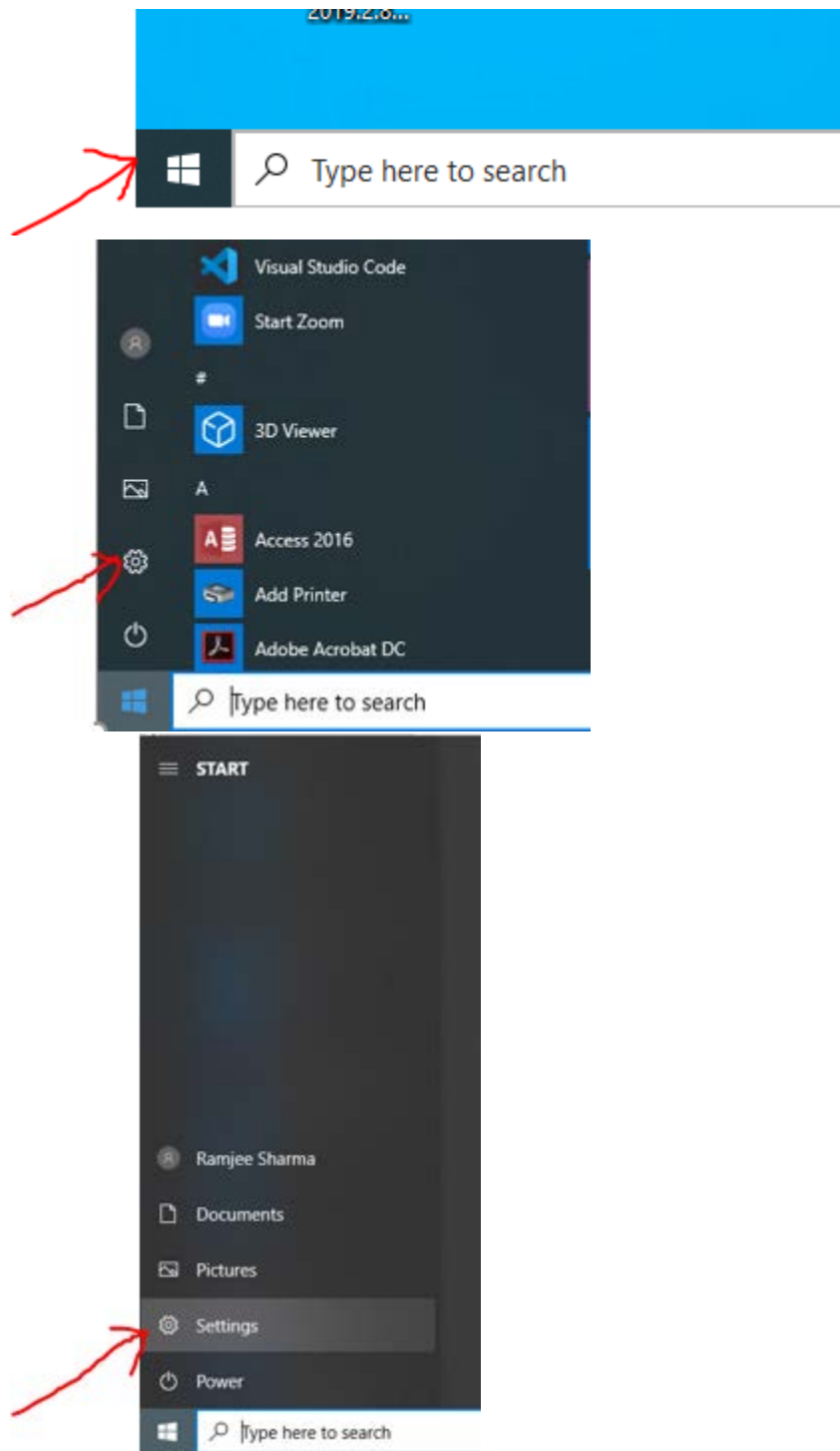
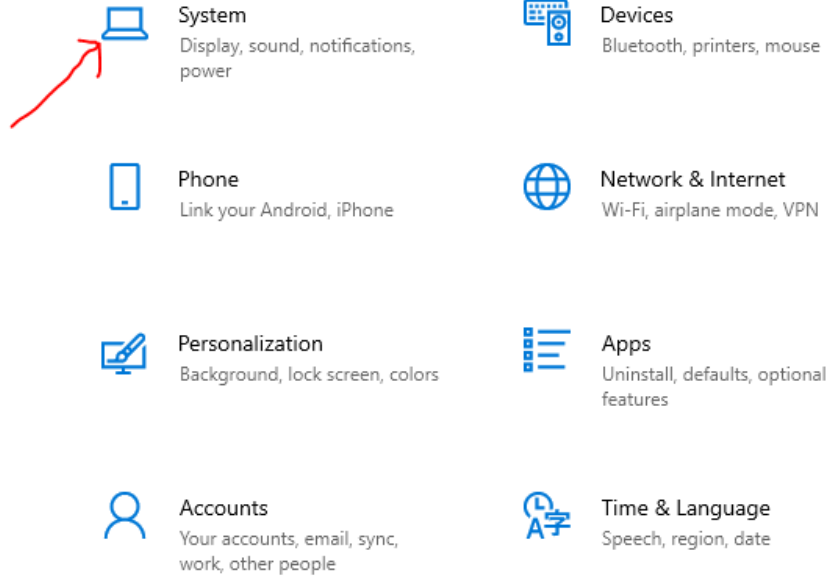


1. 32 or 64 bit?

