Computer lab: R & RStudio

- In this course we will perform structural network analysis with packages implemented in the R statistical software
- R is the software – but we will use Rstudio as an interface
- R is an open-source project lifted by a virtual community of thousands of developers and million of users worldwide

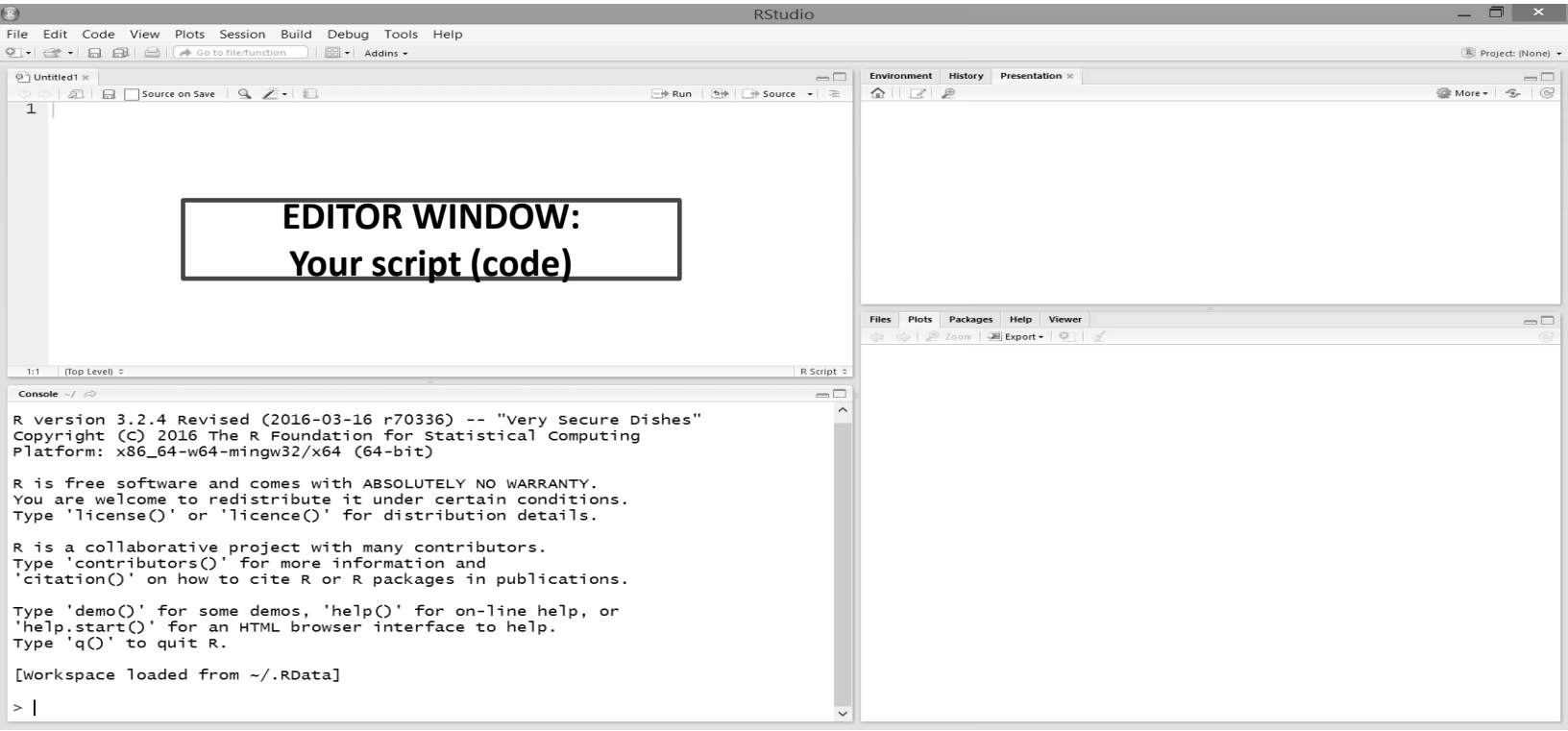
Why R?

- Reproducibility – R scripts
- Today R offers the most elegant and comprehensive language for the structural and dynamic analysis of networks
- It's free and contains state-of-the-art statistical and graphical routines not yet available in other software
- You can do all your analysis in R, but also data scrapping, create a webpage, or write your research paper

Getting started with R

- Using R is easier than it looks like. And once you master it, you save a ridiculous amount of time
- Afraid of R? It is just a big calculator (a very smart one)
- R is case sensitive
- The # character at the beginning of a line signifies a comment, it is ignored by R
- The <- operator assigns and stores objects (data, output of

RStudio


RStudio
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EDITOR WINDOW:
Your script (code)
Environment History Presentation
More
Files Plots Packages Help Viewer
Zoom
Export
Console ~/
R version 3.2.4 Revised (2016-03-16 r70336) -- "Very Secure Dishes"
Copyright (C) 2016 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)
R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.
