

Topic 1: Introduction to Integrated Development Environment

Programación para Análisis de Datos II

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Introduction

- 1.1 How to execute a Python program?
- 1.2 What is an IDE?
- 1.3 Type of IDEs
- 1.4 Visual Studio Code (VS Code)
- 1.5 Installation VS Code
- 1.6 Hello World!

1.1 How to execute a Python program ?

There are multiple ways to tell Python to execute the code you type.
Here are some examples:

- ❶ **Interactive Prompt**
- ❷ **System Command Lines and Files**
- ❸ **Integrated Development Environment (IDE)**
- ❹ **Notebooks**

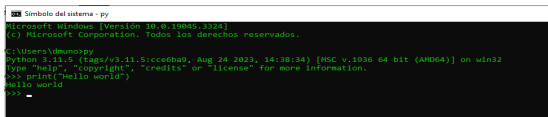
1.1 How to execute a Python program ?

- **Interactive Prompt:**

Directly commands
thought a console.

- **Command Line:**

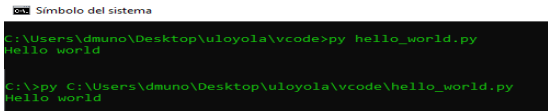
Requires a Run
command (py or python)
and "a file or path file to
be executed"



```
Símbolo del sistema - py
Microsoft Windows [Version 10.0.19045.3924]
(c) Microsoft Corporation. Todos los derechos reservados.

C:\Users\dmuno>py
Python 3.11.5 (tags/v3.11.5:ccc6ba9, Aug 24 2023, 14:38:34) [MSC v.1936 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>> print("Hello world")
Hello world
>>>
```

Figure: Interactive Prompt



```
Símbolo del sistema

C:\Users\dmuno\Desktop\uloyola\vcde>py hello_world.py
Hello world

C:\>py C:\Users\dmuno\Desktop\uloyola\vcde\hello_world.py
Hello world
```





Figure: Command Line

1.2 What is an IDE?

- **Integrated Development Environment (IDE):** An IDE is a **desktop interface program** that lets you edit, run, browse, and debug Python programs, all from a single interface.
- It represents an easy-to-use **alternative** to typing command lines, a less problem-prone alternative to clicking on icons, and a great way for newcomers to get started editing and running code.
- Easy to debug and recommended for professional use.
- Allows a Marketplace to easy install plugins to interact with other tools.

1.3 Type of IDEs

There are several IDEs available in the market.

IDE name	Logo	Description
Python IDLE		By Python Software Foundation, Free.
Visual Studio Code	 Visual Studio Code	By Microsoft, Free.
PyCharm		By JetBrains, Freemium.
Atom		By Github, open-source, free.

1.3 Visual Studio Code (VS Code)



Visual Studio Code

- **Visual Studio Code**, also commonly referred to as **VS Code**, is a source-code editor made by **Microsoft** for Windows, Linux and macOS.
- Features include support for debugging, syntax highlighting, intelligent code completion, snippets, code refactoring, and embedded Git.
- Users can change the theme, keyboard shortcuts, preferences, and install extensions that add functionality.
- In the Stack Overflow 2023 Developer Survey, Visual Studio Code was ranked the **most popular developer environment tool**.

1.5 Installation VS Code

• Visual Studio Code

<https://code.visualstudio.com/download>

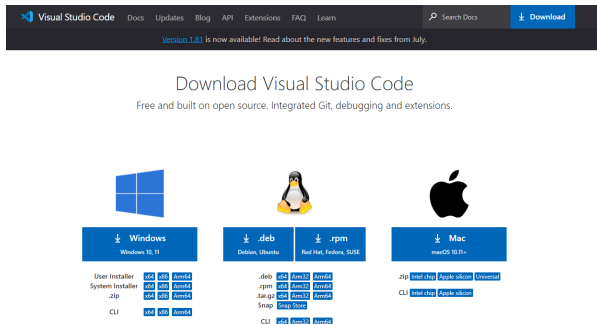


Figure: Main page

New! - No installer full online - <https://vscode.dev/>

1.5 Installation VS Code

- Go to the "Extensions" option
- **Install Python Extension**

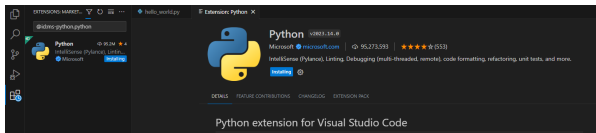


Figure: Main page

1.6 Hello World!

- Create and run Hello world!
- Debug mode Hello world—