



# Curso Intensivo de Python - Tema 1

Agustín Arenas



## Curso Intensivo de Python - Tema 1

- 1) Presentación e introducción al curso
  - 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?

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# Presentación e introducción al curso

## Agenda

- La agenda del curso consiste en:

Clase nº	Descripción
1	Instalación de programas. Introducción a la programación. Entrada y salida por consola. Comentarios
2	Condicionales. Bucles. Cadenas.
3	Estructuras de datos en Python. Funciones lambda. Módulos.
4	Manejo de excepciones. Introducción a clases y objetos.
5	Introducción a Fast API. Creación de proyecto final.



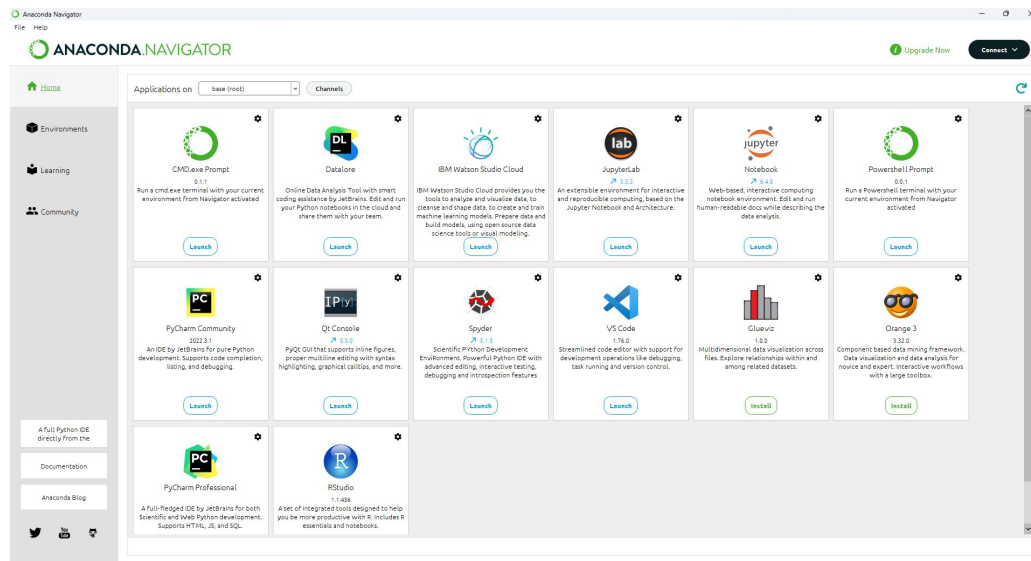
# Python: Introducción - ¿Qué?¿Cuándo?¿Ah?

## 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



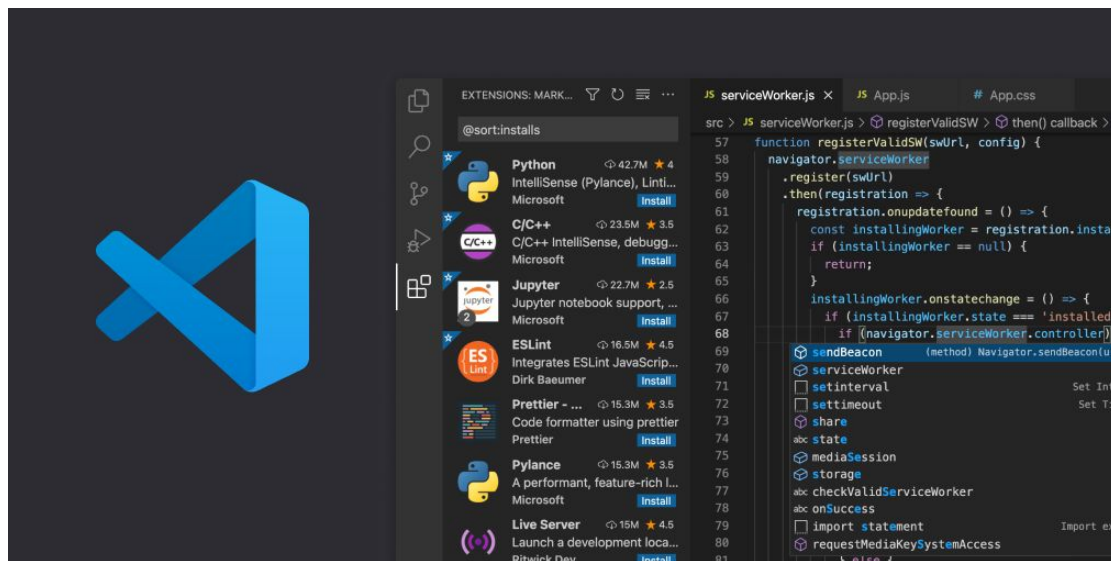
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# Python: Introducción - PyCharm