R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.
Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.
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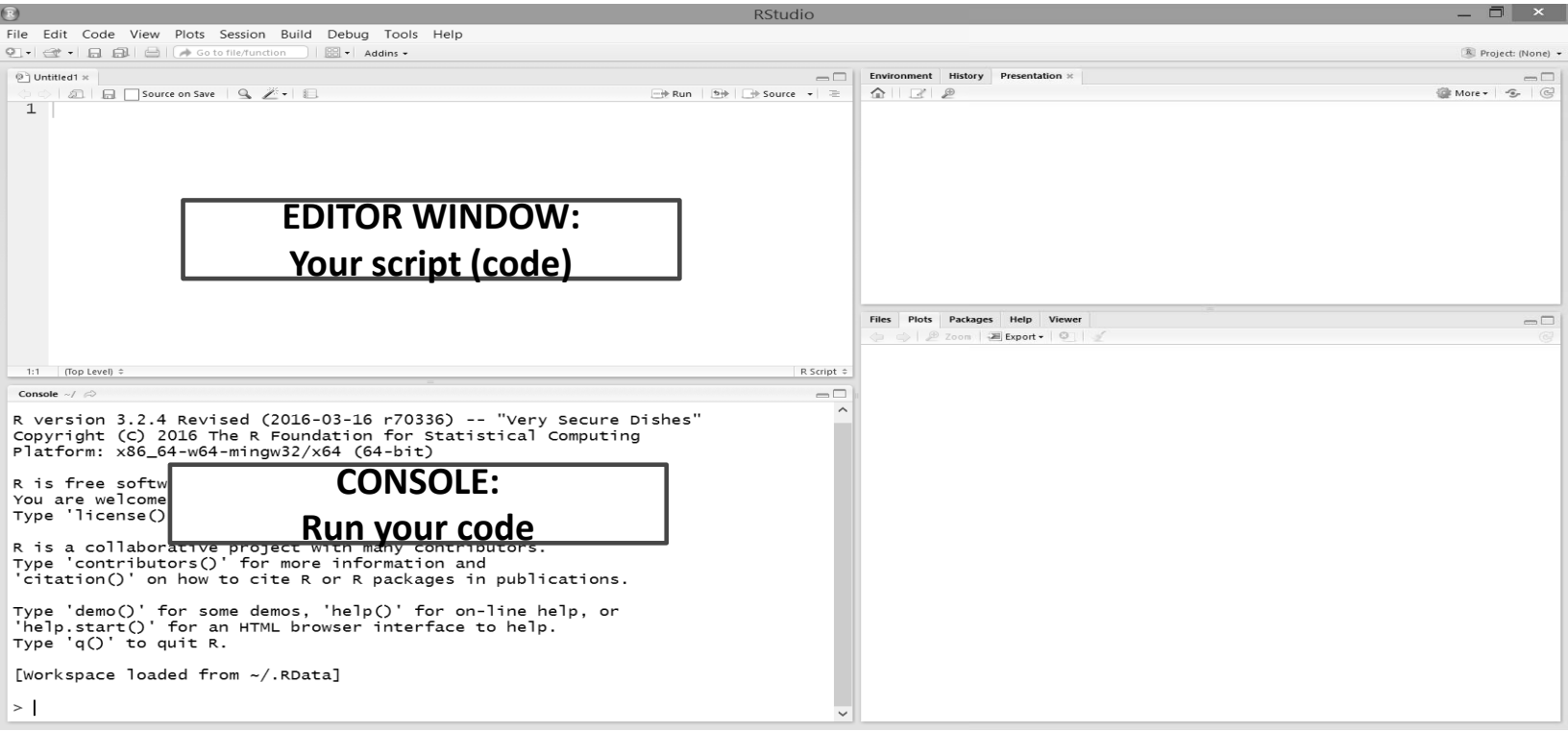
RStudio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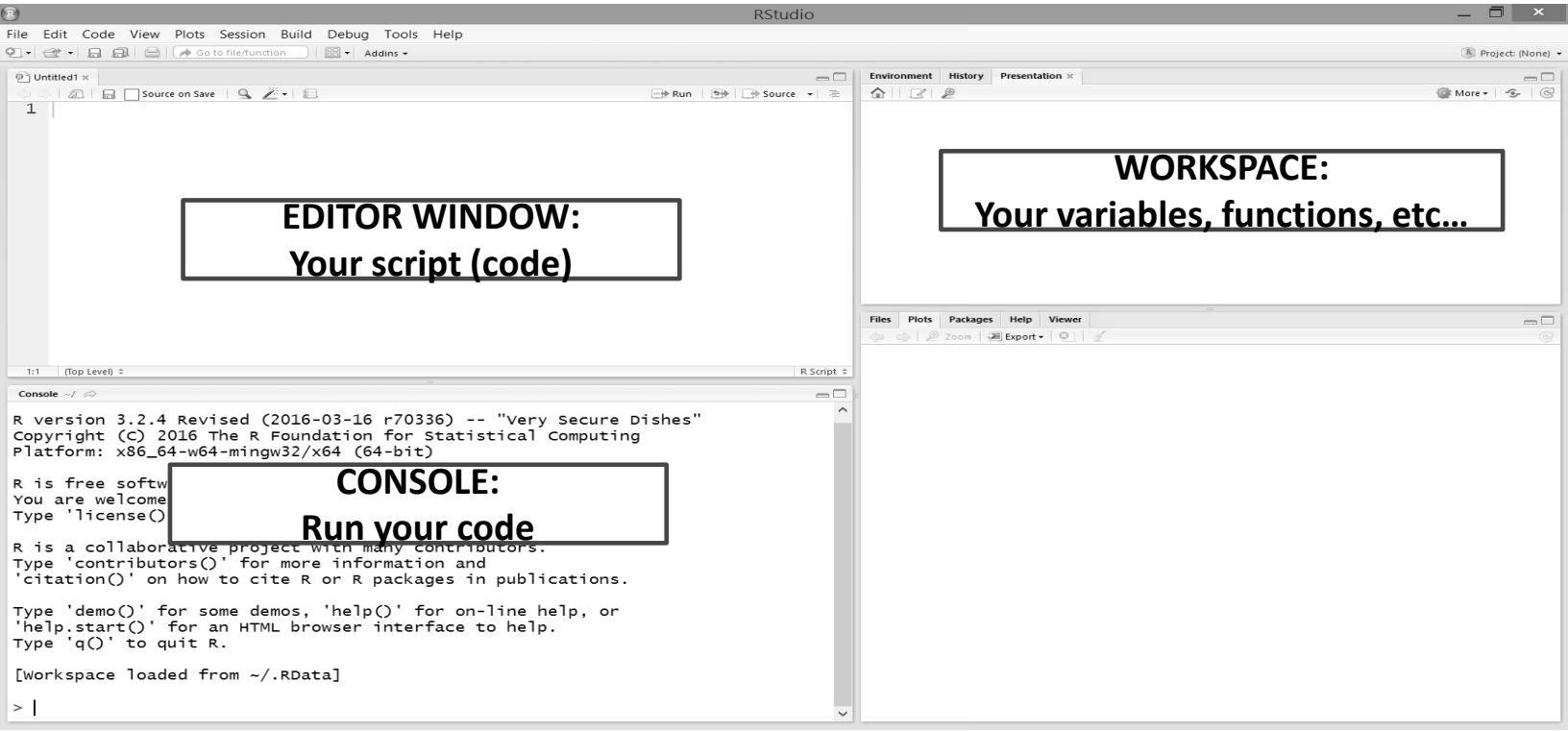