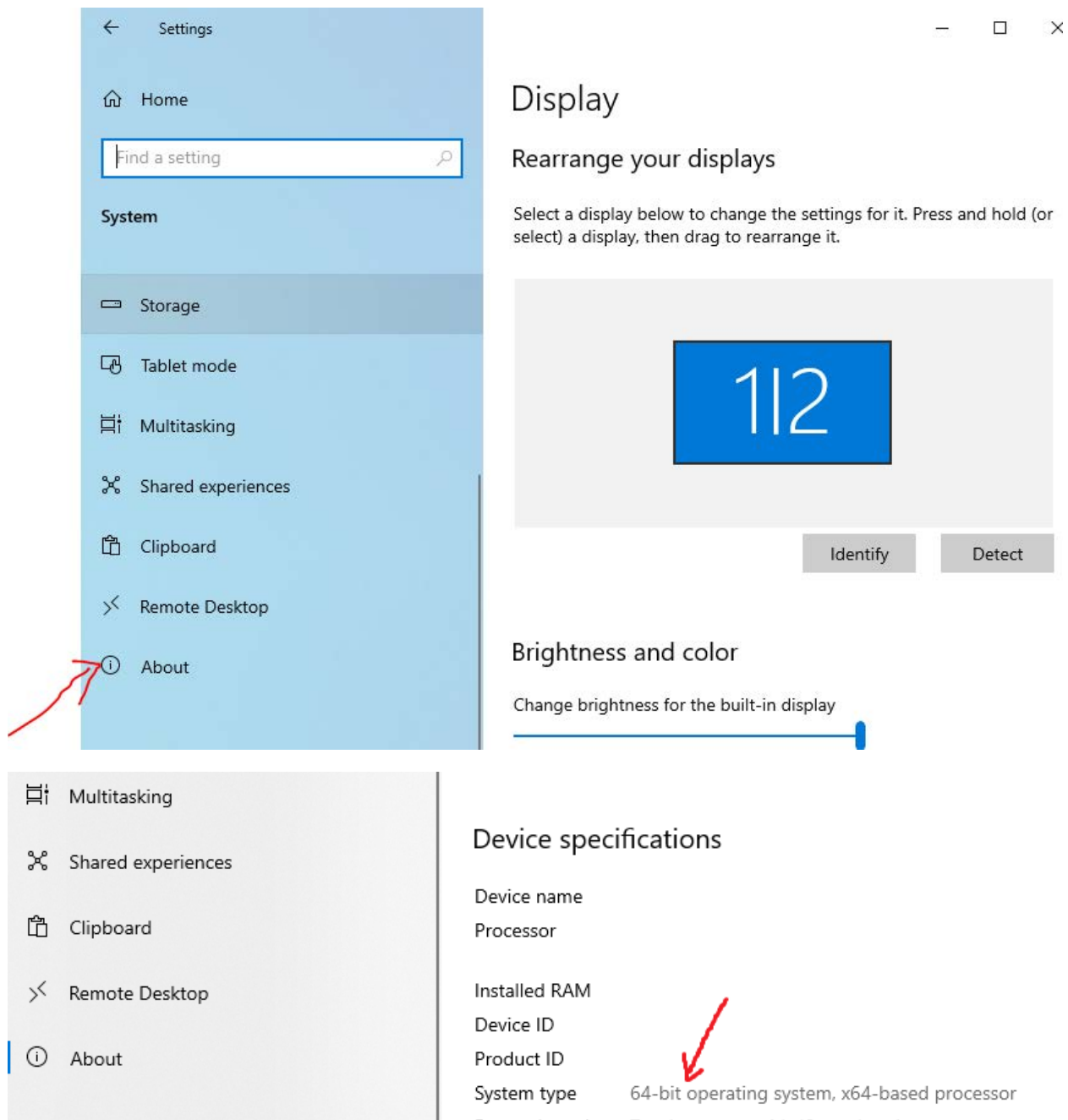


Windows Settings

Find a setting



Scroll down to About or type About in the box.



2. Go to <https://www.cygwin.com/install.html> and click on the .exe file based on the 32 or 64-bit window.

← → ↻ 🏠 🔒 cygwin.com/install.html ☆

Cygwin

- Install Cygwin
- Update Cygwin
- Search Packages
- Licensing Terms

Cygwin/X

Community

- Reporting Problems
- Mailing Lists
- Newsgroups
- IRC channels
- Gold Stars
- Mirror Sites
- Donations

Documentation

- FAQ
- User's Guide
- API Reference
- Acronyms

Contributing

- Snapshots
- Source in Git
- Cygwin Packages

Related Sites

Cygwin

Get that [Linux](#) feeling - on Windows

Installing and Updating Cygwin Packages

Installing and Updating Cygwin for 64-bit versions of Windows

Run [setup-x86_64.exe](#) any time you want to update or install a Cygwin package for 64-bit windows. The [signature](#) for [setup-x86_64.exe](#) can be used to verify the validity of this binary.

Installing and Updating Cygwin for 32-bit versions of Windows

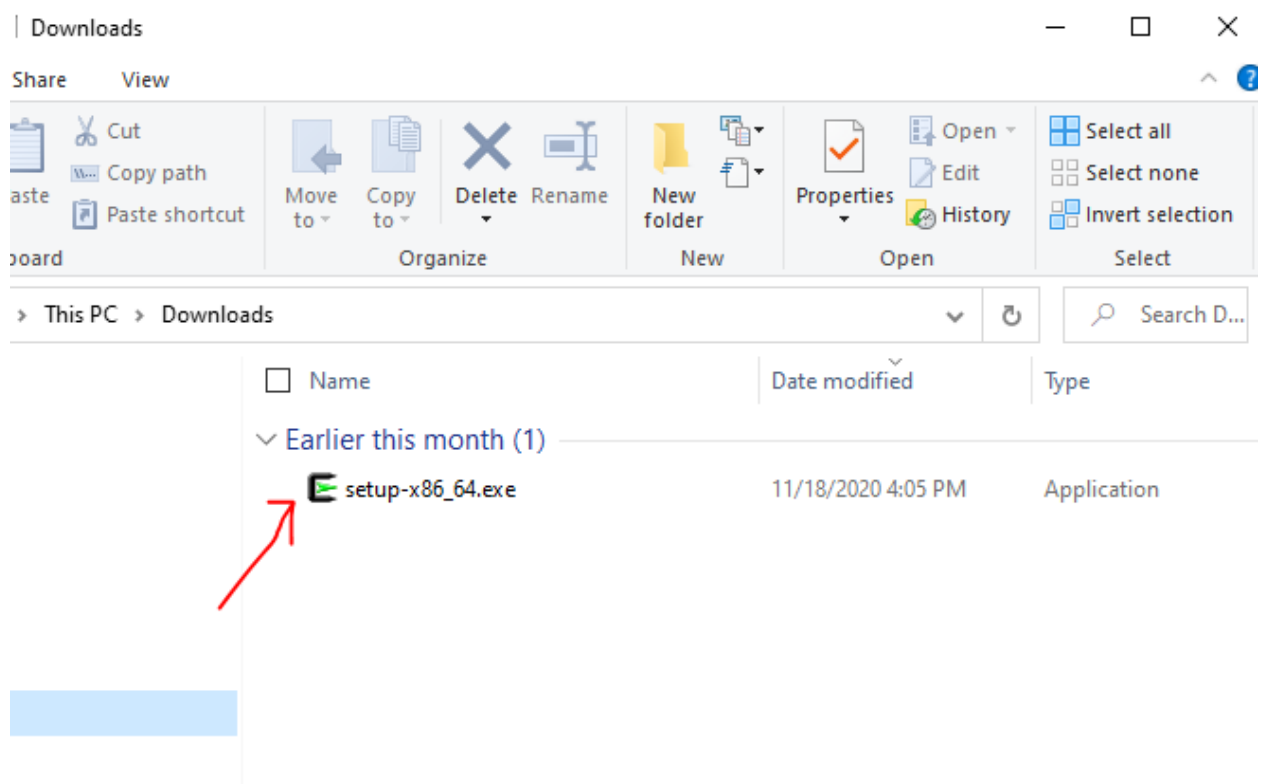
Run [setup-x86.exe](#) any time you want to update or install a Cygwin package for 32-bit windows. The [signature](#) for [setup-x86.exe](#) can be used to verify the validity of this binary.

