



# Curso Intensivo de Python - Tema 1

Agustín Arenas



## Curso Intensivo de Python - Tema 1

### 1) Programa del curso

- a) Presentación e introducción al curso

### 2) Python: Introducción

- a) ¿Qué? ¿Cuándo? ¿Ah?
- b) Herramientas



# Presentación e introducción al curso

Agustín Arenas

- Estudiante de Ingeniería en Computación
- Programador web Fullstack especializado en Frontend
- Desarrollador en Javascript y Typescript

¿Consultas?

- [arenasagustin7@gmail.com](mailto:arenasagustin7@gmail.com)




# Presentación e introducción al curso

## Temario

- El temario del curso consiste en:

Tema	Descripción
1	Instalación de programas
2	Conceptos esenciales
3	Condicionales
4	Bucles y estructuras de datos
5	Funciones, archivos y proyecto final



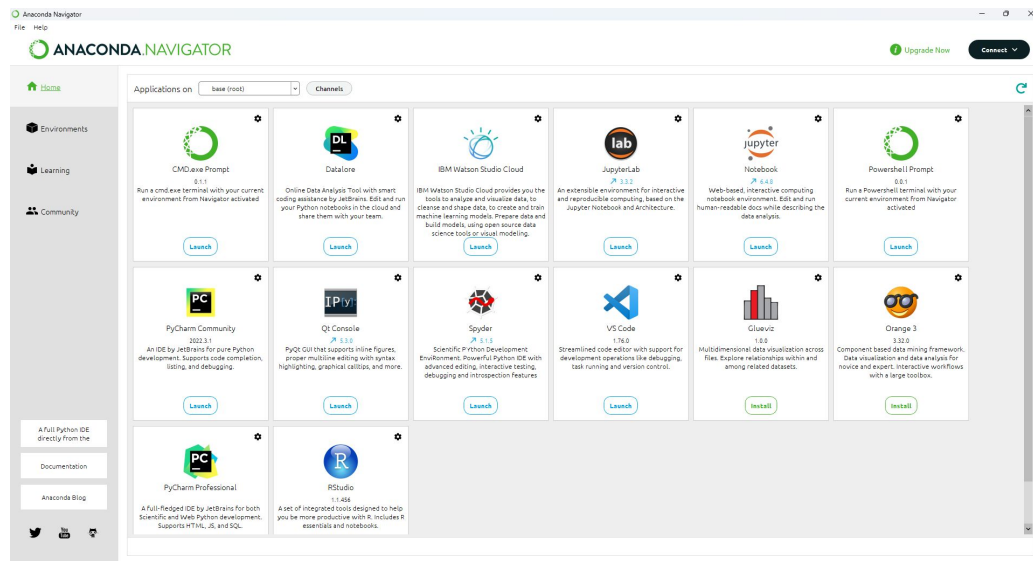
# Python: Introducción - ¿Qué?¿Cuándo?¿Ah?

## Orígenes

- Python es un lenguaje de programación **multiparadigma** e **interpretado** que surgió a finales de los años '80 por Guido van Rossum
- **Multiparadigma**: En la programación un paradigma, al igual que en el lenguaje tradicional es una “guia” para crear código, los dos más famosos son el orientado a objetos (OO) y funcional (FP) por sus siglas en inglés.
- **Interpretado**: Un lenguaje puede ser compilado (Ej: C++) o interpretado. Compilado significa que pasa por un proceso previo, la compilación, para poder ejecutar el programa. Interpretado, el intérprete va leyendo en tiempo de ejecución el programa.

→ ¿Cuál es la diferencia principal entre lenguaje compilado y ejecutado?