RStudio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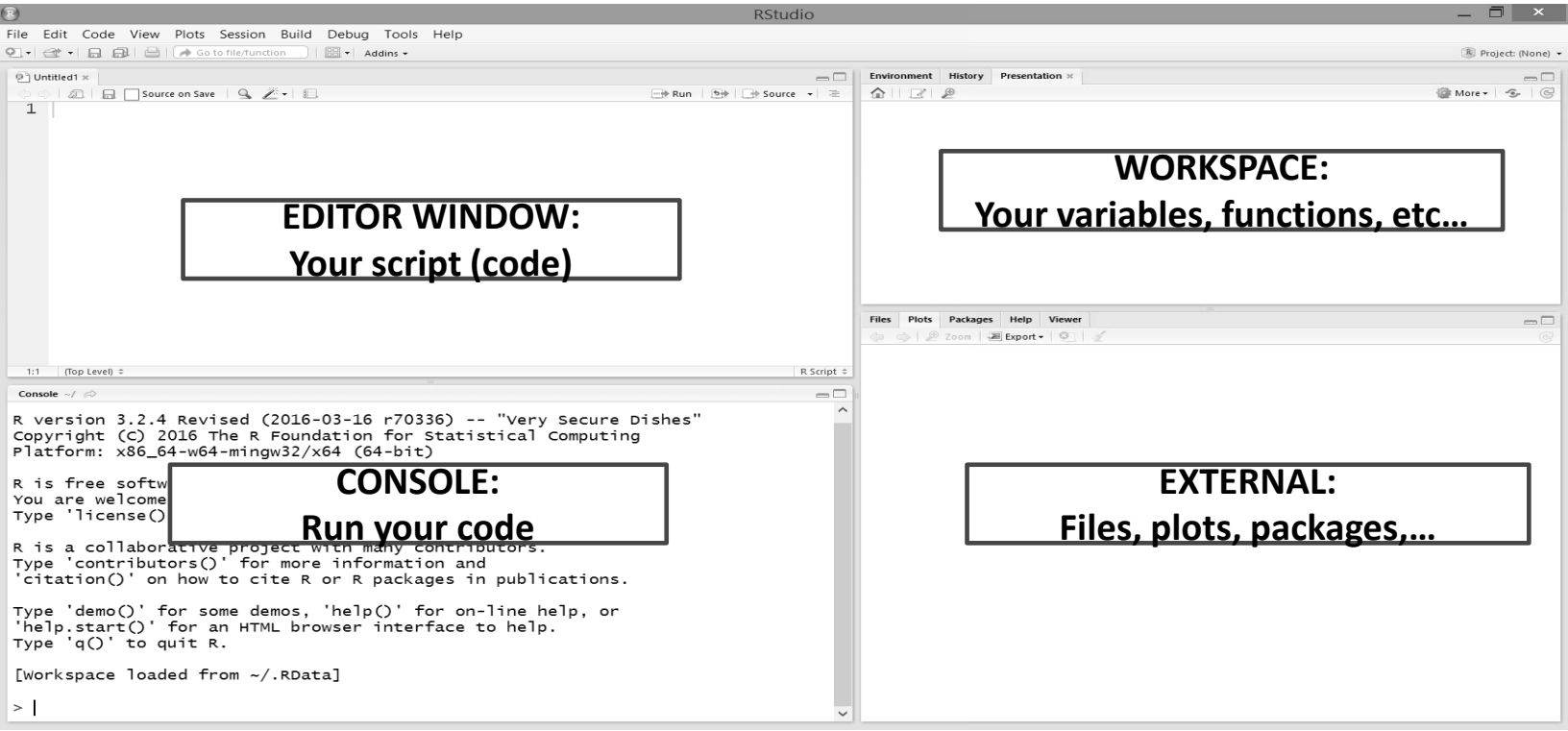
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