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:

1. **Interactive Prompt**
2. **System Command Lines and Files**
3. **Integrated Development Environment (IDE)**
4. **Notebooks**

ej; python 3.11.5
3.=release major
11.=minor feature release
5= bug fixing version

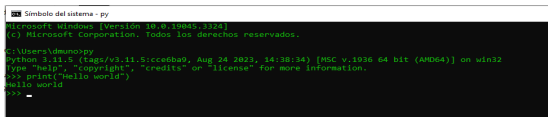- **Interactive Prompt:**
  Directly commands
  thought a console.
  everything is in the memory,

- **Command Line:**
  Requires a Run
  command (py or python)
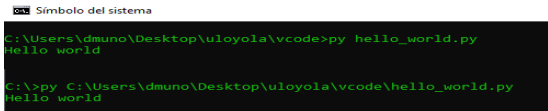 and "a file or path file to
  be executed" ..... .py

we execute files by files

Figure: Interactive Prompt

Figure: Command Line

1.1 How to execute a Python program ?

- **Integrated Development Environment IDE:** Application with interface.

- **Notebook:** Cells to execute code

Figure: IDE

Figure: Notebook

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		By Microsoft, Free.
PyCharm		By JetBrains, Freemium.
Atom		By Github, open-source, free.

open source= code is open, if i find a bug and i can
apply and correct possible errors and bugs

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.**

- **Visual Studio Code**
  https://code.visualstudio.com/download
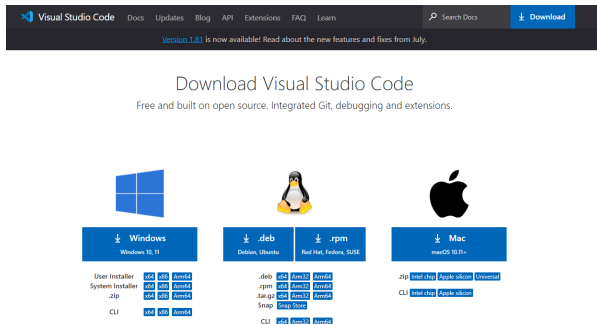
New! - No installer full online - https://vscode.dev/

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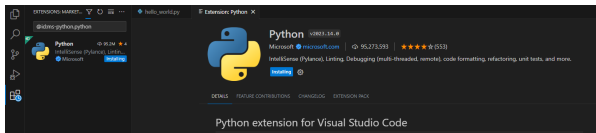- **Install Python Extension**

Figure: Main page

1.6 Hello World!

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