1a. Installation and Resources

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INTRODUCTION

We start by covering the essential steps to install Julia and VS Code. The latter is a code editor to write and execute code in multiple languages. We'll conclude by providing some valuable online resources for Julia's users.

INSTALLING JULIA

> **Remark**
> All the links mentioned on the website are included in Links, located in the left navigation bar.

To download Julia and access its official documentation, visit **Julia's official website**. Note that the installation process depends on your computer's operating system.

INSTALLING VS CODE

Once Julia is installed, you'll need an editor to write scripts and visualize outputs. There are numerous alternatives in this respect. **Our website supposes that you use Visual Studio Code (aka VS Code)**, which is free, officially supported by Julia, and runs on any operating system (i.e., Windows, macOS, and Linux). One of the key benefits of VS Code is the possibility of installing plugins to extend the editor's capabilities. In fact, you'll need to add the *Julia Language Support* plugin for running Julia.

> **Privacy-Oriented Version of VS Code**
> VS Code is open-source software created and maintained by Microsoft. If you want a more private alternative that disables telemetry and tracking, **VSCodium** is a rebuild of VS Code.

Links to other popular editors can be found on **Useful Links**, including Vim, Emacs, NotePad, and Sublime. These editors are officially supported by Julia (except Sublime). I strongly recommend getting proficient in either VS Code or one of these alternatives. This will allow you **to master a single tool for coding in multiple programming languages**.

> **Warning!**

> Avoid getting used to specialized editors built for one particular language, such as RStudio for R (or its newer version **Posit**). The editors I mentioned were designed for coding, regardless of the programming language you choose. Mastering a general code editor will enhance your coding skills—you'll be able to apply the same tools and keyboard shortcuts to every language you work with.

JULIA'S RESOURCES FOR HELP

There are two official resources for learning Julia.

1. **Julia's official documentation**. Written by Julia's developers.
2. **Julia Discourse**. Official forum for asking questions.

INSTALLING R AND PYTHON (*OPTIONAL*)

Julia offers a seamless integration with other programming languages like R and Python, allowing you to export data from Julia, perform specific operations, and then import the results back into Julia. This interoperability is particularly useful when a desired function is only available in one of these languages.

For those familiar with R and Python, **this note** outlines some noteworthy differences with respect to Julia. Additionally, this **cheat sheet** provides a quick reference on syntax differences among Matlab, Python, and Julia.