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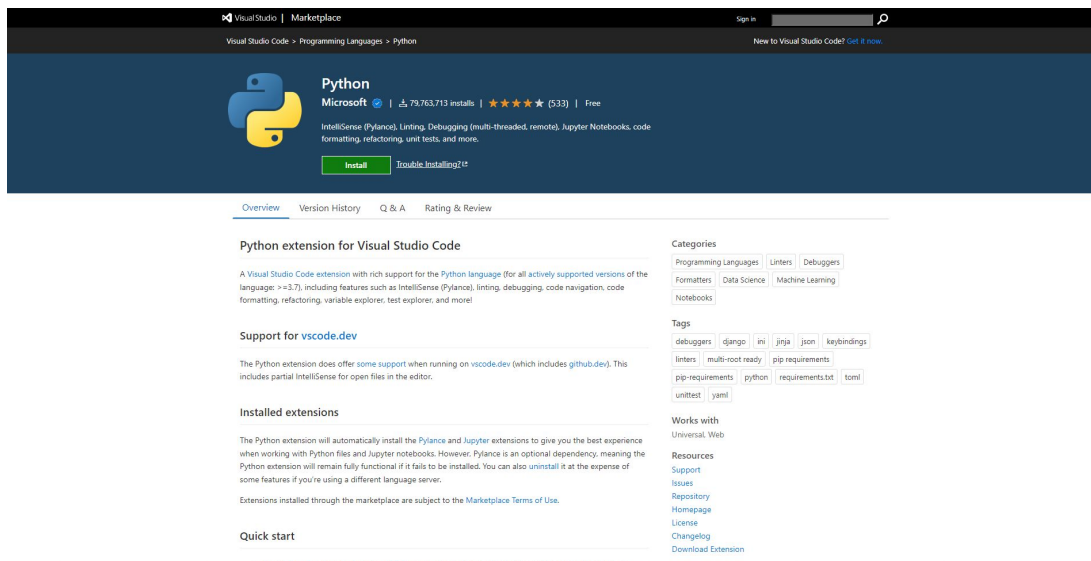
# Python: Introducción - Vs Code



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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, the Marketplace tab, and a search bar. Below the header, the extension is listed with the Python logo, the Microsoft logo, and the text "Python" followed by "Microsoft" and a blue checkmark. It shows 79,763,713 installs, a 5-star rating (5.33), and is free. A description mentions IntelliSense (Pylance), linting, debugging, and Jupyter Notebooks. There are "Install" and "Trouble installing?" buttons. Below this, there are tabs for Overview, Version History, Q & A, and Rating & Review. The main content area is titled "Python extension for Visual Studio Code" and describes the extension's features. It also includes a section for "Support for vscode.dev", "Installed extensions", and "Quick start". On the right side, there are sections for "Categories", "Tags", "Works with", "Resources", and "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

[Download Extension](#)

**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](#)

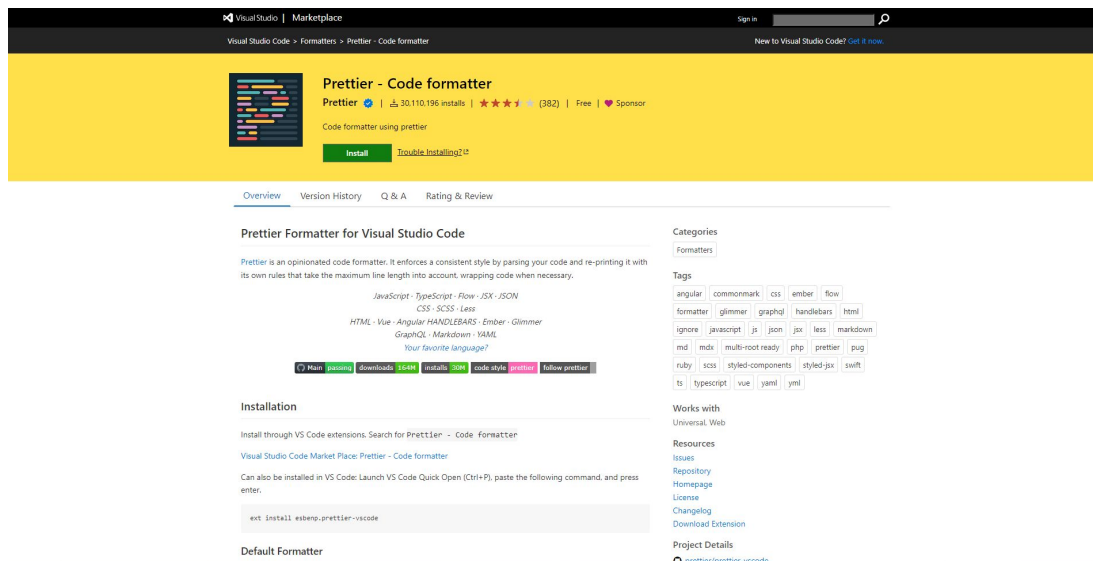
[License](#)

