The RStudio Environment

**Estimated Duration:** 40 minutes

**In this Session**

* Create a new R Script file and enter/run a code to populate the environment
* Session, working directory and global environment
* General, Appearance and Pane Layout in Preferences settings
* Overview of Project

1. **R Script File**

R code can be run from the console or R Script file. Codes written in an R Script file can be saved in any directory and has a .R extension.

1. **Session**

Launching RStudio opens a session. You can open multiple sessions.

**Environment**

An environment stores user-defined objects. The workspace is your current environment and is usually the global environment. Use environment() to display the name of the environment.

**Working Directory**

The working directory is the file path of the current environment and is the default location where files are read from and saved into.

If the environment contains objects, saving your workplace when exiting RStudio creates a .RData file in the current working directory. This file has no name and is usually a hidden file in your O/S directory, but you can view it from the Files pane in RStudio.

Use getwd() to show the path of the working directory and setwd() to set a new working directory. Alternatively, go to the Session menu in RStudio to change the directory. The current path is displayed just below the Console tab.

**Launching RStudio**

Launching RStudio directly from the application restores the default working directory (specified in the Preferences settings) and the .RData environment in that directory.

Launching RStudio from an R file restores the working directory and environment of the .RData file where both files are located, and not the default directory. If the same R file is moved to a different folder, opening it directly will restore the working directory and .RData (if any) of that folder.

* **Tip**

Save all R files belonging to the same project in a specific folder with its own RData file. Since you can open any R files not related to the project in the same session, it can get messy when unrelated objects are stored in the current environment. Always check your workspace to ensure it is pointing to the right working directory and that the environment values are relevant. Open different sessions for different projects.

* **Exercise**

1. Open a new RStudio session and create a new R script file and save.
2. Create a new vector, for example: x <- “green”.
3. Run the code to store the value in the global environment.
4. Take note of where the R and RData files are located.
5. Copy the R file to a new folder and rename it. Run the file directly from the directory.
6. Observe the working directory path and global environment pane.
7. Run the code, exit and save workplace image.
8. Note where the new .RData has been created.
9. Set the working directory back to the default path. Create another vector from the second R file and run the code. In which environment was the vector value stored?
10. **Preferences**

Overview of the General, Appearance and Pane Layout settings.

Further reading

<https://support.rstudio.com/hc/en-us/articles/200549016-Customizing-RStudio>

1. **Project**

Creating a project designates a working directory with a .RProj file. When you open a project, the working directory will automatically be set to the directory that the RProj file is located in.

* **Exercise**

1. Create a new project from RStudio and briefly describe the differences between *New Directory, Existing Directory* and *Version Control*.
2. Observe the files that have been created in the directory.