# Python: Introducción - Anaconda



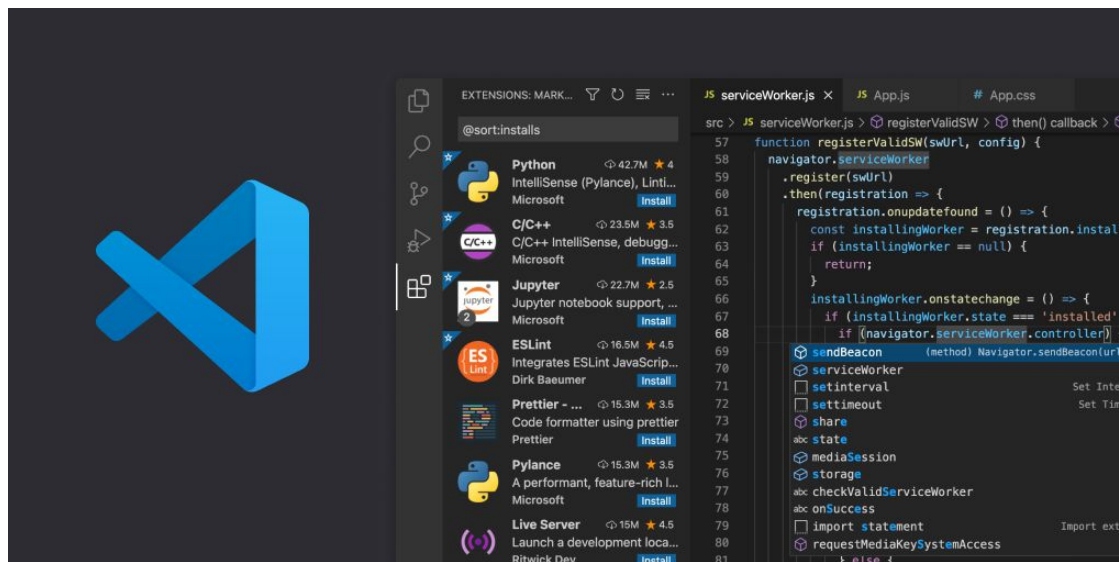
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# Python: Introducción - PyCharm



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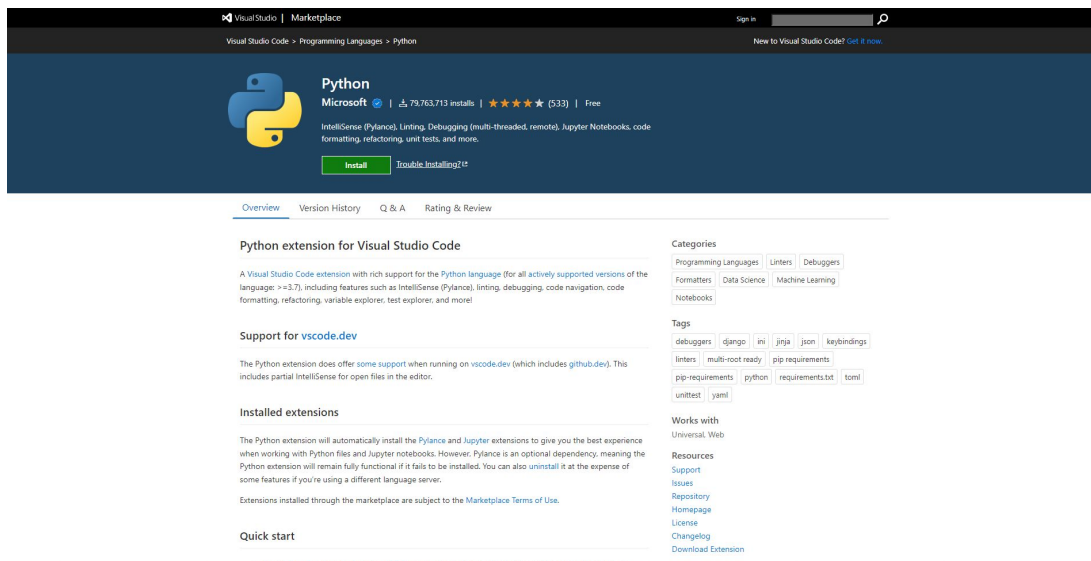
# Python: Introducción - Vs Code