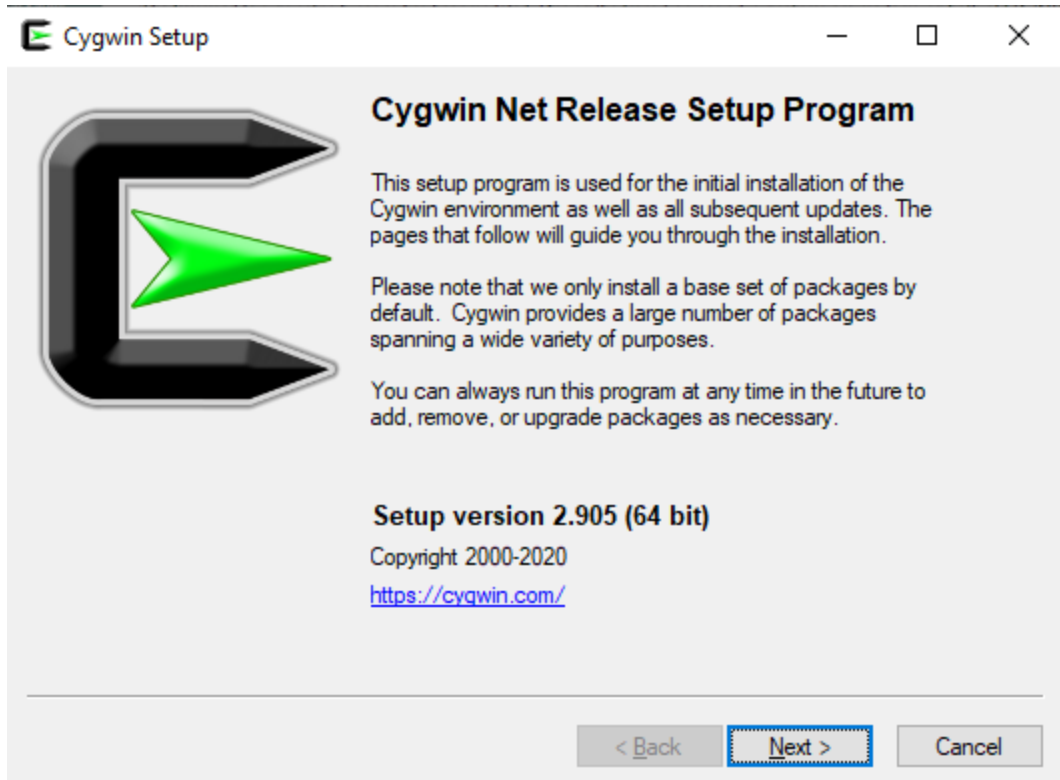
Signing key transition

The key used to sign setup binaries has been updated. During the transition period, signatures are made using both old (676041BA) and new (1A698DE9E2E56300) public keys [here](#).

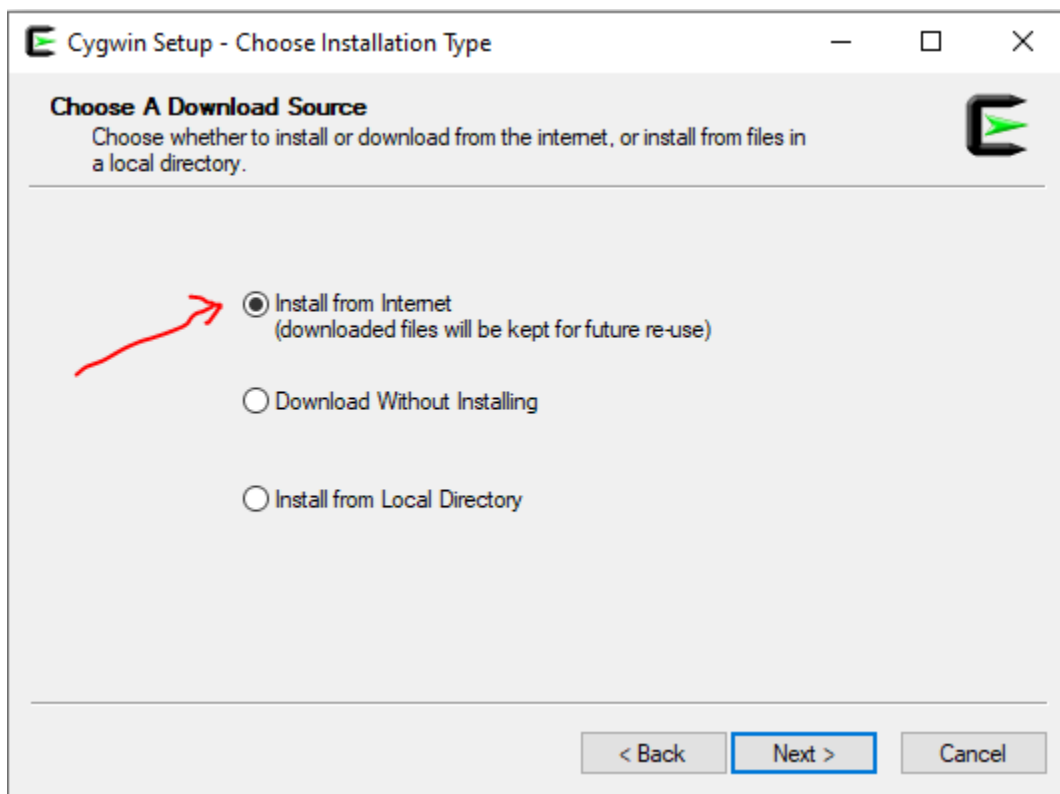
See [this mail](#) for more details.

- Go to the download folder and double click on the downloaded .exe file.

