#### "Minimalist Gnu for Windows"

What is "MinGW"?

MinGW is an open source package freely available for Microsoft Windows based systems that makes it possible to write, develop and run the same numerical C code on Windows that you would usually develop on Linux systems. The package provides the Gnu Compiler Collection (gcc) and a bash command shell that can be run within Windows for compiling source code. The executable files that the MinGW gcc compiles will run directly in Windows. This means that you won't be able to write C code that uses special Linux operating system calls, but all the capabilities in C for computational coding and standard file input and output will work fine.

Description and documentation is available from: http://www.mingw.org/

Most recent release files may be downloaded from: http://sourceforge.net/projects/mingw/files/

For convenience, I have placed the latest version of the "Automated MinGW Installer", which is currently mingw-get-inst-20120426.exe on the Physics 3340 web page for downloading



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#### Starting the Automated MinGW Installer

Run mingw-get-inst-20120426.exe to get started



Just click "Next"



M Setup - MinGW-Get	
<b>Repository Catalogues</b> Use pre-packaged catalogues or download the latest version	s?
The repository catalogues describe the packages and version installed. This installer includes a snapshot of those catalogue been updated since this installer was created. Choose wheth pre-packaged snapshot, or to download the latest versions.	ns available to be es, but they may have her to use the
<ul> <li>Use pre-packaged repository catalogues</li> <li>Download latest repository catalogues</li> </ul>	20120426
< Back	Net > Cancel

Set mingw-get-inst to always download the most recent repository catalog and click "Next"



<b>License Agreement</b> Please read the following important information before continuing.	
Please read the following License Agreement. You must accept the terms of this agreement before continuing with the installation.	
GNU GENERAL PUBLIC LICENSE Version 3, 29 June 2007	
Copyright (C) 2007 Free Software Foundation, Inc. < <u>http://fsf.org/</u> > Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.	
Preamble	
The GNU General Public License is a free, copyleft license for software and other kinds of works.	•
I accept the agreement do not accept the agreement	
< Back Next >	Cancel

Accept the Gnu license agreement and click "Next"



M Setup - MinGW-Get
Select Destination Location Where should MinGW-Get be installed?
Setup will install MinGW-Get into the following folder.
To continue, click Next. If you would like to select a different folder, click Browse.
C:\MinGW Browse
At least 1.6 MB of free disk space is required.
< Back Next > Cancel

It is important that you leave the installation directory to the default C:\MinGW and just click "Next"



📶 Setup - MinGW-Get
Select Start Menu Folder Where should Setup place the program's shortcuts?
Setup will create the program's shortcuts in the following Start Menu folder.
To continue, click Next. If you would like to select a different folder, click Browse.
MinGW Browse
🔲 Don't create a Start Menu folder
< Back Next > Cancel

Select where you want the Windows program shortcut icons under your Start menu; the default MinGW is fine; click "Next"





By default the C compiler component will be installed, and if you optionally want the C++ compiler you can check the box shown, but do NOT click "Next" yet!



M Setup - MinGW-Get		_
<b>Select Components</b> Choose which optional components of MinG <sup>v</sup> installed)	W to install (the C compiler is always	
C++ Compiler Fortran Compiler ObjC Compiler MSY5 Basic System MinGW Developer ToolKit	Includes MSYS Basic System	
	< Back Next >	Cancel

Scroll down the component option list and check "MSYS Basic System" to add the bash command shell and a basic Linux emulation sub-system; now click "Next"



W-Get on your computer.	J.
), or click Back if you want to re	view or
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s (20110802)	
	<b>T</b>
	W-Get on your computer. 1, or click Back if you want to re

Verify installation choices and click "Install"





Installation will proceed automatically downloading needed files from the MinGW server and provide a progress report in a separate command window; after waiting for it to complete click "Finish"



# Updating Windows PATH for MinGW

The Windows PATH variable must be updated to include the C:\MinGW\bin directory for the executable files just installed to be found

System Proper	ties			? 🔀
System Res	store	Automa	tic Updates	Remote
General	Computer Name Hardware		Advanced	
You must be lo	ogged on as	s an Administrat	or to make most of	these changes.
Performance				
Visual effects	, processor	scheduling, m	emory usage, and v	irtual memory
			(	Settings
User Profiles				
Desktop setti	ngs related	to your logon		
			(	Settings
Startup and F	Recovery -			
System startu	ip, system f	ailure, and deb	ugging information	
			(	Settings
	Er	ivironment Vari	ables Error	Reporting
		ОК	Cancel	Apply

In Windows XP, for example, run Settings->Control Panel->System and click on the "Advanced" tab as above; click on "Environment Variables" Other Windows versions will be similar



#### Updating Windows PATH for MinGW

Environment Vari	ables	? 🗙
User variables for a	0179794	
Variable	Value	~
MAKEMODE OBJDIR	windows c:/obj	
PATH PLOT_STRINGS RC	c:\bin;c:\ib;c:\GnuWin32\bin;c:\jed099 c:\temp\pstrings.dat windres	■
	New Edit Dele	te
System variables		
Variable	Value	<u> </u>
OS	Windows_NT	
Path PATHEXT	c:\program files\graphicsmagick-1.2.5-q .COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;	• 🔳
PROCESSOR_A PROCESSOR_ID.	<ul> <li>x86</li> <li>x86 Family 15 Model 2 Stepping 7, Genu.</li> </ul>	💌
	New Edit Dele	te
	ОК Са	incel

In the User variables area, select the PATH variable and click "Edit"; if it is not yet defined, click "New" and create it



### Updating Windows PATH for MinGW

Edit User Variable	· ? 🛛
	l.↓
Variable name:	PATH
Variable value:	9916\bin;c:\MinGW\bin;c:\Td\bin;c:\GTK\bi
	OK Cancel

In the Edit window, insert or append the path name "c:\MinGW\bin" into the PATH variable value It is important that there must be a semicolon character (;) separating each path name in the variable value Click "OK" here, back in the "Environment Variables" window, and back in the "System





# Running Your New MinGW Command Shell

Under Program Files->MinGW you should now have a shortcut for "MinGW Shell"; click it to start your bash shell and minimal Linux system emulator





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