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# Python: Introducción - Python Extensión



The screenshot shows the Visual Studio Marketplace page for the Python extension. The header includes the Visual Studio logo and the Marketplace tab. Below the header, the extension is listed as 'Python' by Microsoft, with 79,763,713 installs and a 5.33 star rating. The description mentions IntelliSense (Pylance), linting, debugging, and Jupyter Notebooks. An 'Install' button is visible. The page is divided into sections: Overview, Version History, Q & A, and Rating & Review. The Overview section describes the extension as a Visual Studio Code extension for Python, supporting versions >=3.7. It lists features like IntelliSense, linting, debugging, code navigation, and code formatting. A 'Support for vscode.dev' section mentions that the extension offers some support when running on vscode.dev. The 'Installed extensions' section states that the Python extension will automatically install Pylance and Jupyter extensions. The 'Quick start' section provides instructions on how to install the extension. On the right side, there are sections for Categories (Programming Languages, Linters, Debuggers, Formatters, Data Science, Machine Learning, Notebooks), Tags (debuggers, django, ini, jinja, json, keybindings, linters, multi-root ready, pip requirements, pip-requirements, python, requirements.txt, toml, unittest, yaml), Works with (Universal, Web), and Resources (Support, Issues, Repository, Homepage, License, Changelog, Download Extension).

Visual Studio | Marketplace

Visual Studio Code > Programming Languages > Python

Sign in

New to Visual Studio Code? [Get it now.](#)

## Python

Microsoft | 79,763,713 installs | ★★★★★ (5.33) | Free

IntelliSense (Pylance), Linting, Debugging (multi-threaded, remote), Jupyter Notebooks, code formatting, refactoring, unit tests, and more.

[Install](#) [Trouble installing?](#)

[Overview](#) [Version History](#) [Q & A](#) [Rating & Review](#)

### Python extension for Visual Studio Code

A Visual Studio Code extension with rich support for the Python language (for all actively supported versions of the language: >=3.7), including features such as IntelliSense (Pylance), linting, debugging, code navigation, code formatting, refactoring, variable explorer, test explorer, and more!

### Support for [vscode.dev](#)

The Python extension does offer [some support](#) when running on [vscode.dev](#) (which includes [github.dev](#)). This includes partial IntelliSense for open files in the editor.

### Installed extensions

The Python extension will automatically install the [Pylance](#) and [Jupyter](#) extensions to give you the best experience when working with Python files and Jupyter notebooks. However, Pylance is an optional dependency, meaning the Python extension will remain fully functional if it fails to be installed. You can also [uninstall](#) it at the expense of some features if you're using a different language server.

Extensions installed through the marketplace are subject to the [Marketplace Terms of Use](#).

### Quick start

Click a button in the right-hand column of the extension's page to get the extension installed on Python.

### Categories

[Programming Languages](#) [Linters](#) [Debuggers](#)

[Formatters](#) [Data Science](#) [Machine Learning](#)

[Notebooks](#)

### Tags

[debuggers](#) [django](#) [ini](#) [jinja](#) [json](#) [keybindings](#)

[linters](#) [multi-root ready](#) [pip requirements](#)

[pip-requirements](#) [python](#) [requirements.txt](#) [toml](#)

[unittest](#) [yaml](#)

### Works with

[Universal](#) [Web](#)

### Resources

[Support](#)

[Issues](#)

[Repository](#)

[Homepage](#)

