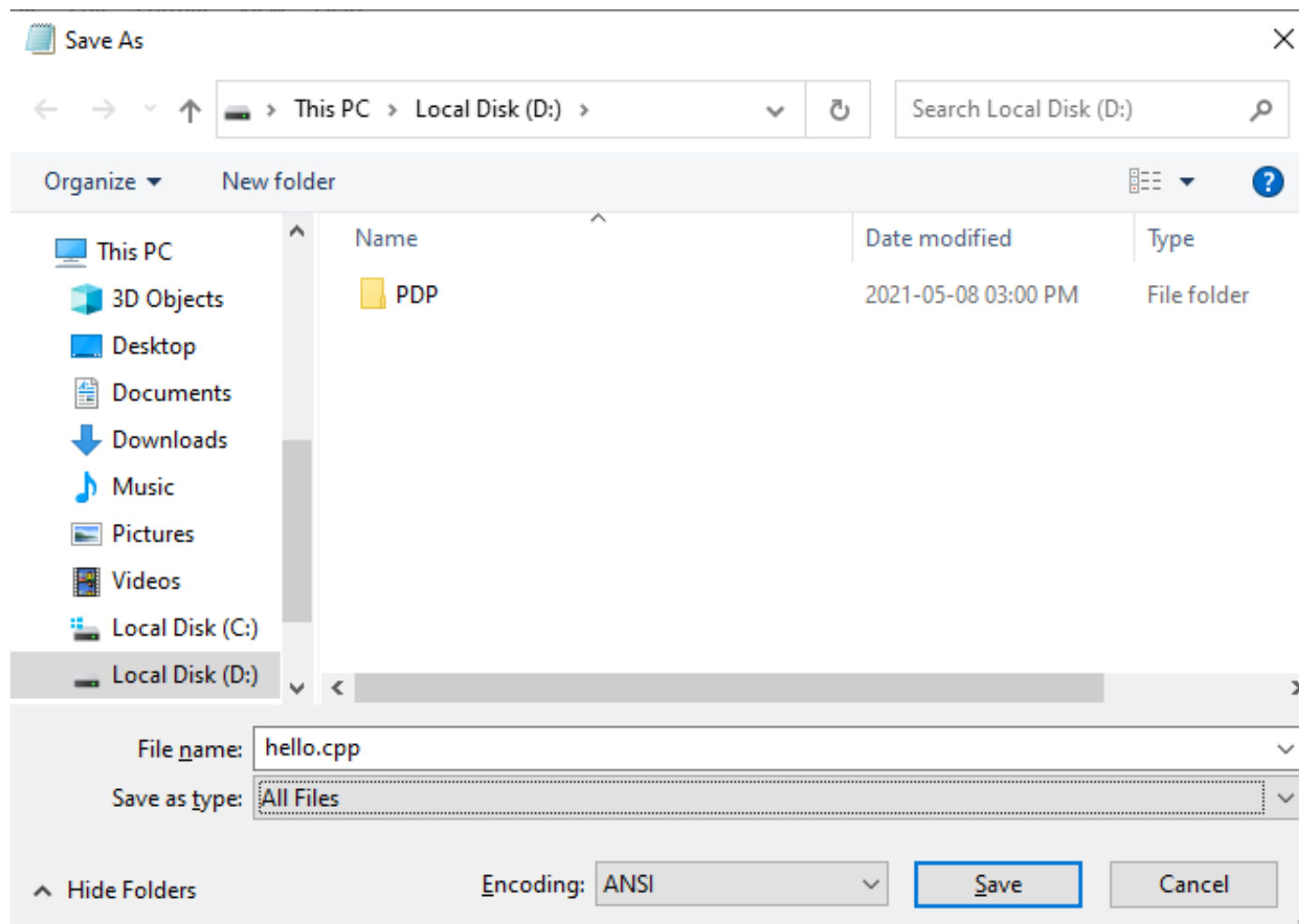
```
#include<iostream>
```

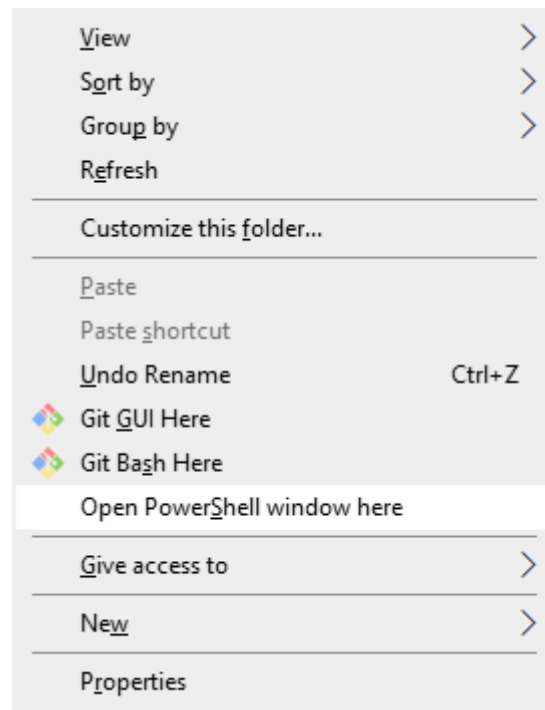
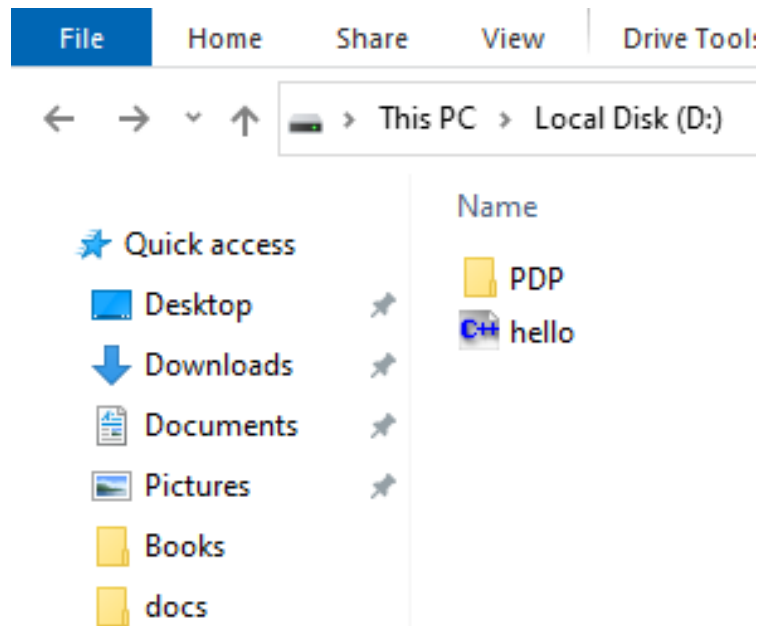
```
using namespace std;
```

```
int main(){  
    cout<<"Hello World!";  
    return 0;  
}
```




 \*hello - NotepadFile Edit Format View HelpNew Ctrl+NNew Window Ctrl+Shift+NOpen... Ctrl+OSave Ctrl+SSave As... Ctrl+Shift+SPage Setup...Print... Ctrl+PExit








This PC &gt; Local Disk (D:) &gt;

Name	Date modified	Type	Size
 PDP	2021-05-08 03:00 PM	File folder	
 hello	2021-05-20 05:24 PM	C++ source file	1 KB
 a	2021-05-20 05:27 PM	Application	44 KB

 Administrator: Windows PowerShell  
PS D:\> g++ hello.cpp  
PS D:\> \_

Bu yerda: a faylni ishga tushiramiz.

 hello - Notepad

File Edit Format View Help






---


```
#include<iostream>
#include<stdlib.h>
```

```
using namespace std;
```

