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**Report on the Installation of R and RStudio on Windows**

**Introduction**

This report documents the installation process for R and RStudio on a Windows system. It includes the steps, challenges, and relevant directory paths needed for a smooth setup.

**1. Preparing for Installation**

To start, I reviewed installation requirements and obtained the latest R version from CRAN and a compatible RStudio version from its official site. Installing R first is crucial, as RStudio requires it to function.

**2. Installing R-Base on Windows**

I began by installing R-base, the core R software, by navigating to CRAN, selecting the Windows version, and downloading the latest R file. The steps included:

Directory Selection:

``` C:\Program Files\R\R-4.4.1 ```

-Additional Options: I selected default settings to associate R with `.RData` files and create a GUI shortcut.

The setup completed successfully, creating necessary subdirectories (`bin`, `etc`, `library`) within the specified folder.

**3. Installing RStudio on Windows**

After R was installed, I downloaded RStudio from its official website. Unlike R, RStudio installs by default in:

```C:\Program Files\RStudio```

The installer offered basic setup options, including a desktop shortcut. The installation was quick, and no errors occurred. I confirmed RStudio’s compatibility with the R version installed in `C:\Program Files\R\R-4.4.1`.

**4. Challenges Encountered**

A primary challenge was ensuring R and RStudio versions were compatible, as R updates frequently. I confirmed compatibility through the RStudio website. Additionally, CRAN’s extensive documentation was somewhat overwhelming, so I focused on the basic Windows installation instructions.

**5. Verifying the Installation**

To verify the setup, I opened RStudio, which displayed the expected interface panels for the console, environment, and file viewer. Running a simple command, such as:

```r

print("Data Science")

```

confirmed that both R and RStudio were installed and configured correctly.

**6. Final Thoughts**

The installation process was smooth overall. By following the correct order and using default directories, I ensured compatibility and ease of access. RStudio’s organized interface will support various data analysis projects, making R’s capabilities more accessible.

**Conclusion**

In summary, installing R and RStudio on Windows provided a straightforward starting point for statistical computing course SDS 6103. The setup process and attention to version compatibility created a solid foundation for data analysis work.