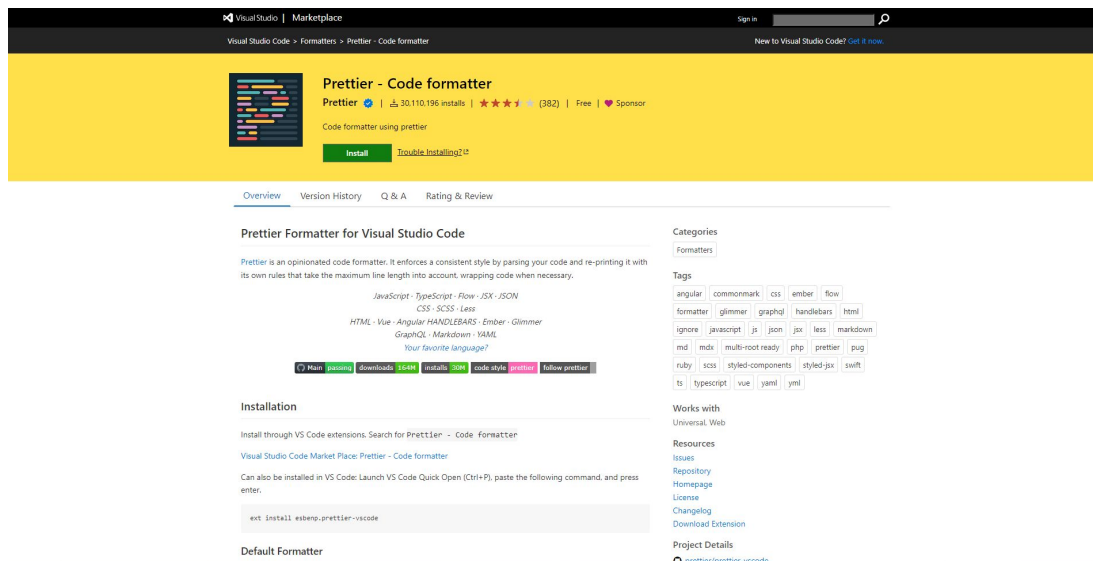
[License](#)

[Changelog](#)

[Download Extension](#)

Disponible aquí

# Python: Introducción - Prettier Extensión



The screenshot shows the Visual Studio Code Marketplace page for the 'Prettier - Code formatter' extension. The page has a yellow header with the extension's name and a green 'Install' button. Below the header, there's a section titled 'Prettier Formatter for Visual Studio Code' with a description of the formatter and a list of supported languages. To the right, there are categories, tags, and resources. At the bottom, there's an 'Installation' section with instructions on how to install the extension.

Visual Studio | Marketplace

Visual Studio Code > Formatters > Prettier - Code formatter

New to Visual Studio Code? [Get it now.](#)

**Prettier - Code formatter**

Prettier 🌟 | 30,110,196 installs | ★★★★★ (382) | Free | ❤️ Sponsor

Code formatter using prettier

[Install](#) [Trouble installing?](#)

[Overview](#) [Version History](#) [Q & A](#) [Rating & Review](#)

**Prettier Formatter for Visual Studio Code**

Prettier is an opinionated code formatter. It enforces a consistent style by parsing your code and re-printing it with its own rules that take the maximum line length into account, wrapping code when necessary.

JavaScript · TypeScript · Flow · JSX · JSON  
CSS · SCSS · Less  
HTML · Vue · Angular · HANDLEBARS · Ember · Glimmer  
GraphQL · Markdown · VAML  
Your favorite language?

🔗 Main [downloads](#) [1648](#) [installs](#) [382](#) [code style](#) [prettier](#) [follow prettier](#)

**Installation**

Install through VS Code extensions. Search for Prettier - Code formatter

Visual Studio Code Market Place: Prettier - Code formatter

Can also be installed in VS Code: Launch VS Code Quick Open (Ctrl+P), paste the following command, and press enter.

```
ext install esbenp.prettier-vscode
```

**Default Formatter**

**Categories**

Formatters

**Tags**

angular | commonmark | css | ember | flow  
formatter | glimmer | graphql | handlebars | html  
ignore | javascript | js | json | jsx | less | markdown  
md | mdx | multi-root ready | php | prettier | pug  
ruby | scss | styled-components | styled-jsx | swift  
ts | typescript | vue | yaml | yml