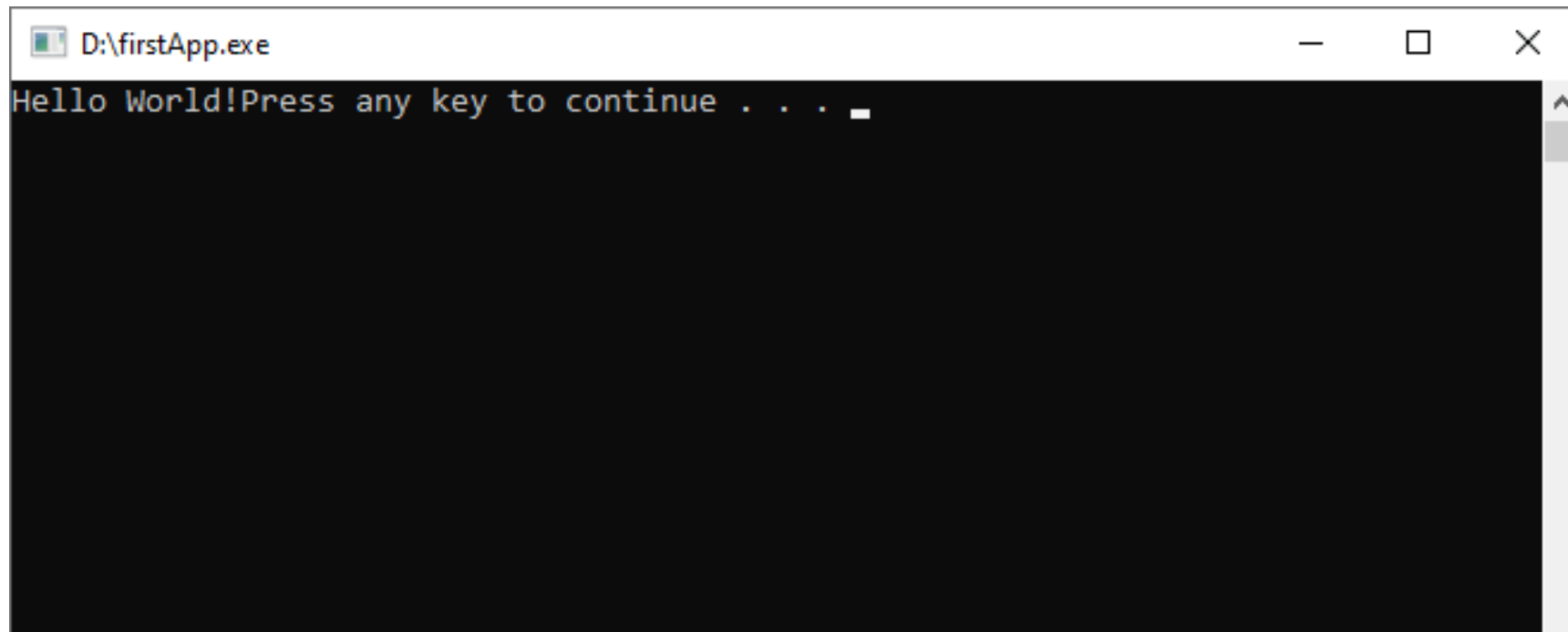
```
int main(){
    cout<<"Hello World!";
    system("pause");
    return 0;
}
```

This PC &gt; Local Disk (D:) &gt;

Name	Date modified	Type	Size
 PDP	2021-05-08 03:00 PM	File folder	
 hello2	2021-05-20 05:32 PM	C++ source file	1 KB
 hello	2021-05-20 05:32 PM	C++ source file	1 KB
 a	2021-05-20 05:34 PM	Application	44 KB
 firstApp	2021-05-20 05:35 PM	Application	44 KB

 Administrator: Windows PowerShell

```
PS D:\> g++ hello2.cpp -o firstApp
PS D:\> _
```



```
D:\firstApp.exe
Hello World!Press any key to continue . . . _
```



Tabriklaymiz! Siz birinchi C++  
dasturingizni yozdingiz.



