Cygwin: A Linux-like Environment for Windows

Since we are using the Linux platform and the GNU C compiler for our structure programming class, for those who want to setup a similar environment as in our lab FSC 801 but on the window platform, you can download and install CYGWIN for a try. Here are the steps for setting it up:

1. Visit the "Cygwin" site at <u>http://www.cygwin.com/</u>, click the "Install Cygwin now" button and run the setup program;



2. Click "next" to continue the Cygwin Setup program;

🗲 Cygwin Setup	
	Cygwin Net Release Setup Program
	This setup program is used for the initial installation of the Cygwin environment as well as all subsequent updates. Make sure to remember where you saved it.
	The pages that follow will guide you through the installation. Please note that Cygwin consists of a large number of packages spanning a wide variety of purposes. We only install a base set of packages by default. You can always run this program at any time in the future to add, remove, or upgrade packages as necessary.
	E
	Setup.exe version 2.510.2.2
	Copyright 2000-2005
	http://www.cygwin.com/
	《上一步四》 取消

3. Choose "Installed from Internet" and click "next";

Cygwin Setup - Choose Installation Type	
Choose A Download Source Choose whether to install or download from the internet, or install from files in a local directory.	E
 Install from Internet (downloaded files will be kept for future re-use) Download Without Installing Install from Local Directory 	
<上一步(B) 下一步(M) >	取消

4. Specify the Root Directory for Cygwin;

The Root Directory is the directory where you will install Cygwin in your system (e.g. C:\cygwin). Choose Install For All Users and Unix/binary as recommended and click "next";

ll Cygwin. Also choose a few
Browse
┌ Default Text File Type
Unix / binary (RECOMMENDED)
No line translation done; all files opened in binary mode. Files on disk will have LF line endings.
◯ D <u>O</u> S / text
Line endings will be translated from unix (LF) to DOS (CR-LF) on write and vice versa on read. Read more about file modes

5. Specify the Local Package Directory for Cygwin;

The Local Package Directory is a directory to store the downloaded files and you setup files; Specify a directory (e.g. D:\Downloads\cygwin) and click "next";

Cygwin Setup - Select Local Package Directory	- D ×
Select Local Package Directory Select a directory where you want Setup to store the installation files it downloads. The directory will be created if it does not already exist.	E
Local Package Directory D:\Downloads\cygwin Browse	
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6. Choose Your Internet Connection (e.g. Direct Connection);

Direct Connection	
C Use <u>I</u> E5 Settings	
C Use HTTP/FTP Proxy:	
Proxy <u>H</u> ost	
Por <u>t</u> 80	

7. Pick a download site to download the Cygwin files (e.g. ftp://ftp.cise.ufl.edu);

► Cygwin Setup -	Choose Download Site(s)	<u>-0×</u>
Choose A Do Choose a s	wnload Site ite from this list, or add your own sites to the list	E
	Available Download Sites:	
	ftp://cygwin.dp.ua ftp://cygwin.osuosl.org ftp://ftp-stud.fht-esslingen.de ftp://ftp.ale.org ftp://ftp.ce.kmitl.ac.th ftp://ftp.chg.ru ftp://ftp.cise.ufl.edu ftp://ftp.easynet.be ftp://ftp.easynet.be ftp://ftp.easu.et ftp://ftp.esat.net ftp://ftp.fit.vutbr.cz ftp://ftp.funet.fi ftp://ftp.gwdg.de	
User URL:		Add
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8. Select the packages you need;

Basically, you just need the Default Set of files, plus the GNU C compiler and an Editor; For the GNU C compiler, open "Devel" and choose "gcc: C compiler upgrade helper"; For the Editors, open "Editors" and choose "nano" for the pico editor or "vim" for the vi editor;

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Category	Current	New	В	S Size	Packag	,e _
🗆 All 🚯 D	efault			20 20	10	
🕀 Admi	n 🚯 Default					
🕀 Archi	ve 🚯 Default					
🕀 Audio) 🚯 Default					
🖽 Base -	😯 Default					
🕀 Datab	ase 🚯 Default					
⊞ Devel	🚯 Default					
🕀 Doc 🌢	Default					
— ⊞ Editor	rs \Lambda Default					
1		-				

9. Create the icon & shortcut on the Desktop and add them to the Start Menu;

🕞 Cygwin Setup - Create Icons	-DX
Create Icons Tell setup if you want it to create a few icons for convenient access to the Cygwin environment.	E
✓ Create icon on <u>D</u> esktop ✓ Add icon to Start Menu	
<u> </u>	取消

10. Done with the Cygwin Setup and you can click the Cygwin icon on Desktop to try it out;

Extra Notes:

- If you specify the Root Directory to be C:\cygwin, then your home directory will be at C:\cygwin\home\Administrator.
- Try to create a simple C program, compile and run it. Here are the steps:
 - 1. To create or edit the file "testit.c", type at the prompt sign, \$, "nano testit.c" and enter the codes below:

```
#include <stdio.h>
int main (void)
{
   printf("Hello, World!\n");
   return 0;
}
```

then save and exit the editor;

- 2. To compile the program, type "gcc –o testit testit.c"
- 3. To run the program, type "./testit"
- 4. Type "logout" to end Cygwin