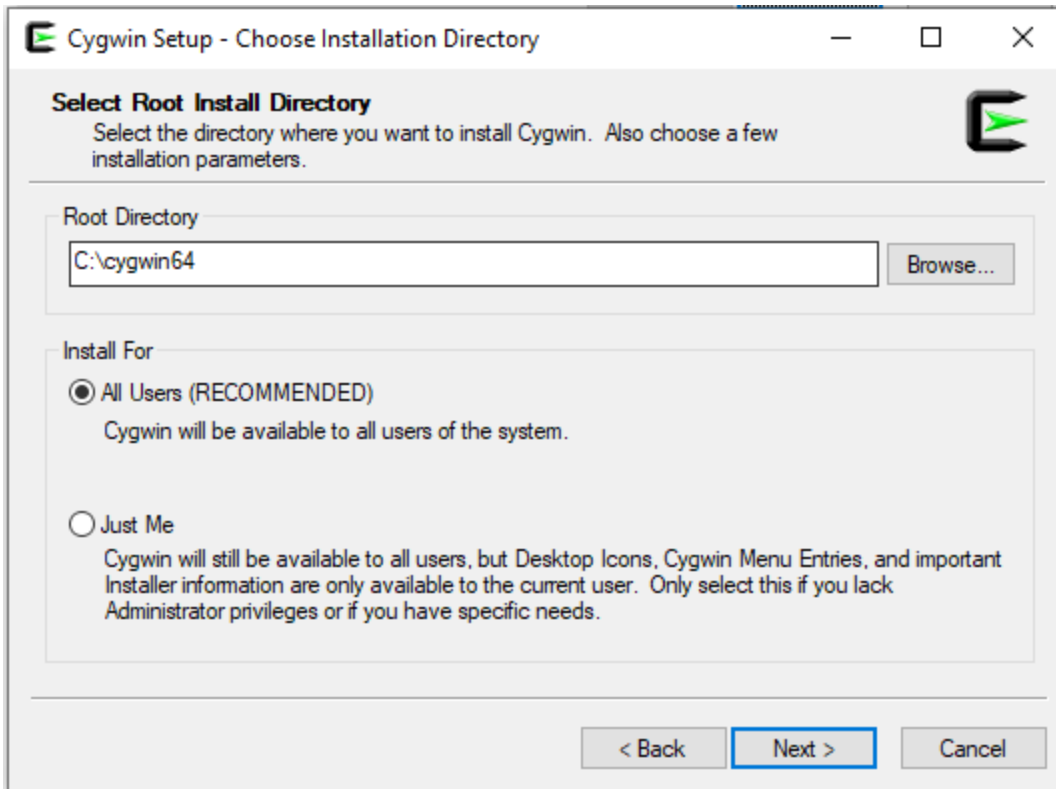




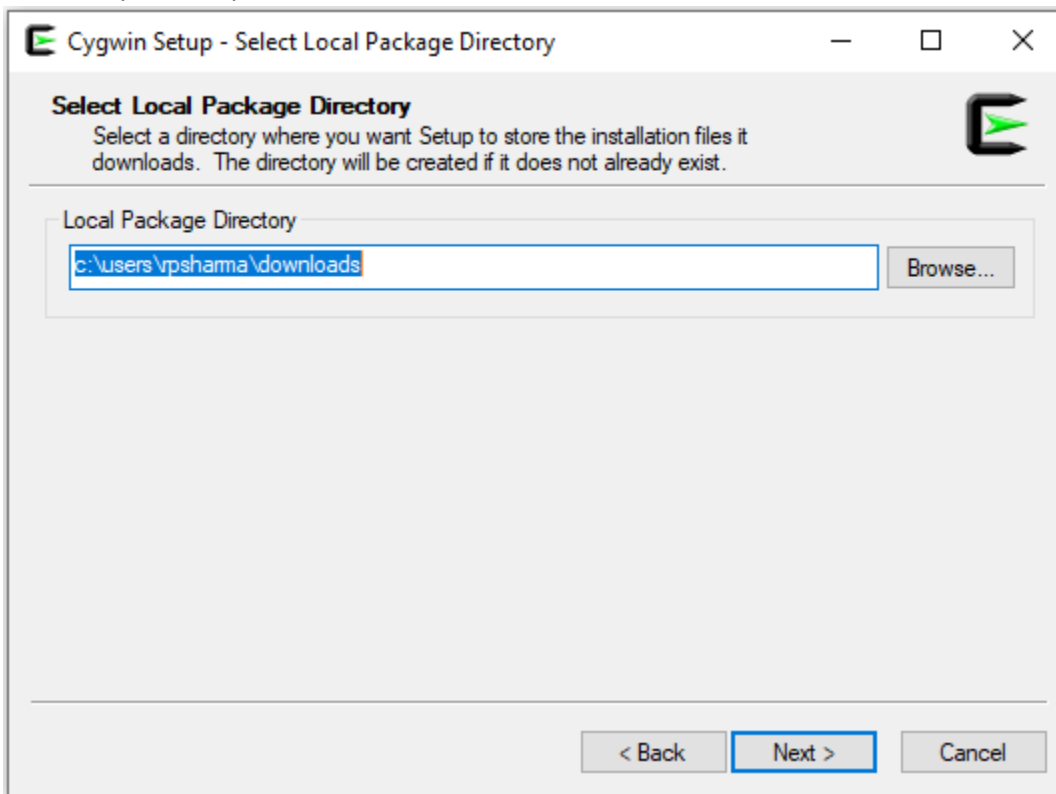
Click on Next



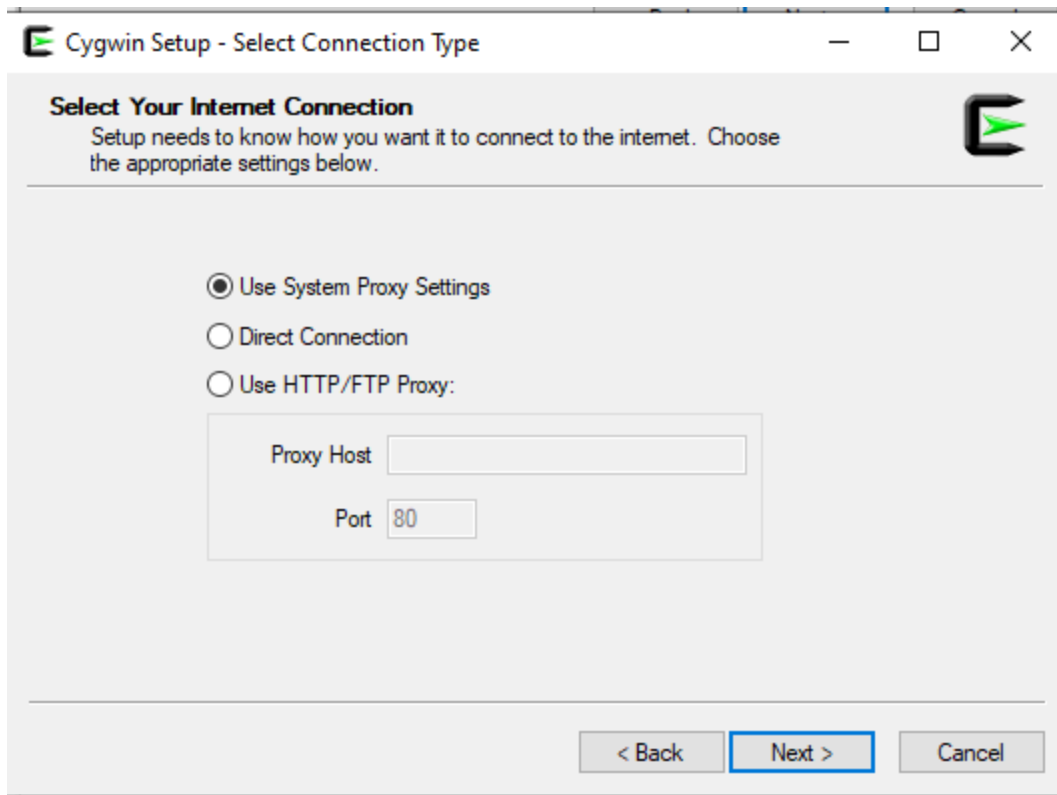
Leave install from Internet selection as it is. If it is not selected, select that and click on Next.