[Changelog](#)

[Download Extension](#)

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# Python: Introducción - Prettier Extensión



The screenshot shows the Visual Studio 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 is a section titled 'Prettier Formatter for Visual Studio Code' with a description of the formatter and a list of supported languages. The 'Installation' section provides instructions on how to install the extension. The 'Default Formatter' section shows the command to set Prettier as the default formatter. The right sidebar contains categories, tags, and resources.

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

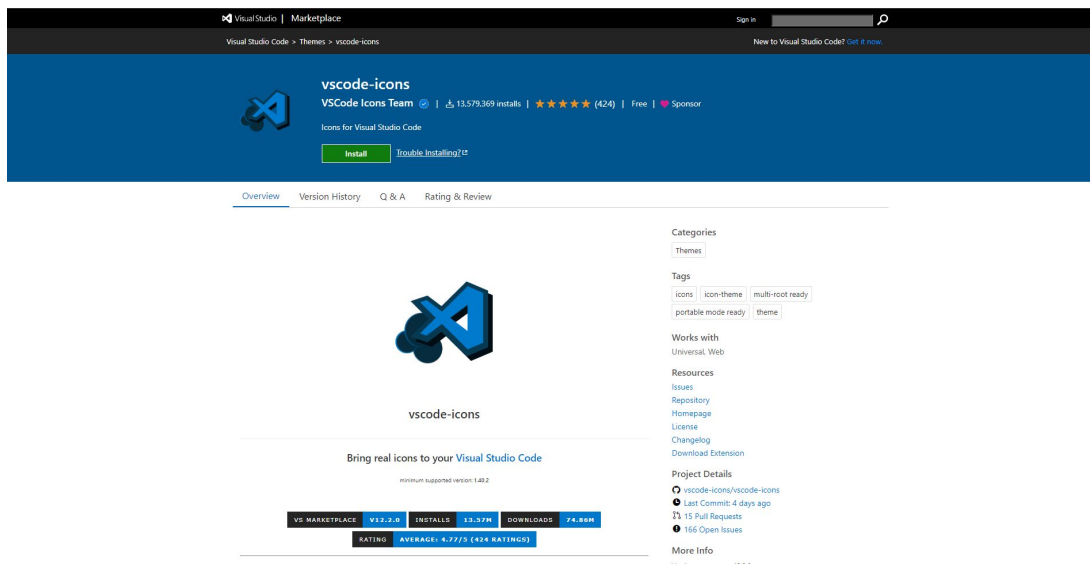
Works with  
Universal: Web

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

Project Details  
[@prettier/prettier-vscode](#)

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# Python: Introducción - Vscode-icons Extensión



The screenshot shows the Visual Studio Marketplace page for the 'vscode-icons' extension. The page has a dark blue header with the Visual Studio logo and 'Marketplace' text. Below the header, there's a section for the 'vscode-icons' extension by the 'VSCode Icons Team'. It shows the extension's icon, a green 'Install' button, and a 'Trouble installing?' link. The extension has 13,579,369 installs, a 4.77/5 rating from 424 reviews, and is marked as 'Free'. Below this, there are tabs for 'Overview', 'Version History', 'Q & A', and 'Rating & Review'. The 'Overview' tab is selected, showing the extension's icon and name. Below the icon, it says 'Bring real icons to your Visual Studio Code' and 'Minimum supported version: 1.40.2'. At the bottom, there's a table with statistics: VS Marketplace (13.2.0), Installs (13.37M), Downloads (74.88M), and Rating (Average: 4.77/5 (424 Ratings)). On the right side, there are sections for '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), and 'More info'.