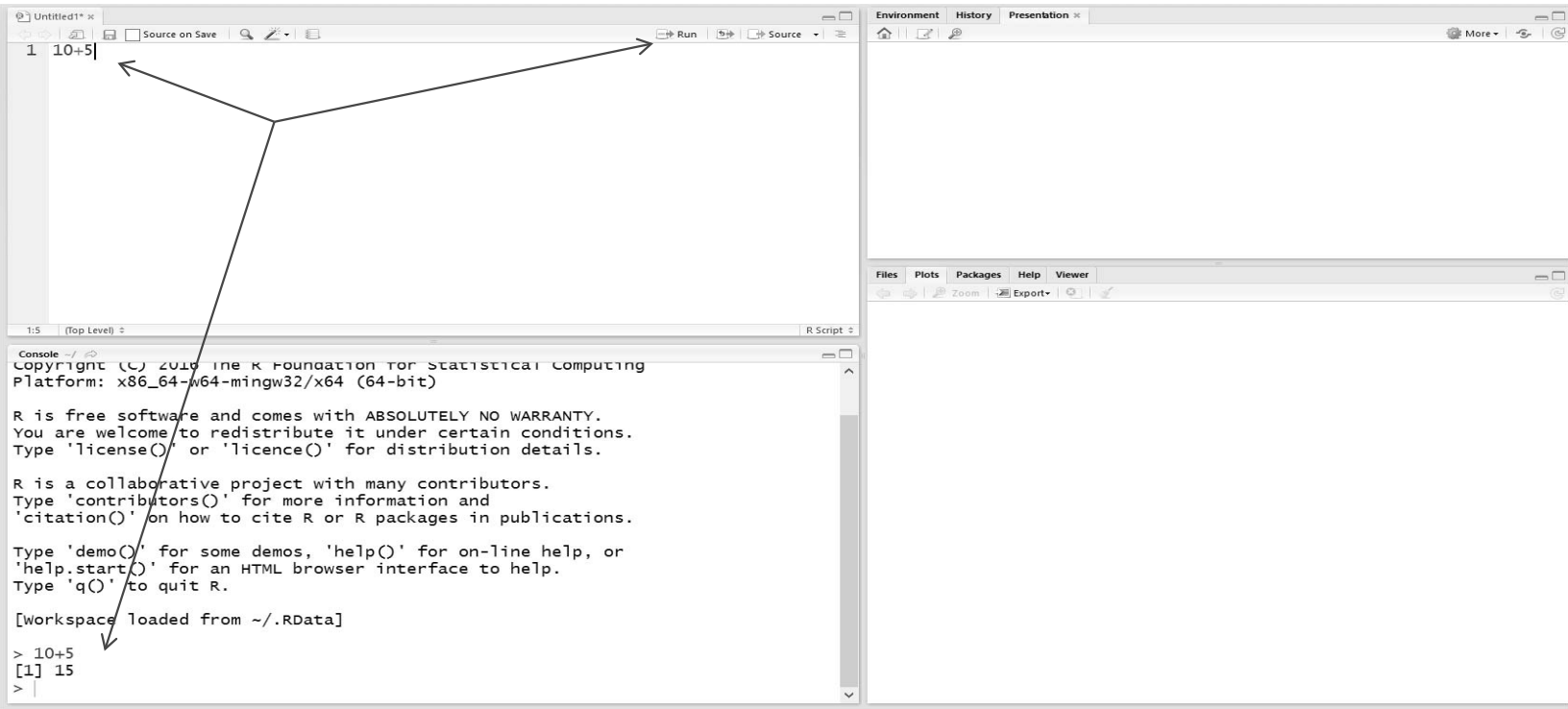
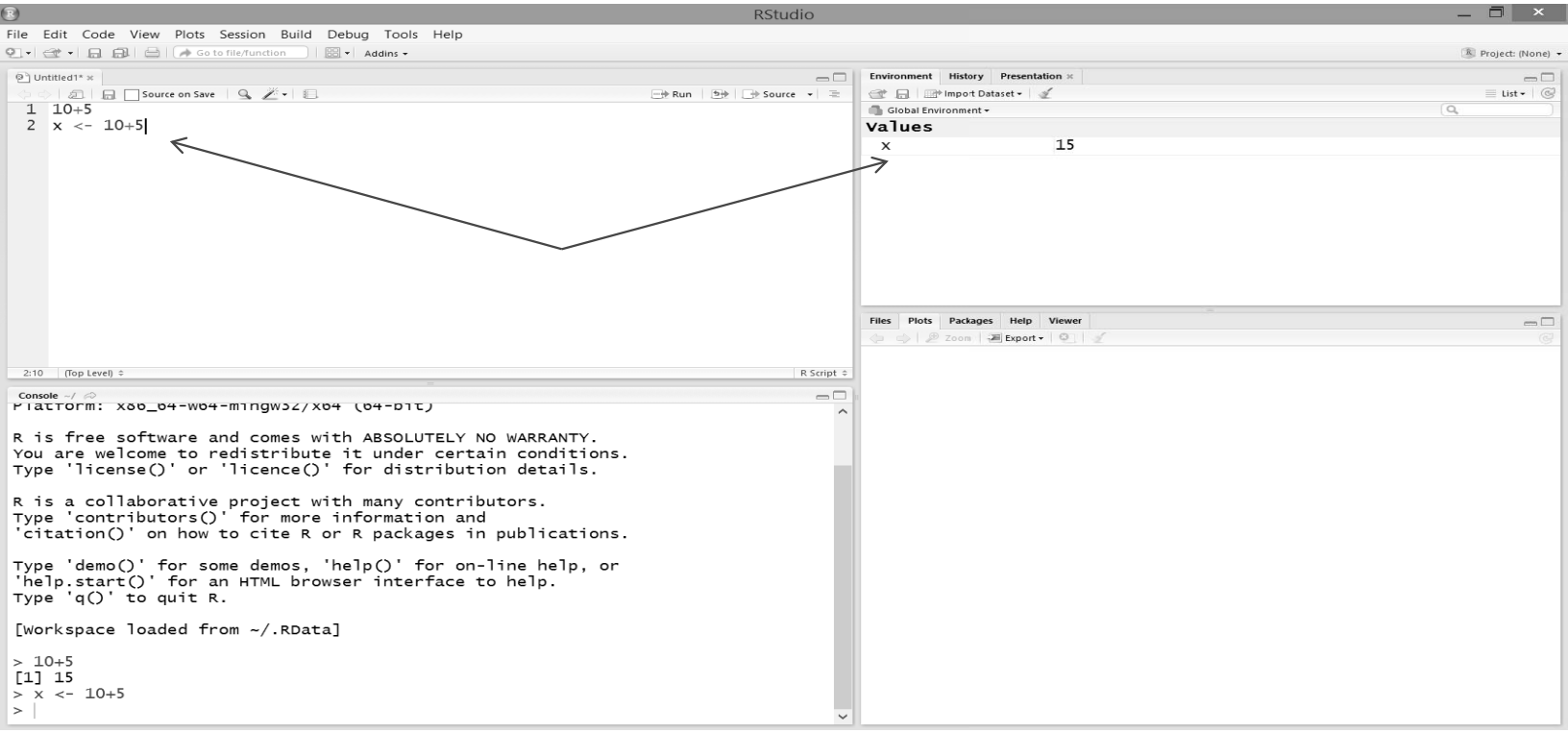
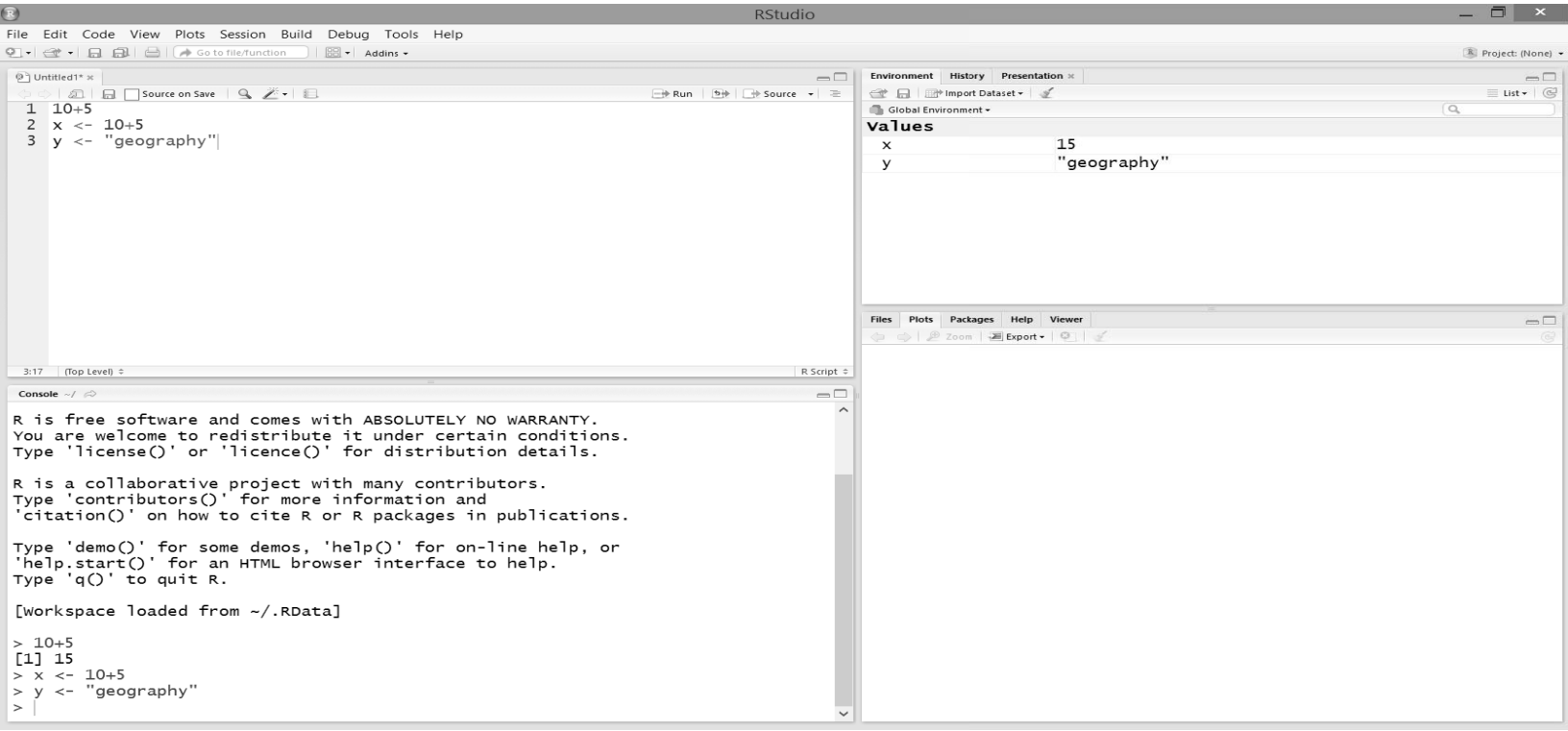
Let’s get started



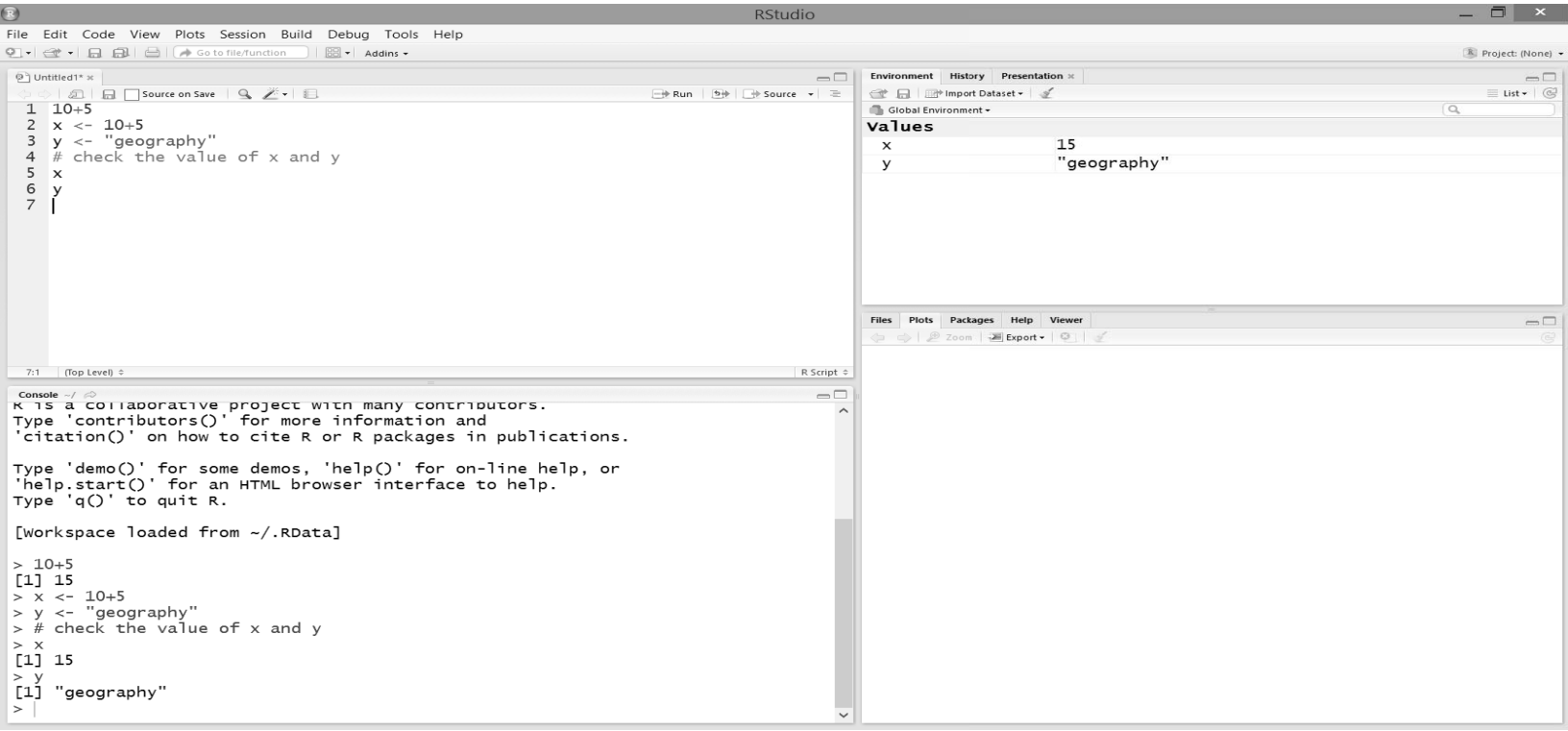