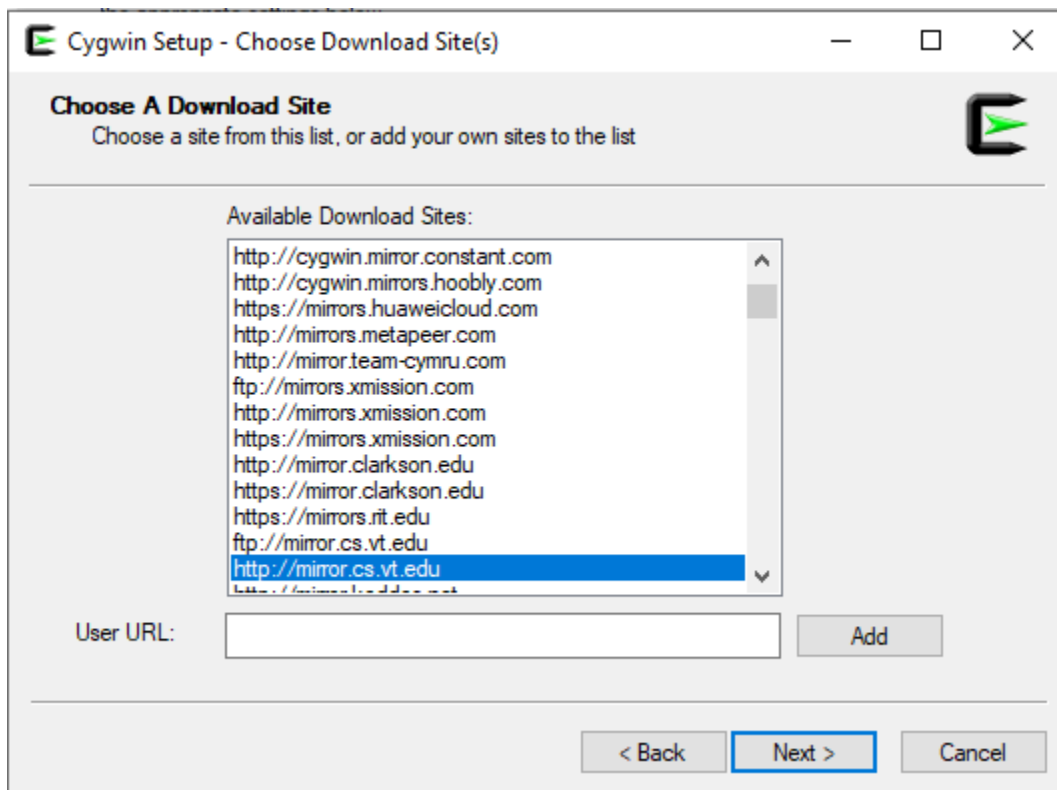
Click on Next. It will take you to the following window. The text inside the box will be different based on your computer user name.



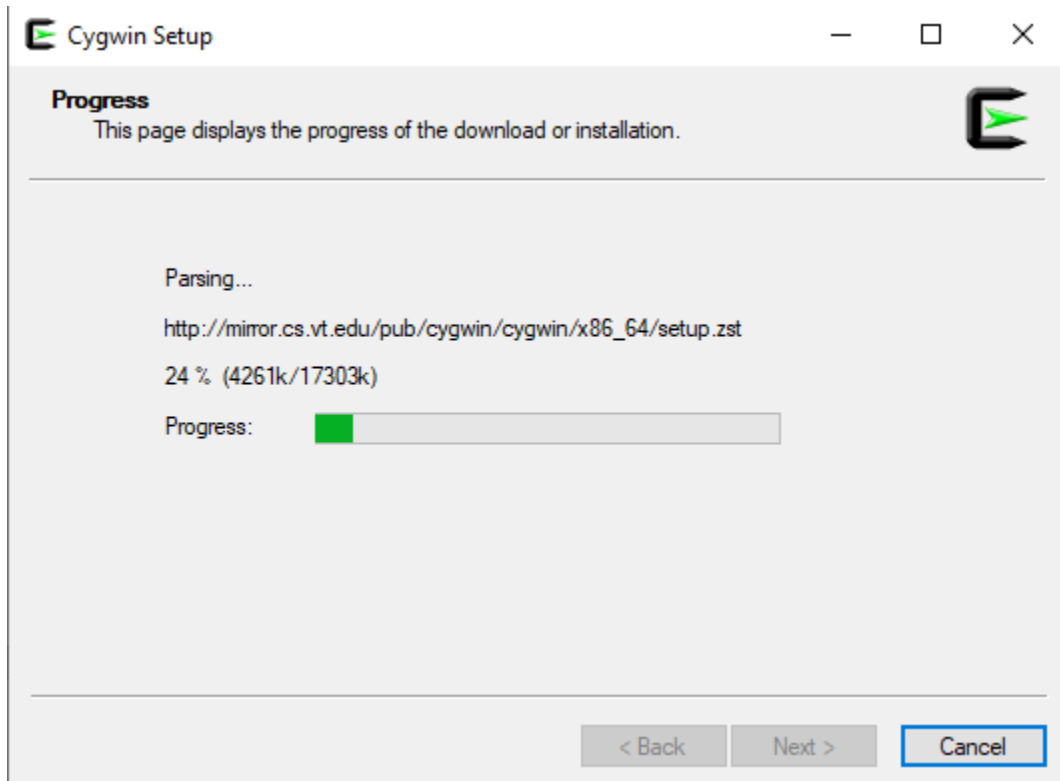
Click on Next.