VisualStudio | 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	Version	Installs	Downloads	Rating
13.2.0	13.37M	74.88M	Average: 4.77/5 (424 Ratings)	

**Categories**  
Themes

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

**Works with**  
Universal Web

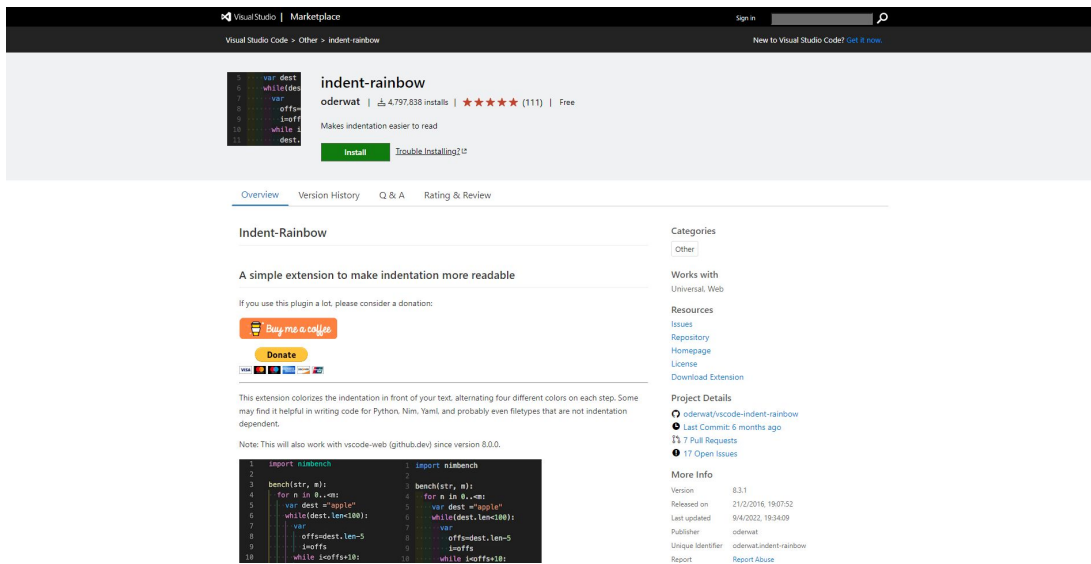
**Resources**  
Issues  
Repository  
Homepage  
License  
Changelog  
Download Extension

**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. The top section features a code snippet with Python code where indentation is highlighted with different colors. Below this, the extension name 'indent-rainbow' is displayed along with the publisher 'oderwat', a star rating of 4.797,838, and a 'Free' label. An 'Install' button is prominently shown. The page is divided into sections: 'Overview' (which includes a description, a donation link, and a note about compatibility), 'Version History', 'Q & A', and 'Rating & Review'. On the right side, there are sections for 'Categories', 'Works with', 'Resources', 'Project Details', and 'More Info'.

**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
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

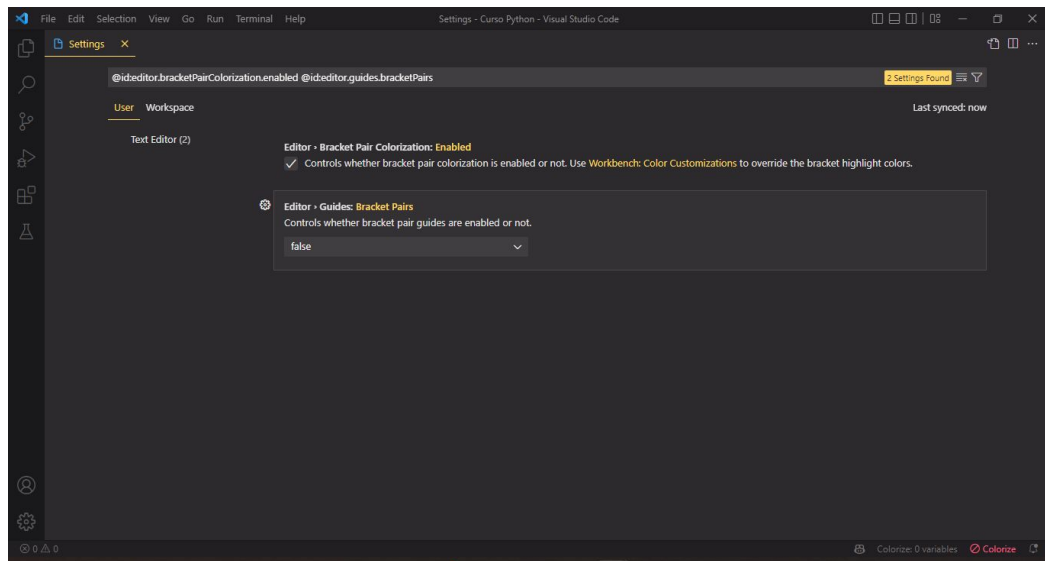
**Resources**  
[Issues](#)  
[Repository](#)  
[Homepage](#)  
[License](#)  
[Download Extension](#)

