

# Phase 1: C, your weapon of choice

## Installing the tools

It is mandatory to run an operative system base on **arch linux**, It is highly recommended to install any of the [Manjaro Downloads](#) s which has a really good support and stability. We choose linux over windows for its simplicity and because we gonna use the command line a lot, so get use to it, You are a SW engineer!!!

 If you are not an experience linux user, don't go fancy trying to install arch linux from scratch, this could give a you a lot of headache

Before anything, install the linux base devel package

```
1 $ sudo pacman -Syu base-devel
```

After installing Manjaro ( *or any other arch linux distro based on Arch* ) the next step is to install the GCC compiler, first let see if is not already installed, open any terminal and type:

```
1 $ gcc -v
2 Using built-in specs.
3 COLLECT_GCC=gcc
4 COLLECT_LTO_WRAPPER=/usr/lib/gcc/x86_64-pc-linux-gnu/11.1.0/lto-wrapper
5 Target: x86_64-pc-linux-gnu
6 Configured with: /build/gcc/src/gcc/configure --prefix=/usr --libdir=/usr/lib --libexecdir=/usr/lib --mandir=/usr
7 Thread model: posix
8 Supported LTO compression algorithms: zlib zstd
9 gcc version 11.1.0 (GCCyayA)
```

In case nothing or an error appears, you have to install it typing

```
1 $ sudo pacman -Syu gcc
```

Do not forget its debugger

```
1 $ sudo pacman -Syu gdb
```

Next, you need to install make, again you can try to see if it is already installed typing **make -v**, and in case you haven't

```
1 $ sudo pacman -Syu make
```

Prior to continue it is need it to install an arch linux utility that will allow us to install extra packages, it is called yay and if you are using Manjaro then it will pretty easy

```
1 $ sudo pacman -Syyu
2 $ sudo pacman -S yay
```

And last but not least the code editor, we gonna pick VS Code because it is really fancy and has a tons of plugins you can use, there is a open source version on the arch official repo, but we gonna choose the microsoft license version because it is easy to install the plugins and themes. Hope you don't mind to be spy by Microsoft.

```
1 $ yay -S visual-studio-code-bin
```

 To learn ho to compile your programs take a look at [📖 Compiling for the first time](#) and [📖 Programs with more than one file](#)