

We first need to install the tools necessary for program development. These are among others:

- A compiler for the C programming language such as `gcc` or `clang`,
- a proper text editor like `gedit` or `gnome-builder`,
- the GTK+ library and its dependencies as well as
- a few other useful tools (debugger, Autotools, ...).

1 Arch GNU/Linux

The following terminal command installs the tools:

```
# pacman -Syu --needed base-devel gtk3 gnome-builder  
git gdb valgrind
```

2 Fedora

The following terminal commands install the tools:

```
$ sudo dnf upgrade  
$ sudo dnf groups install "Development Tools"  
$ sudo dnf groups install  
"C Development Tools and Libraries"  
$ sudo dnf install gtk3-devel gnome-builder
```

3 Debian and Ubuntu

The following terminal commands install the tools:

```
$ sudo apt-get update  
$ sudo apt-get upgrade  
$ sudo apt-get install build-essential autoconf git  
valgrind libgtk-3-dev gtk-3-examples gnome-builder
```

4 OS X

You need to install XCode from the Mac App Store and launch it. Then enter the following commands in Terminal.app:

```
$ curl https://git.gnome.org/browse/gtk-osx/plain/  
gtk-osx-build-setup.sh > gtk-osx-build-setup.sh  
$ chmod +x gtk-osx-build-setup.sh  
$ ./gtk-osx-build-setup.sh # maybe execute twice  
$ echo 'export PATH="$PATH:~/local/bin"'  
>> ~/.bash_profile  
$ . ~/.bash_profile  
$ sudo mkdir /usr/local/bin  
$ sudo ln -s /usr/bin/python2.7 /usr/local/bin/python2  
$ jhbuild bootstrap  
$ jhbuild build meta-gtk-osx-bootstrap  
meta-gtk-osx-gtk3  
$ jhbuild shell
```

Details see:

<https://wiki.gnome.org/Projects/GTK+/OSX>

5 Windows

For many free Unix programs there are Windows versions as well. These can be installed e.g. via MSYS2:

<https://msys2.github.io/>

After installing MSYS2 as described on the Web site the following command will install the tools:

```
$ pacman -Syu --needed base-devel git  
mingw-w64-x86_64-binutils mingw-w64-x86_64-gcc  
mingw-w64-x86_64-pkg-config mingw-w64-x86_64-gtk3  
mingw-w64-x86_64-gedit
```

GNOME Builder does not yet exist on Windows, but the gedit text editor can be used. Valgrind is not available either.