



Setting Up Your First Development Environment

A Step-by-Step Guide

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Introduction

Welcome to the world of programming!

In this guide, we will help you set up your first development environment.

Whether you are an absolute beginner or you are switching from another environment, this guide will help provide a solid foundation.



Required Tools

Computer with Internet access

Administrative access to install software

Patience and enthusiasm to learn!

Text Editors vs. IDEs

Text Editor

Basic tools that allow you to write and edit code. Examples: Notepad++, Sublime Text, Atom.

IDE (Integrated Development Environment)

Advanced tools with features like debugging, code suggestions, and built-in terminals. Examples: Visual Studio Code, PyCharm, Eclipse.

For beginners, we recommend starting with Visual Studio Code (VSCode). It is lightweight, versatile, and has a plethora of extensions.

Installing Necessary Software

Go to [Visual Studio Code](#) and download the installer suitable for your operating system.

Follow installation instructions. (mostly clicking next)

Once installed, open VSCode and familiarize yourself with the interface.

Setting Up Version Control

Version control systems allow you to track changes in your code. The most popular system is Git.

Download and install [Git](#).

After installation, open a terminal or command prompt and type:

```
git --version
```

This ensures Git was installed correctly.

Using the Terminal

The terminal (or command prompt) is a powerful tool that you will use often in development.

- For **Windows** users, consider using Windows Subsystem for Linux (WSL) or Powershell.
- **Mac** users have the built-in Terminal.
- **Linux** users can access the terminal with a shortcut or through the application menu.

Basic Commands

- `'pwd'` – Displays current directory.
- `'ls'` – Lists files in the current directory.
- `'cd [directory_name]'` – Changes directory.
- `'mkdir [directory_name]'` – Creates a new directory.
- `'touch [file_name]'` – Creates a new file.

Practice these commands in your terminal to get comfortable.

Writing Your First Code

Let's write a simple "Hello, World!" program.

1. In VSCode, click **'File > New File'**.
2. Type: **'print("Hello, World!")'**.
3. Save the file with a **' .py'** extension, indicating it's a Python file.
4. Open a terminal in VSCode (Terminal > New Terminal).
5. Navigate to the directory where you saved the file.
6. Run the file with: **'python3 file_name.py'**

You should see "Hello, World!" printed in the terminal!

Conclusion

Congratulations! You've set up your first development environment.

There's so much more to explore, but you've taken the crucial first step.

Keep learning.

Keep coding.

Keep building!