# Development & Programming

## Overview

- [\*\*Python 3 - High-level interpreted programming language\*\*](#python-3)

- [\*\*Go - Programming language\*\*](#go)

- [\*\*Node.js - open-source, JavaScript runtime environment\*\*](../webserver\_stack/#nodejs)

- [\*\*Docker - Create, deploy, and run applications using containers\*\*](#docker)

- [\*\*Docker Compose - Define and run multi-container Docker applications\*\*](#docker-compose)

- [\*\*Portainer - Lightweight management UI, managing your Docker host or Swarm cluster\*\*](#portainer)

- [\*\*VSCodium - FLOSS version of Microsoft VSCode\*\*](#vscodium)

??? info "How do I run \*\*DietPi-Software\*\* and install \*\*optimised software\*\* items?"

To install any of the \*\*DietPi optimised software items\*\* listed below run from the command line:

```sh

dietpi-software

```

Choose \*\*Browse Software\*\* and select one or more items. Finally select `Install`.

DietPi will do all the necessary steps to install and start these software items.

![DietPi-Software menu screenshot](../assets/images/dietpi-software.jpg){: width="643" height="365" loading="lazy"}

To see all the DietPi configurations options, review the [DietPi Tools](../../dietpi\_tools/) section.

[Return to the \*\*Optimised Software list\*\*](../../software/)

## Python 3

Python is a text based interpreted programming language with object oriented programming options for general purpose applications.

![Python logo](../assets/images/dietpi-software-programming-pythonlogo.png){: width="200" height="59" loading="lazy"}

Source: By [www.python.org](https://www.python.org/community/logos/), [GPL](https://commons.wikimedia.org/w/index.php?curid=34991637)

You can find Python everywhere in the world of computer programming. For example, Python is the foundation of some of the worlds guide to Docker](https://www.freecodecamp.org/news/a-beginners-guide-to-docker-how-to-create-a-client-server-side-with-docker-compose-12c8cf0ae0aa/)\_

=== "Update to latest version"

The tool is available soon after the installation. In case you need to upgrade it, here is the command:

```sh

sudo pip3 install docker-compose --upgrade

```

\*\*\*

Official documentation: <https://docs.docker.com/compose>

Getting started: <https://docs.docker.com/compose/gettingstarted>

Sample apps with Compose: <https://docs.docker.com/compose/samples-for-compose/>

Release notes: <https://docs.docker.com/compose/release-notes/>

Wikipedia: <https://wikipedia.org/wiki/Docker\_(software)>

## Portainer

Portainer simplifies your Docker container management via Portainer web interface. It enables faster deploy of the applications and it gives real time visibility.

![Portainer screenshot](../assets/images/dietpi-software-portainer.jpg){: width="1159" height="636" loading="lazy"}

=== "Access to the web interface"

The web interface is accessible via port \*\*9002\*\*[^1]:

- URL = `http://<your.IP>:9002`

=== "Update to latest version"

To update Portainer, simply reinstall it:

```sh

dietpi-software reinstall 185

```

\*\*\*

Official documentation: <https://documentation.portainer.io>

Beginners guide: <https://codeopolis.com/posts/beginners-guide-to-portainer/>

Source code: <https://github.com/portainer/portainer>

Open-source license: [zlib](https://github.com/portainer/portainer/blob/develop/LICENSE)

## VSCodium

VSCodium is a FLOSS version of [Microsoft's Visual Studio code](https://code.visualstudio.com/), built directly from the source on GitHub, without branding, tracking, or telemetry.

![VSCodium screenshot](../assets/images/dietpi-software-programming-vscodium.png){: width="1028" height="799" loading="lazy"}

=== "Update to latest version"

VSCodium is installed as APT package, hence you can update it by running the following commands:

```sh

apt update

apt install codium

```

Documentation (Visual Studio Code): <https://code.visualstudio.com/docs>

Documentation (VSCodium): <https://github.com/VSCodium/vscodium/blob/master/DOCS.md>

Source code: <https://github.com/VSCodium/vscodium>

License: [MIT](https://github.com/VSCodium/vscodium/blob/master/LICENSE)

[Return to the \*\*Optimised Software list\*\*](../../software/)

[^1]:

[Logitech Media Server](../media/#logitech-media-server) already listened to port `9000`, and this is why \*\*Portainer\*\* has been configured to start using port `9002`. For more details on the implementation Portainer in DietPi see the GitHub task: <https://github.com/MichaIng/DietPi/pull/3933>

[^2]: [7 Most Famous Companies That Use Golang](https://www.agiratech.com/blog/companies-using-golang/)

[^3]: [8 World-Class Software Companies That Use Python](https://realpython.com/world-class-companies-using-python/)

[^4]: [TIOBE Programming Community index](https://www.tiobe.com/tiobe-index/)