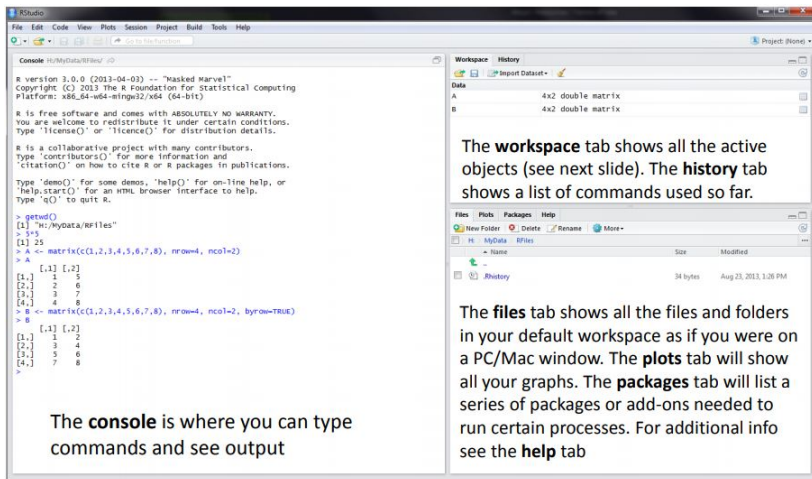


- R is a cross-platform, zero-cost statistical programming environment.
- R offers a powerful but easy-to-learn set of tools that can assist you with working with data.
- **R**
- **CRAN**
- **RStudio**

RStudio

RStudio screen



The screenshot displays the RStudio application window. The top menu bar includes File, Edit, Code, View, Plots, Session, Project, Build, Tools, and Help. Below the menu is a toolbar with icons for file operations and running code. The main window is divided into three panes:

- Console:** Shows the R version (3.0.0), copyright information, and the output of the `getwd()` command, which is `"H:/MyData/RFiles"`. It also shows the creation of two matrices, A and B, with their dimensions and contents.
- Workspace:** Lists the active objects in the workspace, including `A` and `B`, both of which are `4x2 double matrix`.
- Files:** Shows the file explorer for the current workspace, listing files and folders such as `H:`, `MyData`, and `RFiles`.

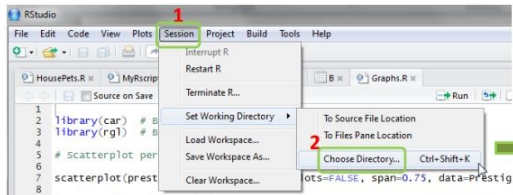
The **workspace** tab shows all the active objects (see next slide). The **history** tab shows a list of commands used so far.

The **files** tab shows all the files and folders in your default workspace as if you were on a PC/Mac window. The **plots** tab will show all your graphs. The **packages** tab will list a series of packages or add-ons needed to run certain processes. For additional info see the **help** tab

The **console** is where you can type commands and see output

- **Workspace** is your current **R** working environment and includes any user-defined **objects: vectors, matrices, data frames, lists, functions and others**;
- at the end of an **R** session, the user can save an image of the current workspace that is automatically reloaded the next time **R** is started.
- RStudio: one project is one workspace;
- the workspace is saved to the file `.RData`.

RStudio working directory



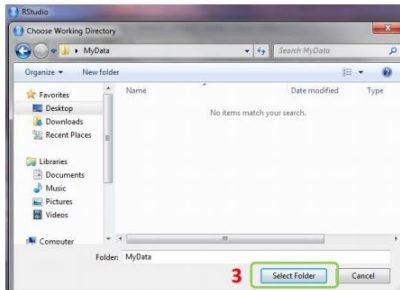
If you have different projects you can change the working directory for that session, see above. Or you can type:

```
# Shows the working directory (wd)
```

```
getwd()
```

```
# Changes the wd
```

```
setwd("C:/myfolder/data")
```



Remember that you must use the forward slash / or double backslash \\ in R ! The Windows format of single backslash will not work.

RStudio - creating projects