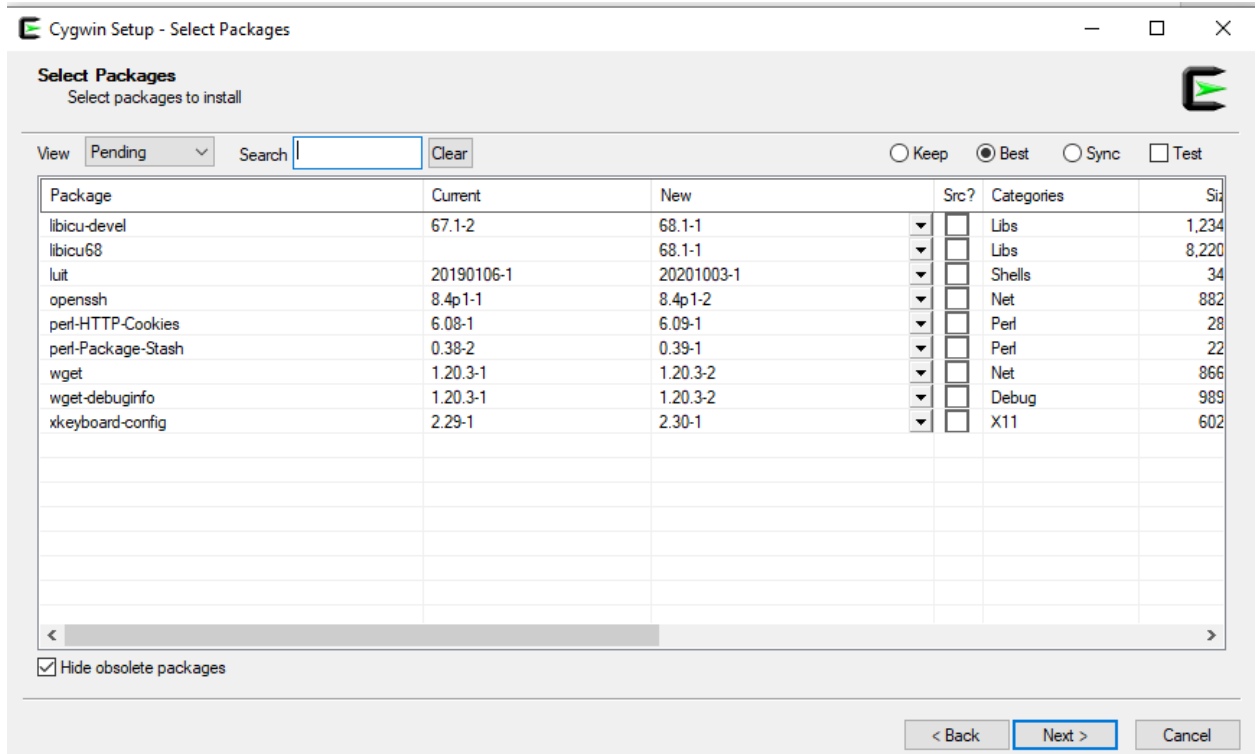
Leave the selection Use System Proxy Settings as it is. If it is not selected, select it and click on Next.



Here you can select different website to download the Cygwin packages from. You can just leave the one that is selected by the system (in this case <https://mirror.cs.vt.edu>). Then, click on Next.

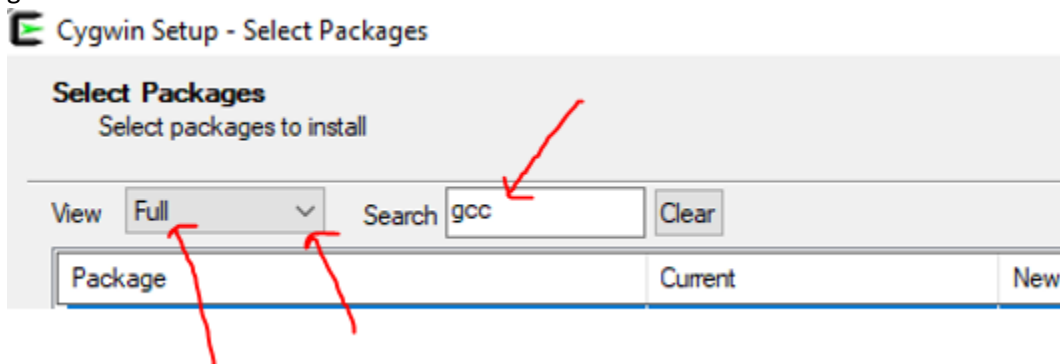


This will take some time depending on your download speed. It will open the package selection window.