Create a variable “x”



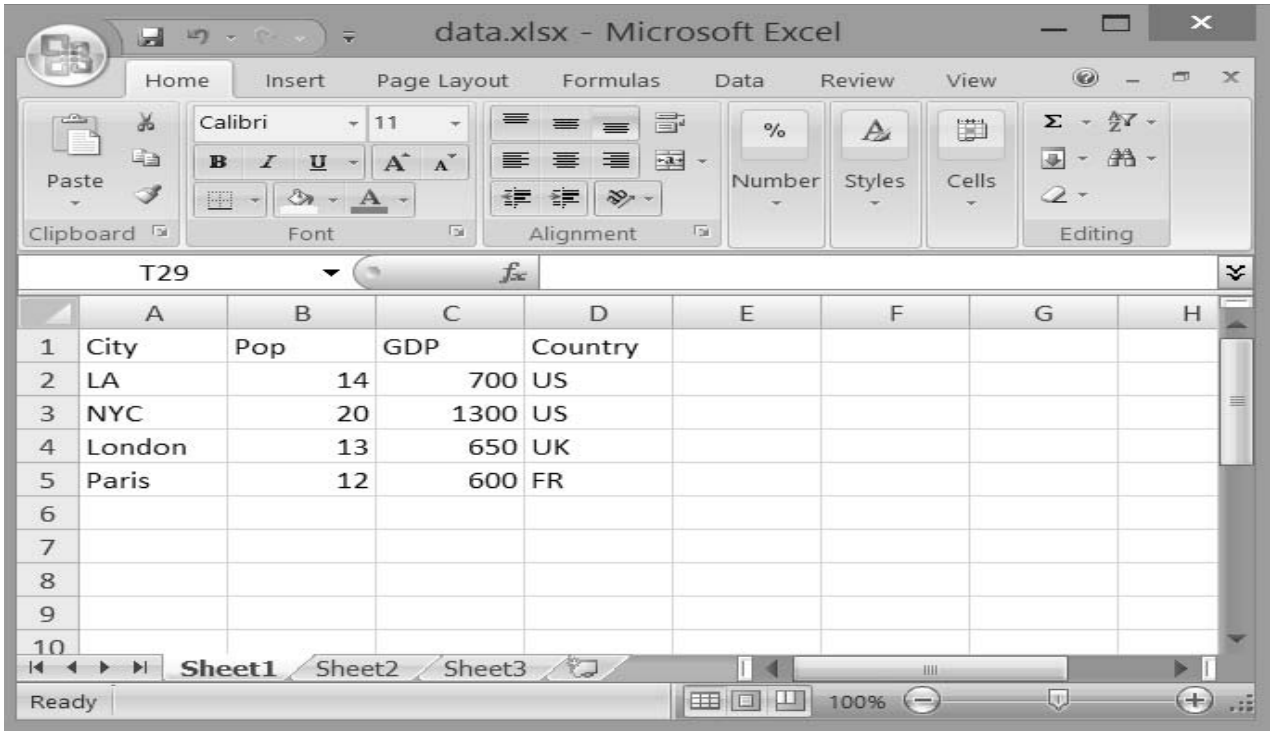
Create a variable y



Check the value of x and y



Let’s create a toy dataset