**Works with**

Universal Web

**Resources**

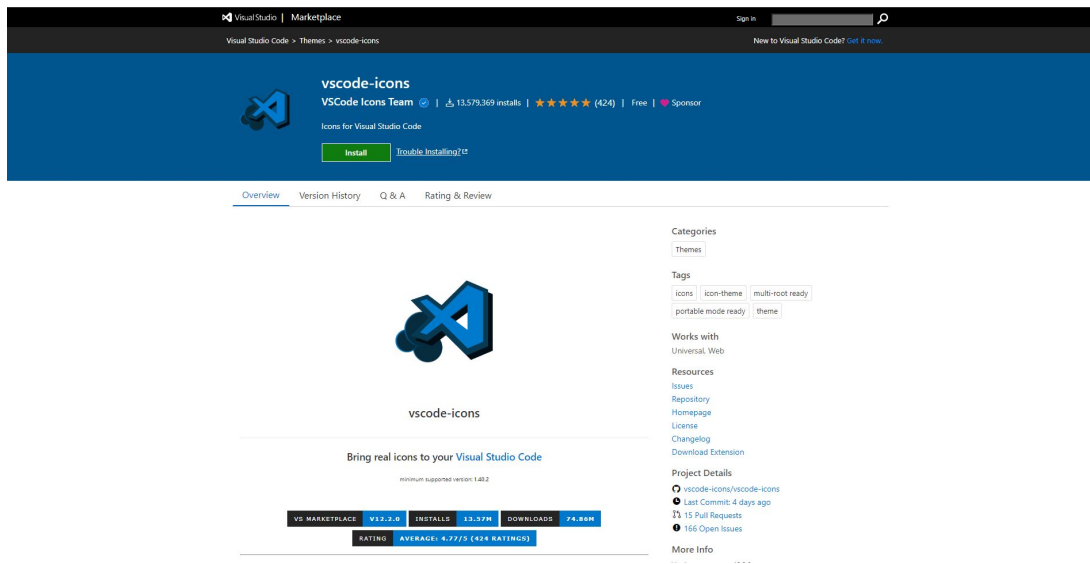
Issues  
Repository  
Homepage  
License  
Changelog  
Download Extension

**Project Details**

[@prettier/prettier-vscode](#)

Disponible aquí

# Python: Introducción - Vscode-icons Extensión



The screenshot shows the Visual Studio Marketplace page for the 'vscode-icons' extension. The header includes the Visual Studio logo and 'Marketplace' text. Below the header, the extension name 'vscode-icons' is displayed, followed by the publisher 'VSCode Icons Team'. The page shows the extension's icon, a blue 'X' logo, and a green 'Install' button. The extension is described as 'Icons for Visual Studio Code'. The page also features a 'Rating & Review' section with a star rating of 4.77/5 (424 ratings) and a 'Downloads' section showing 74.88M downloads. The 'Project Details' section includes links to the extension's repository, license, and changelog. The 'More Info' section provides additional details about the extension.

Visual Studio | Marketplace

Visual Studio Code > Themes > vscode-icons

Sign in

New to Visual Studio Code? Get it now.

**vscode-icons**

VSCode Icons Team | 13,579,369 installs | ★★★★★ (424) | Free | Sponsor

Icons for Visual Studio Code

[Install](#) [Trouble installing?](#)

[Overview](#) [Version History](#) [Q & A](#) [Rating & Review](#)

**vscode-icons**

Bring real icons to your Visual Studio Code

Minimum supported version: 1.40.2

VS MARKETPLACE	VS 2.2.0	INSTALLS	13.57M	DOWNLOADS	74.88M
RATING AVERAGE: 4.77/5 (424 RATINGS)					