**IDE nima?**

***IDE (Integrated development environment)*** - integratsiyalashgan rivojlanish muhiti, dasturiy ta'minotni yaratish uchun ishlatiladigan dasturdir.

Dev C++, Code::Blocks , Visual Studio, C free lar C++ dasturlash tili uchun IDE lar hisoblanadi .

# IDE ni o'rnatish

<https://www.codeblocks.org> ▼

## Code::Blocks

The free C/C++ and Fortran IDE. Code::Blocks is a free C/C++ and Fortran IDE built to meet the most demanding needs of its users. It is designed to be very ...

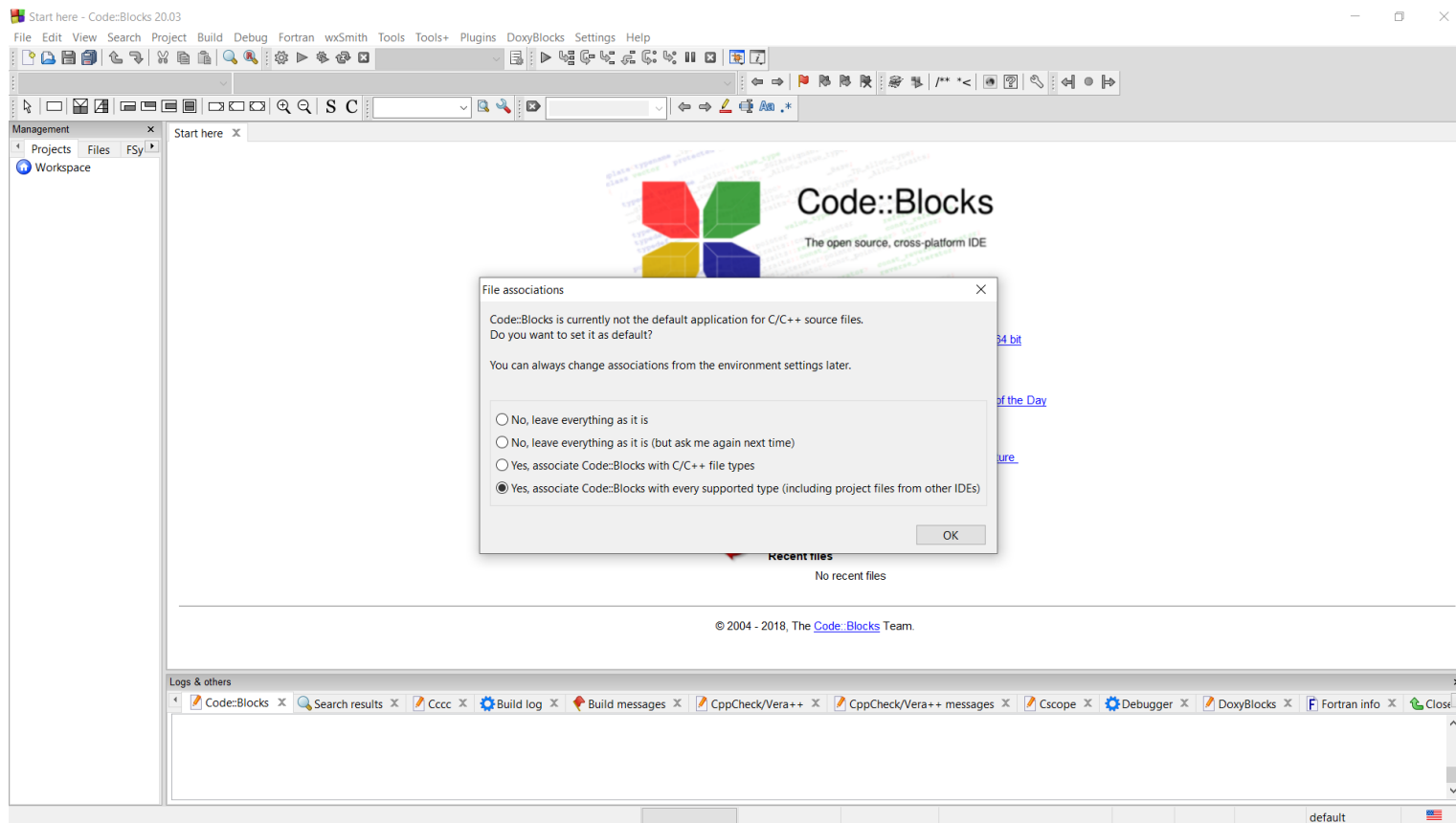
### Binary releases

Windows XP / Vista / 7 / 8.x / 10;  
Linux 32 and 64-bit; Mac OS X.

### Source code

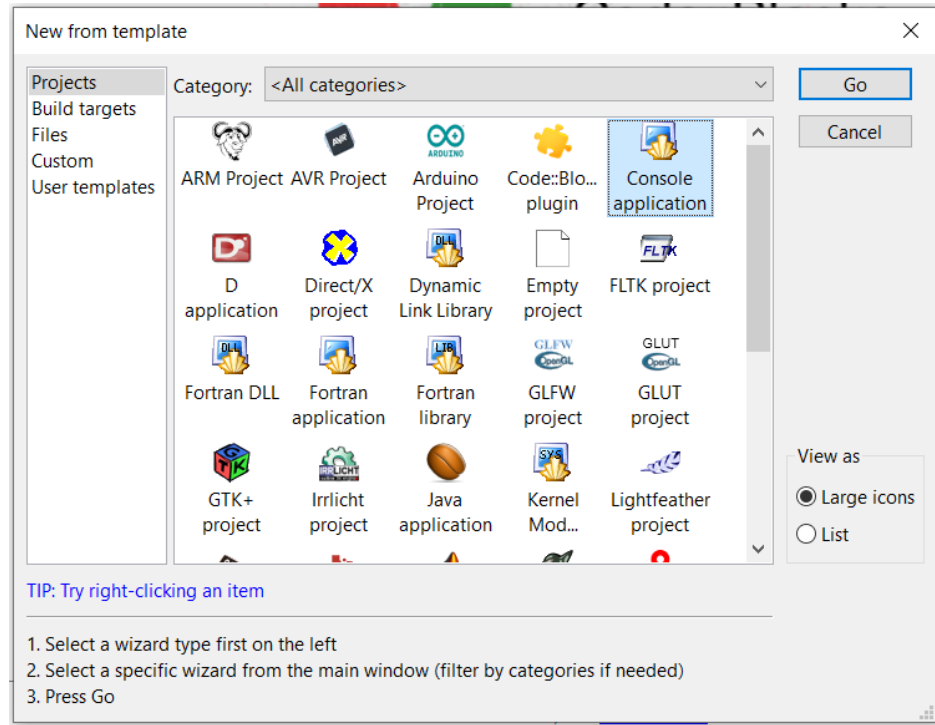
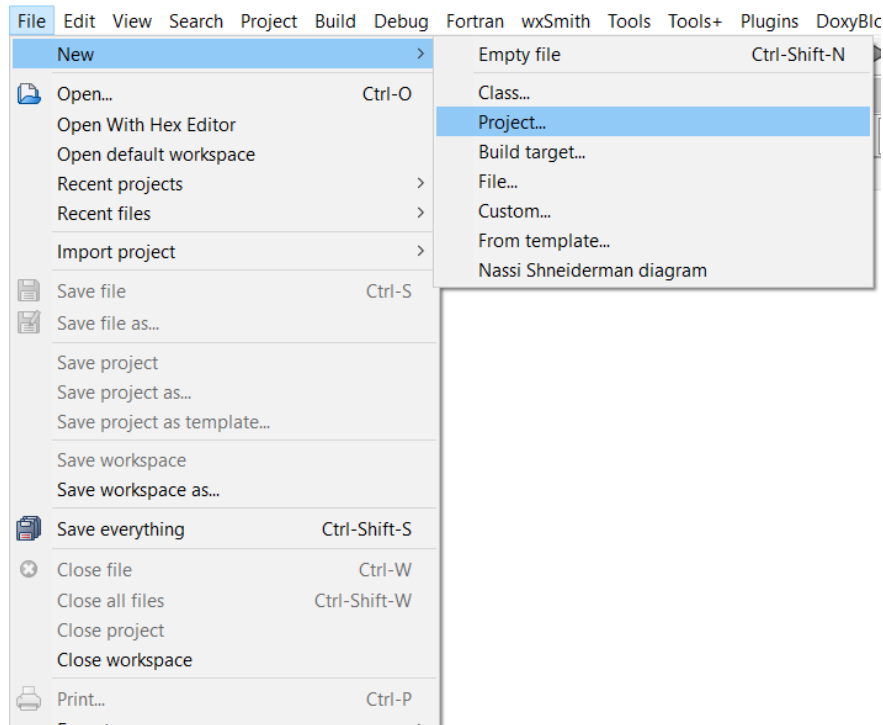
If you want to download the source  
code of Code::Blocks 20.03 ...

