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



Glossary



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



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
```

Download and execute installation script:

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

3. Add the following entries into your -/.bash.com/ file:

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

4. Restart your shell:

```
$ exec $SHELL
```

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

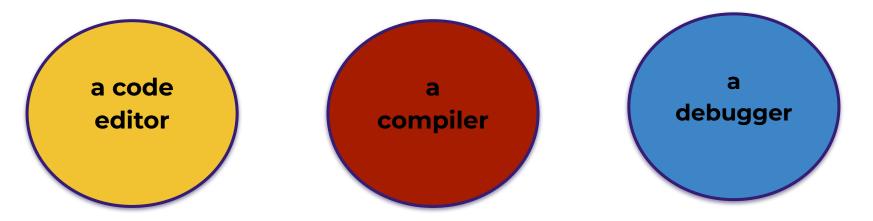


What is an IDE in Programming?



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:



IDE



Code Editor

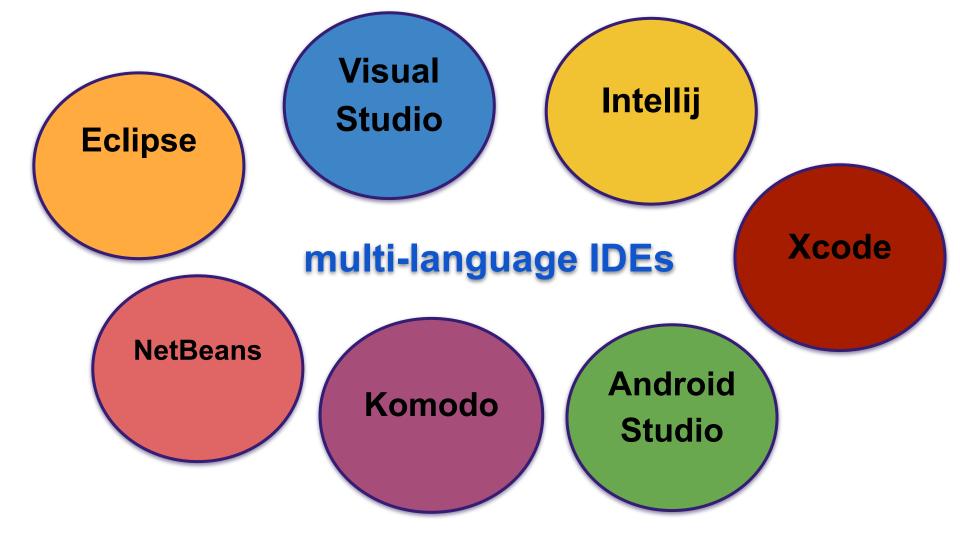
A code editor that's designed to help us write and edit our code. It also helps us make it more readable and clean.

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.



Features of Multi-lang IDEs



Intellisense

Smart code editing

Debugger

Extension/plugin manager

Version Control

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

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

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

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

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

VSCode



1. Go to this website



2. Download for Debian, Ubuntu



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

PyCharm



sudo snap install pycharm-community --classic

Self Study



Topic: VSCode Plugins



Documentation



Resources



- Install brew
- Install Python with pyeny
- Install Python 3
- What is an IDE in Programming?
- <u>Download VSCode</u>
- <u>Install VSCode on Linux</u>
- Download and install PyCharm