**Categories**

Themes

**Tags**

icons icon-theme multi-root ready portable mode ready theme

**Works with**

Universal Web

**Resources**

Issues  
Repository  
Homepage  
License  
Changelog  
Download Extension

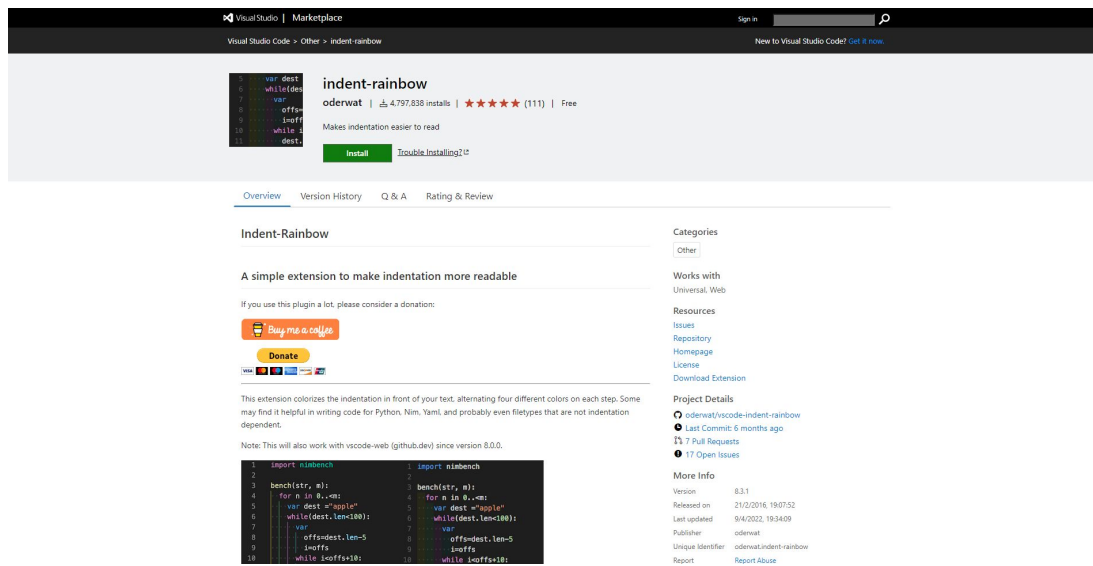
**Project Details**

vscode-icons/vscode-icons  
Last Commit 4 days ago  
15 Pull Requests  
166 Open Issues

**More Info**

Disponible aquí

# Python: Introducción - Indent-rainbow Extensión



The screenshot shows the Visual Studio Marketplace page for the 'indent-rainbow' extension. At the top, there's a header with 'Visual Studio | Marketplace' and a search bar. Below the header, the extension's name 'indent-rainbow' is displayed, along with the publisher 'oderwat', 4,797,838 installs, a 5-star rating, and a 'Free' price tag. A description states 'Makes indentation easier to read'. There are 'Install' and 'Trouble installing?' buttons. Below this, there are tabs for 'Overview', 'Version History', 'Q & A', and 'Rating & Review'. The 'Overview' tab is selected, showing a description: 'A simple extension to make indentation more readable'. It includes a 'Buy me a coffee' button and a 'Donate' button. A note mentions compatibility with 'vscode-web'. A code snippet demonstrates the extension's effect on Python code, showing alternating colors for each indentation level. On the right side, there are sections for 'Categories' (Other), 'Works with' (Universal: Web), 'Resources' (Issues, Repository, Homepage, License, Download Extension), 'Project Details' (Repository link, Last Commit, Pull Requests, Open Issues), and 'More Info' (Version, Released on, Last updated, Publisher, Unique Identifier, Report).

Visual Studio | Marketplace

Visual Studio Code > Other > indent-rainbow

Sign in

New to Visual Studio Code? [Get it now.](#)

**indent-rainbow**  
oderwat | 4,797,838 installs | ★★★★★ (111) | Free  
Makes indentation easier to read  
[Install](#) [Trouble installing?](#)

[Overview](#) [Version History](#) [Q & A](#) [Rating & Review](#)

### Indent-Rainbow

A simple extension to make indentation more readable

If you use this plugin a lot, please consider a donation:

[Buy me a coffee](#)

[Donate](#)

This extension colorizes the indentation in front of your text, alternating four different colors on each step. Some may find it helpful in writing code for Python, Nim, Yaml, and probably even flatypes that are not indentation dependent.

