

There is no formal installer for the Cygwin tools, as it is quite complicated, especially for new students. Instead, there is a zip file named `cygwin64-2016-preinstalled.zip` and it can't be downloaded from here:

<http://azrael.digipen.edu/~mmead/www/public/Files/preinstalls/cygwin64-2016-preinstalled.zip>

Inside the archive is a folder named `cygwin64`. You simply have to extract that folder from the archive and put it into the root of your C:\ drive on Windows. After the files have been placed on hard drive, the PATH environment variable needs to be adjusted so that the programs will work properly.

	Package	Description	Directory to unzip in
1	Cygwin	The zip file is about 530 MB and extracts to about 1.5 GB. Creates: C:\cygwin64\	C:\

The only thing left to do is to update the PATH environment variable to reflect the changes. Since there are multiple versions of the same executables installed, it is important that the PATH is arranged so that the desired versions are found first on the command line. There are only a few directories that need to be in a certain order. Most of the other directories in the PATH can be placed at the end. This is the order of the PATH:

```
MinGW
Doxygen
cygwin64
Dr. Memory
(Everything else...)
```

For CS120, you only need to install MinGW and Cygwin. Doxygen and Dr. Memory will be introduced in CS170. You must put the bin directory of each of these in the PATH. For example, this might be how the PATH would look if you took the default installation paths on each package.

For CS120:

```
c:\mingw\mingw64\bin;c:\cygwin64\bin;(Other programs listed here...)
```

For CS170 and later:

```
c:\mingw\mingw64\bin;c:\Program Files (x86)\doxygen\bin;c:\cygwin64\bin;C:\Program Files (x86)\Dr. Memory\bin;(Other programs listed here...)
```

If you are new to computers, you may need to visit the Academic Support Center for help. Any CS or MAT tutor will be able to help you with this.

As a general rule of thumb: NEVER put spaces in the names of files or directories (folders). Doing so may cause your system to behave strangely. Yes, Windows and other programs have violated that rule, but as a software developer, you will never put spaces in the names of anything on the computer. As you gain more experience with computers, you'll understand why spaces are problematic.