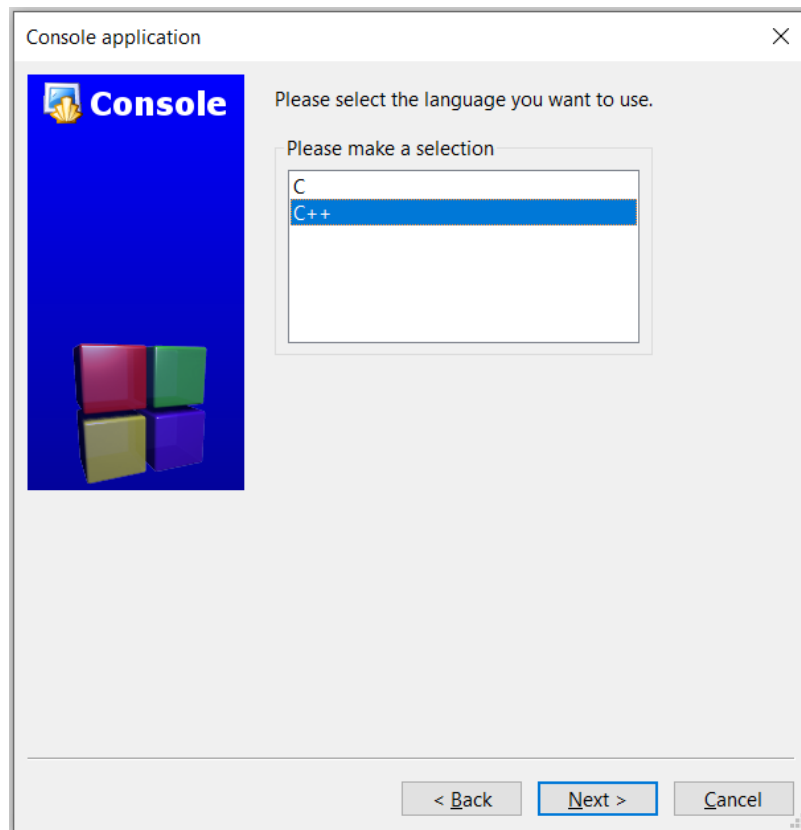
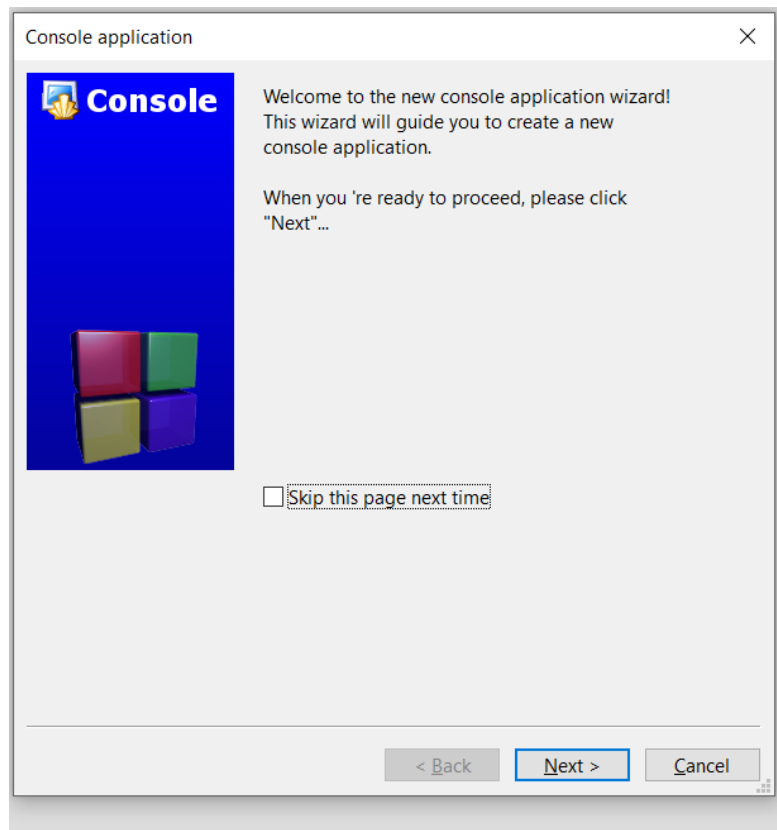