Note: This will also work with vscode-web (github.dev) since version 8.0.0.

```
1 import random 2 import random
2
3 bench(str, m): 3 bench(str, m):
4 for a in B.m: 4 for a in B.m:
5     var dest = "apple" 5     var dest = "apple"
6     while(dest.len<100): 6     while(dest.len<100):
7         var 7         var
8         off=dest.len-5 8         off=dest.len-5
9         i=offs 9         i=offs
10        while i<offs+10: 10        while i<offs+10:
```

**Categories**  
Other

**Works with**  
Universal: Web

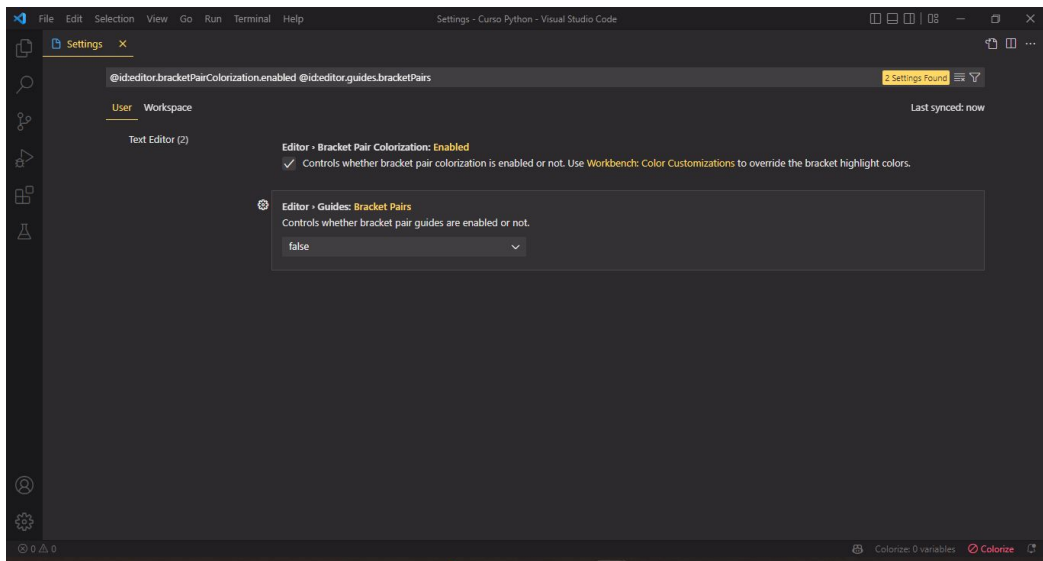
**Resources**  
[Issues](#)  
[Repository](#)  
[Homepage](#)  
[License](#)  
[Download Extension](#)

**Project Details**  
[oderwat/vscode-indent-rainbow](#)  
Last Commit 6 months ago  
7 Pull Requests  
17 Open Issues

**More Info**  
Version 8.3.1  
Released on 21/2/2016, 19:07:52  
Last updated 9/4/2022, 19:34:09  
Publisher oderwat  
Unique Identifier oderwat.indent-rainbow  
Report [Report Abuse](#)

Disponible aquí

# Python: Introducción - Bracket Pair Colorization



@id:editor.bracketPairColorization.enabled @id:editor.guides.bracketPairs



# Python: Introducción - Complejo vs Complicado

**Simple** es mejor que **complejo**.  
**Complejo** es mejor que **complicado**.

- Mientras más complicado es algo, más difícil de entender
- Mientras más complejo es algo, más partes tiene
  
- Los problemas complicados tienden a no tener soluciones simples
- Pero es posible **modularizar** la situación para tener muchos componentes simples

Por ejemplo, el uso de funciones y en formas más avanzadas, clases y objetos hace que el código sea más complejo, pero es todavía fácil de entender



¿Preguntas?