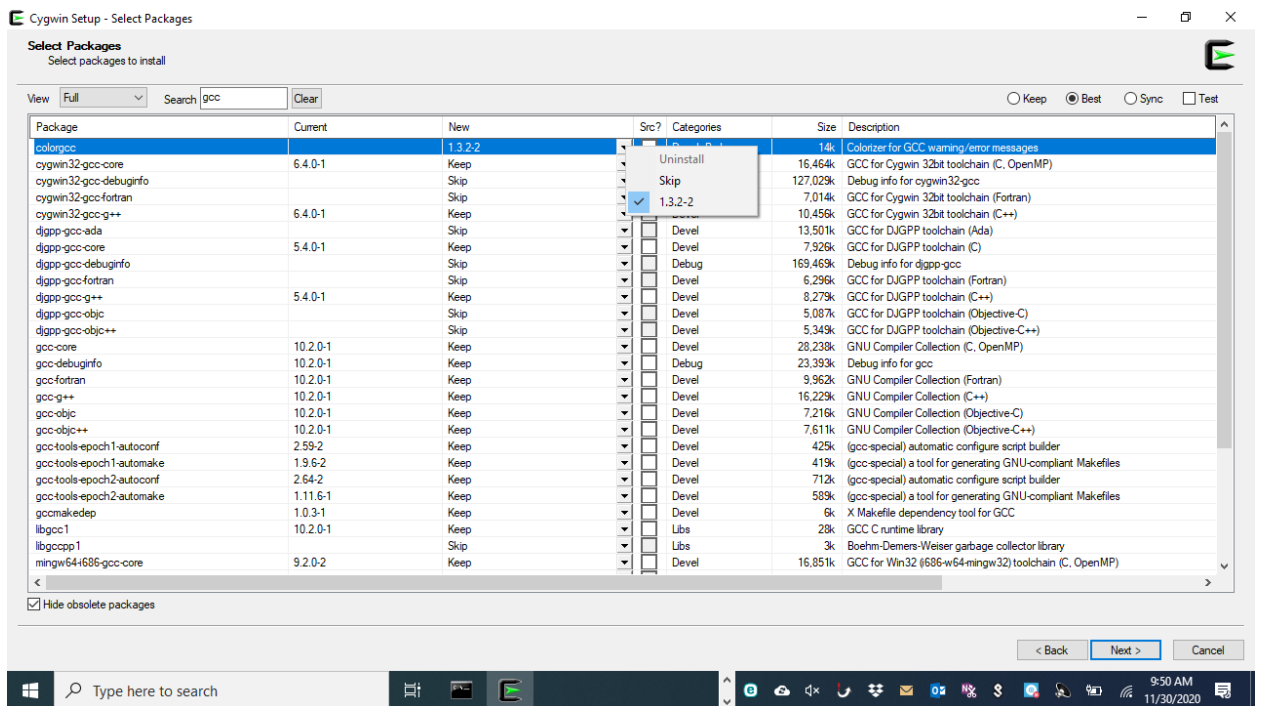
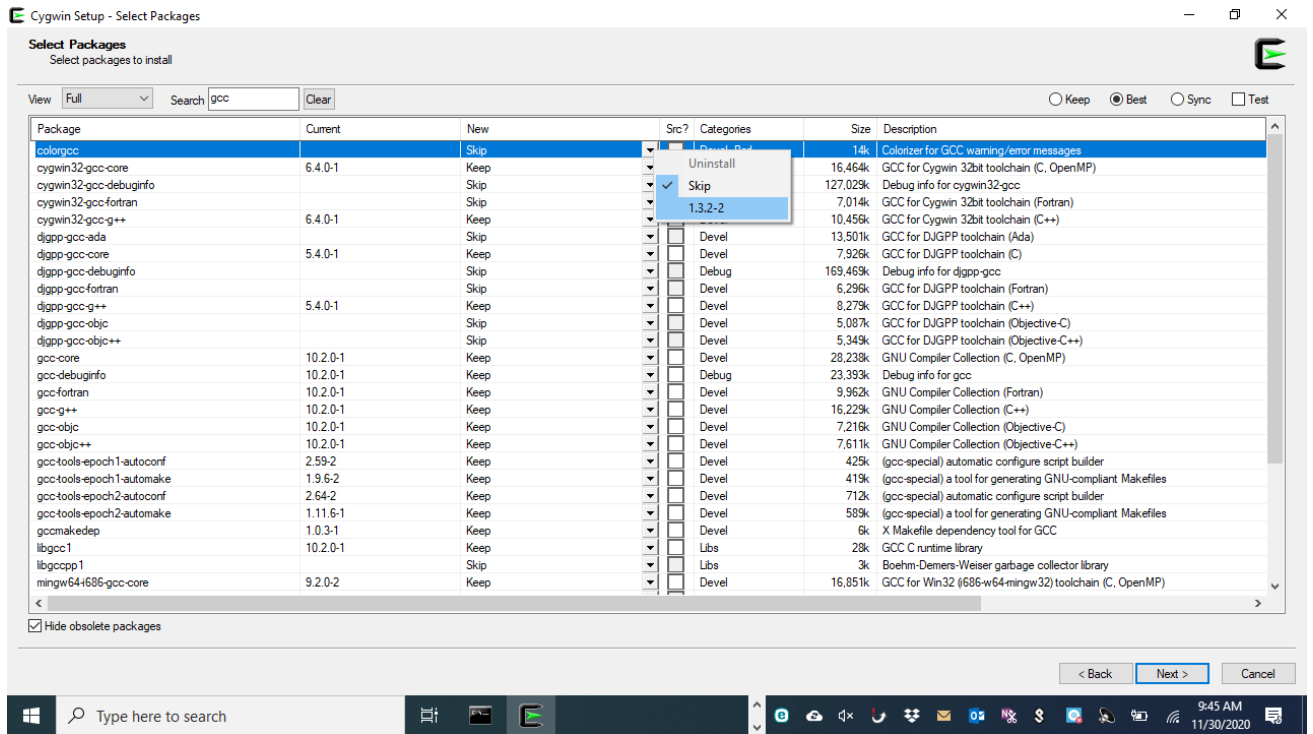


This part is very important. The system will select the minimum packages. You need to select all the additional packages that we need manually. We need several packages including gcc, gfortran, gnuplot, x11, fftw and openmpi. Just type the package name in the search box and you will see the related packages.

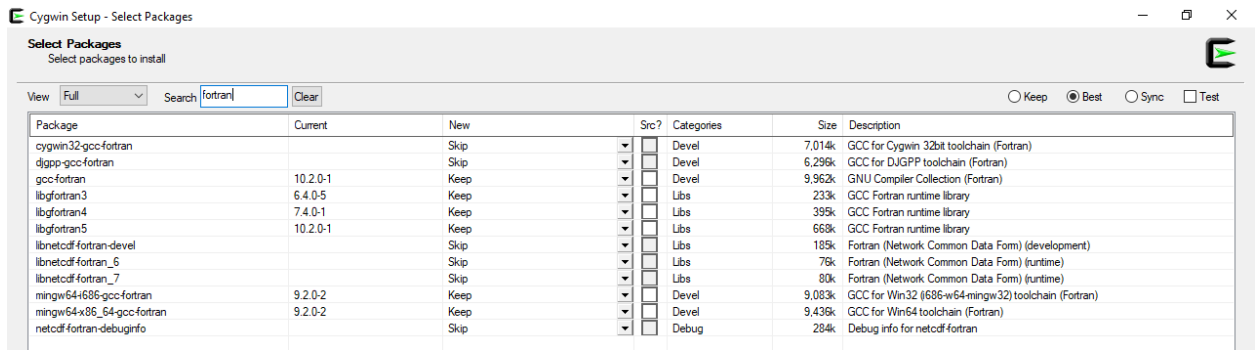
Gcc package. Click on the down arrow key by the View and change the view into Full. Then type gcc in the search box.



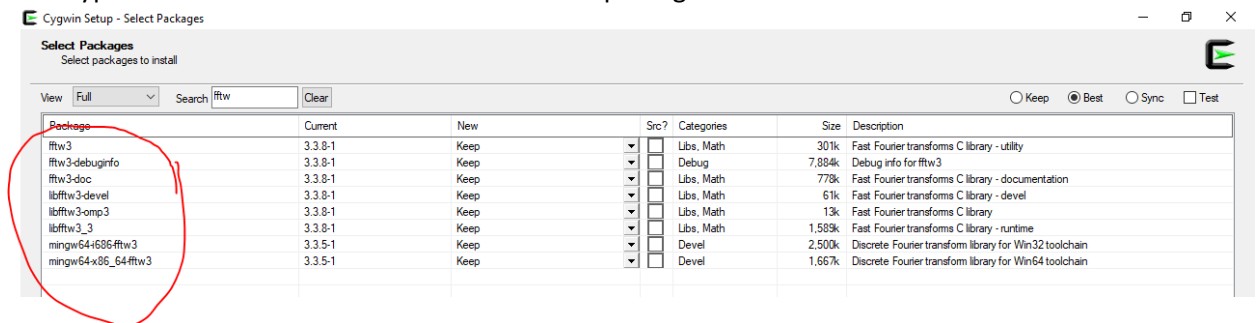
You must install all the packages here. Click on the down arrow key by each package and select the version number. By default most of these packaged are skipped.