# New Project Console application


File > New > Project...







Console application

 **Console**

Please select the folder where you want the new project to be created as well as its title.

Project title:

Folder to create project in:

Project filename:

Resulting filename:

< Back   Next >   Cancel

Please select the folder to create your project in

← → ▾ ▴ 📁 > This PC > Local Disk (C:) > Users > Islam > C++ ▾ ↻ Search C++ 🔍

Organise ▾ New folder

	Name	Date modified	Type	Size
📁	FirstProject	4/28/2021 10:23 AM	File folder	

Folder:


Select Folder   Cancel

# Basic syntax

Build > Build and Run

```
main.cpp x
1      #include <iostream>
2
3      using namespace std;
4
5      int main()
6      {
7          cout << "Hello world!" << endl;
8          return 0;
9      }
10
```

# Result

 C:\Users\Islam\C++\FirstProject\lesson1\bin\Debug\lesson1.exe

Hello world!

Process returned 0 (0x0)    execution time : 0.009 s  
Press any key to continue.

# C++ Comments

(izohlar)

Commentlar – C++ kodini tushuntirish uchun foydalaniladi. Commentlar bir qatorli yoki ko'p qatorli bo'lishi mumkin.

## Comments

// Single line comment

/\* Multi-line comment \*/

Bir qatorli commentlar ikkita slash (kesma)lar bilan boshlanadi (//).

// va satr oxiri orasidagi har qanday matn kompilyator tomonidan e'tiborga olinmaydi (bajarilmaydi).

```
int main()  
{  
    //Bu comment  
    cout << "Hello world!" << endl;  
    return 0;  
}
```

Ko'p qatorli commentlar `/*` bilan boshlanadi va `*/` bilan tugaydi.

`/*` va `*/` orasidagi har qanday matn kompilyator tomonidan e'tiborga olinmaydi:

```
int main()  
{  
    /*Dasturlashni  
    pdp.uz da o`rganing!*/  
    cout << "Hello world!" << endl;  
    return 0;  
}
```

E`tiboringiz uchun  
rahmat!