

Digital Career Institute

Tooling



Goal of the Submodule

The goal of this submodule is to help the learners install and run Python 3, install VSCode and run Python code on their machines. By the end of this submodule, the learners should be able:

- install and run Python 3 locally
- understand IDEs
- download VSCode
- edit and run Python code on VSCode
- add plugins of VSCode

Topics

- Python installation
- IDE
- IDE Plugins

Term	Definition
IDE	Integrated Development Environment

Python 3 Installation

pyenv

pyenv lets you easily switch between multiple versions of Python per user and per project.

Install pyenv

1. Install all required prerequisite dependencies:

```
$ sudo apt-get update; sudo apt-get install make build-essential libssl-dev
zlib1g-dev \
libbz2-dev libreadline-dev libsqlite3-dev wget curl llvm \
libncursesw5-dev xz-utils tk-dev libxml2-dev libxmlsec1-dev libffi-dev liblzma-dev
```

2. Download and execute installation script:

```
$ curl https://pyenv.run | bash
```

3. Add the following entries into your `~/.bashrc` file:

```
# pyenv
export PATH="$HOME/.pyenv/bin:$PATH"
eval "$(pyenv init --path)"
eval "$(pyenv virtualenv-init -)"
```

4. Restart your shell:

```
$ exec $SHELL
```

5. Validate installation:

```
$ pyenv --version
```

Install python

1. To install specific python version use install flag:
`$ pyenv install 3.8.0`
2. To list all available installed versions of Python on your system:
`$ pyenv versions`
3. To set a specific version of Python global (system-wide) use global flag:
`$ pyenv global 3.8.0`
4. To set a specific version of Python local (project-based) use local flag:
`$ pyenv local 3.8.0`

IDE-Integrated Development Environment

What is an IDE in Programming?

An IDE is:

- an application that facilitates application development.
- a piece of software that acts as a text editor, debugger, and compiler all in one.
- designed to make coding easier for developers and provides a central interface featuring tools like:



**a code
editor**



**a
compiler**



**a
debugger**

Code Editor

A code editor that's designed to help us write and edit our code. It also helps us make it more readable and clean.

Compiler

A compiler that transforms code written by a human into machine-readable form.

Debugger

A debugger that helps us eliminate errors from our programs so that our code executes and performs the way it should. This feature provides tools to help us examine our code.

multi-language IDEs

**Visual
Studio**

Intellij

Xcode

**Android
Studio**

Komodo

NetBeans

Eclipse

Features of Multi-lang IDEs

Intellisense

provide code completion, quick info, and member lists on a project.

Smart code editing

indent code lines, match words and brackets, and also highlight keywords.

Debugger

powerful debugging features and along with a graphical debugger and breakpoints. code written by a human into machine-readable form.

Extension/plugin manager

add new extensions/plugins to extend your IDE's functionality.

Version Control

offer support for various version control systems like Git, Subversion, Mercurial, CVS and so on.

1. Go to this [website](#)



2. Download for Debian, Ubuntu



3. Double-click on VSCode-osx. zip to expand the contents

```
sudo snap install pycharm-community --classic
```

Self Study



Topic:
VSCode Plugins

Documentation

- [Install brew](#)
- [Install Python with pyenv](#)
- [Install Python 3](#)
- [What is an IDE in Programming?](#)
- [Download VSCode](#)
- [Install VSCode on Linux](#)
- [Download and install PyCharm](#)

A large group of people, mostly young adults, are posing for a group photo in a room with a projector screen in the background. They are arranged in several rows, with some people sitting on the floor in the front. Many of them are making peace signs or other celebratory gestures. The room has a white ceiling with recessed lights and a white wall with a projector screen. The overall atmosphere is positive and energetic.

THANK YOU

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