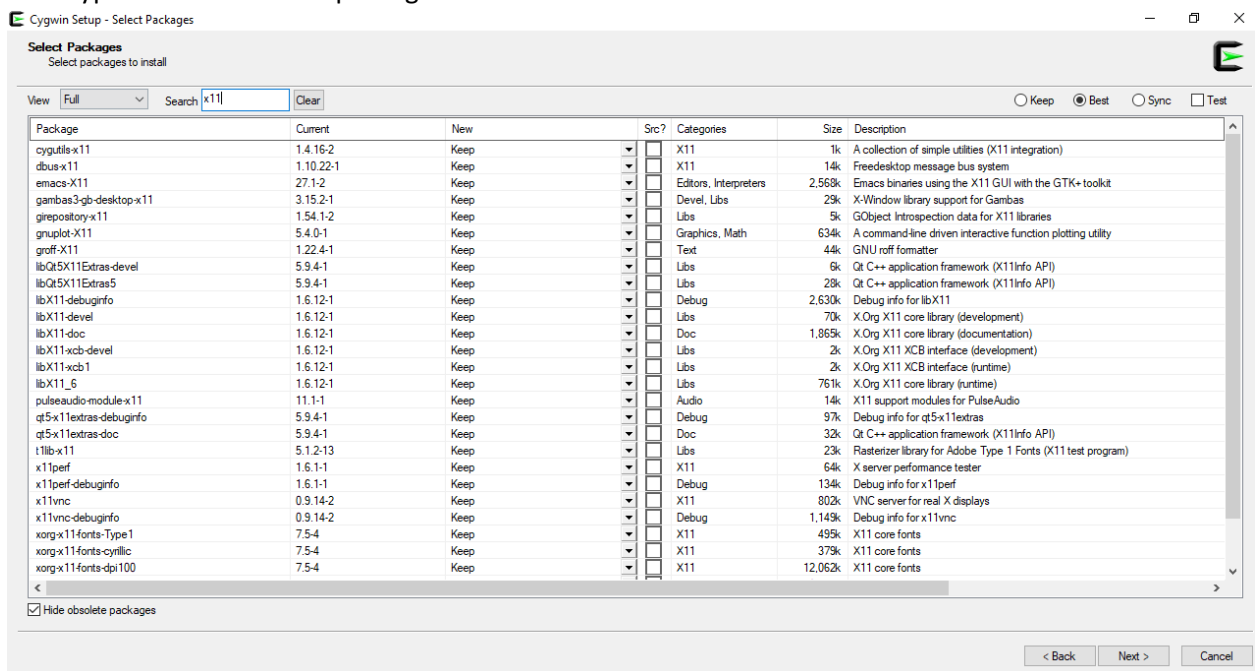
Do not click on Next yet. You need to select other packages.
Next type fortran in the search box and select all the packages as before.



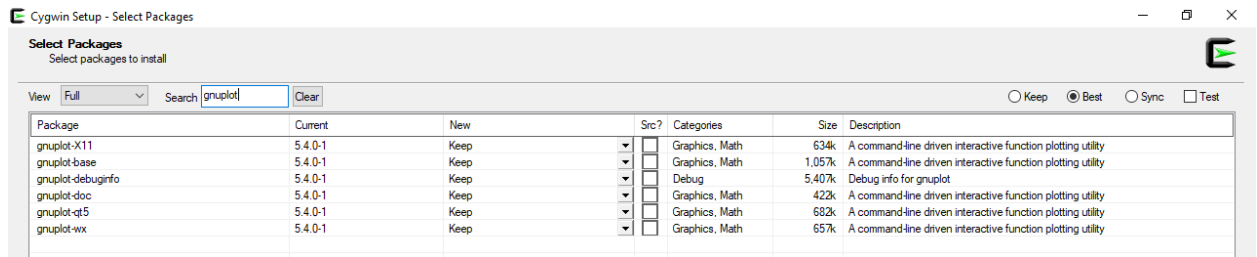
Next type fftw in the search box and select all the packages as before.



Next type x11 select all the packages.

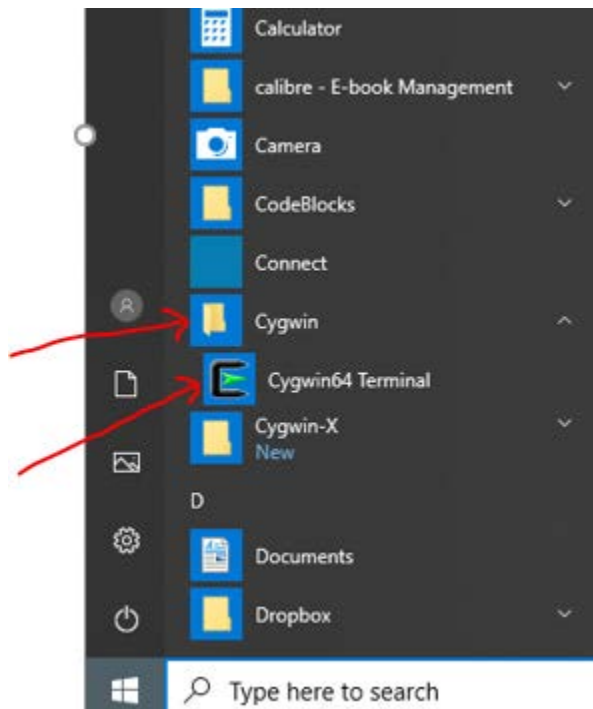


Next type gnuplot and select all the packages.



You can select additional packages as you wish. You can always do this later. Once you complete your selection, click on Next.

The installation may take several hours depending on the internet speed. Once the installation is complete, you should see Cygwin in your start Menu.



The Cygwin Terminal window will open as follows.



Exercise:

What do the following commands do?

mkdir, cd, ls, notepad hello.f95, mv, rm, cat, less, cd .., ./, gfortran, gcc,

Installation of FFTW3 in Cygwin

1. Open an internet browser and go to

<http://www.fftw.org/download.html>

2. Download the tar file [fftw-3.3.8.tar.gz](#)

3. Go to the Downloads folder/ or the folder where the file is downloaded

Also, open another file explorer in a new window and go to C/Cygwin64//home/<your username>

Copy/paste or move the file [fftw-3.3.8.tar.gz](#) from the download folder to the folder inside the Cygwin directory C/Cygwin64/home/<yourusername>

4. Open the Cygwin terminal window and type the command ls. You will see the fftw3 tar file.

You need to untar the tar file by typing the following command:

```
tar -zxvf fftw-3.3.8.tar.gz
```

5. Change the directory into fftw-3.3.8 by typing

```
cd fftw-3.3.8
```

6. Next you need to type the following three lines of commands one at a time to install the fftw3 with the parallel mpi and openmp options:

```
./configure --enable-openmp --enable-threads --enable-mpi
```

```
make
```

```
make Install
```

Note that the configure, make and install commands may take several minutes to complete. Now you will have already installed all the necessary packages of fftw3. To check if the installation took place correctly, type the following and send me the responses.

whereis fftw3.f

whereis mpif.h

whereis mpi