**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](#)

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# Python: Introducción - Bracket Pair Colorization



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



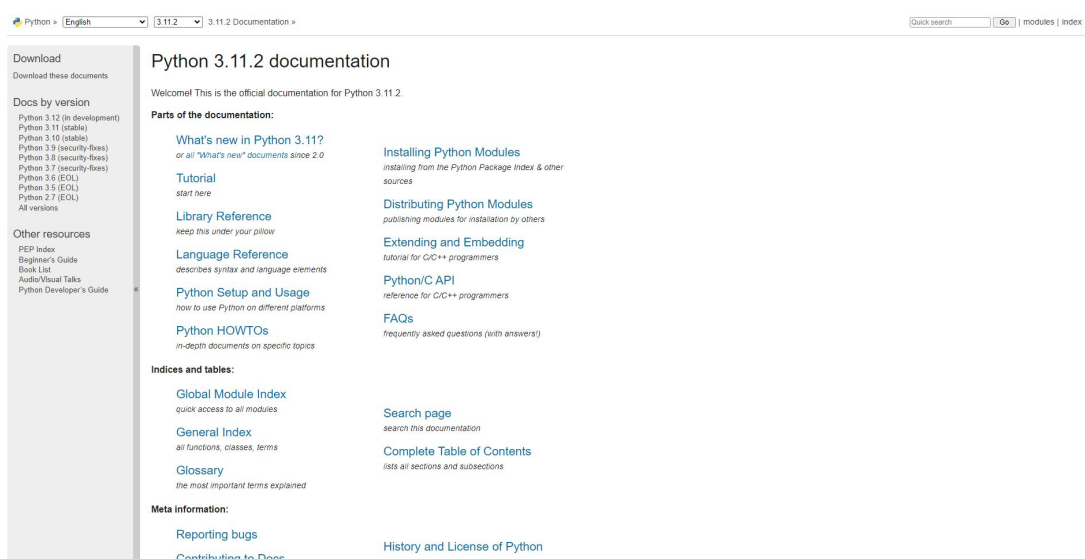
# Python: Introducción - Complejo vs Complicado

**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

# Python: Introducción - Documentación



The screenshot shows the official Python 3.11.2 documentation website. At the top, there's a navigation bar with 'Python' and a language dropdown set to 'English', and a version dropdown set to '3.11.2'. A search bar and links for 'modules' and 'index' are also present. The main heading is 'Python 3.11.2 documentation'. Below it, a welcome message states: 'Welcome! This is the official documentation for Python 3.11.2.' The page is organized into sections: 'Parts of the documentation:' which includes links for 'What's new in Python 3.11?' (with a note about 'What's new' documents since 2.0), 'Tutorial' (start here), 'Library Reference' (keep this under your pillow), 'Language Reference' (describes syntax and language elements), 'Python Setup and Usage' (how to use Python on different platforms), 'Python HOWTOs' (in-depth documents on specific topics), 'Installing Python Modules' (installing from the Python Package Index & other sources), 'Distributing Python Modules' (publishing modules for installation by others), 'Extending and Embedding' (tutorial for C/C++ programmers), 'Python/C API' (reference for C/C++ programmers), and 'FAQs' (frequently asked questions (with answers!)). 'Indices and tables:' includes 'Global Module Index' (quick access to all modules), 'General Index' (all functions, classes, terms), and 'Glossary' (the most important terms explained). 'Meta information:' includes 'Reporting bugs' and 'Contributing to Docs'. A 'Search page' link is also present with the text 'search this documentation'. A 'Complete Table of Contents' link is also present with the text 'lists all sections and subsections'. A 'History and License of Python' link is at the bottom right.

Disponible aquí



¿Preguntas?