	A	B	C	D	E	F	G	H
1	City	Pop	GDP	Country				
2	LA	14	700	US				
3	NYC	20	1300	US				
4	London	13	650	UK				
5	Paris	12	600	FR				
6								
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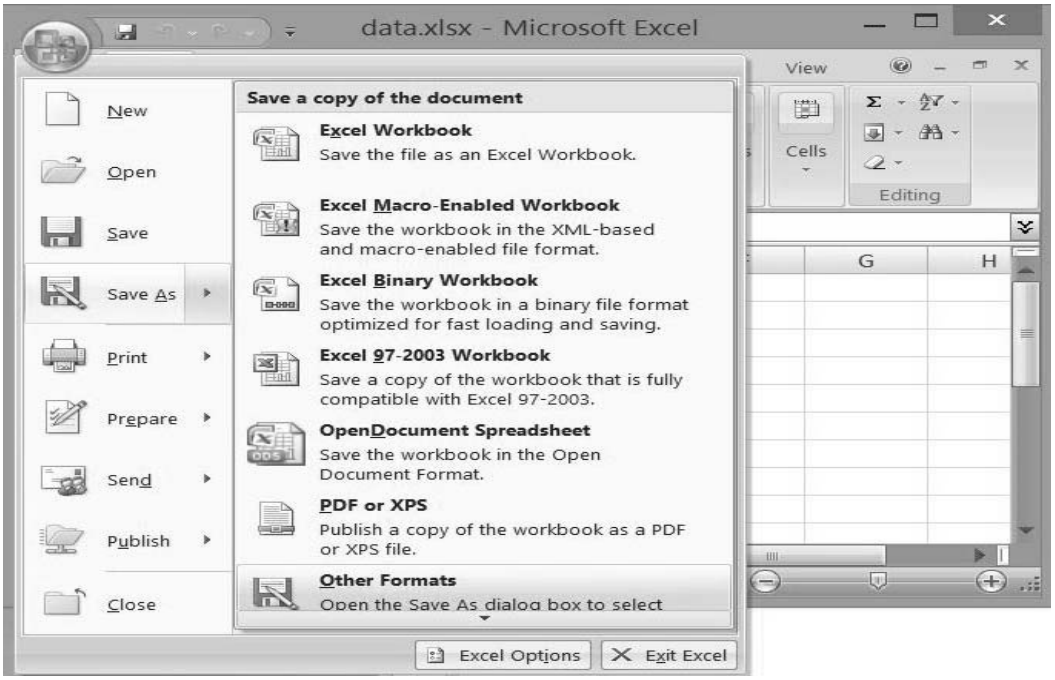
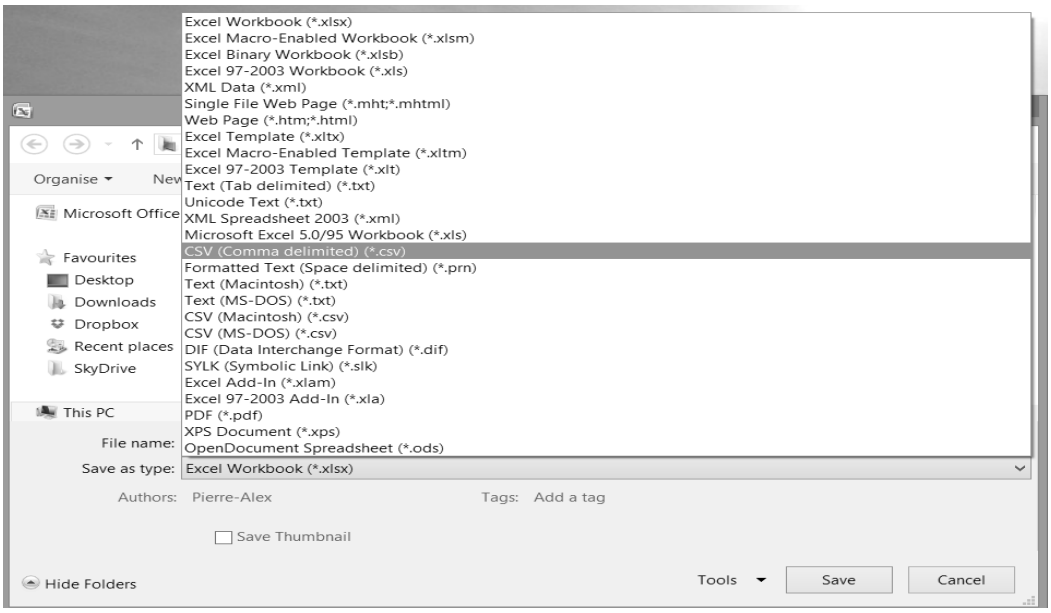
10								

Save as a .csv file

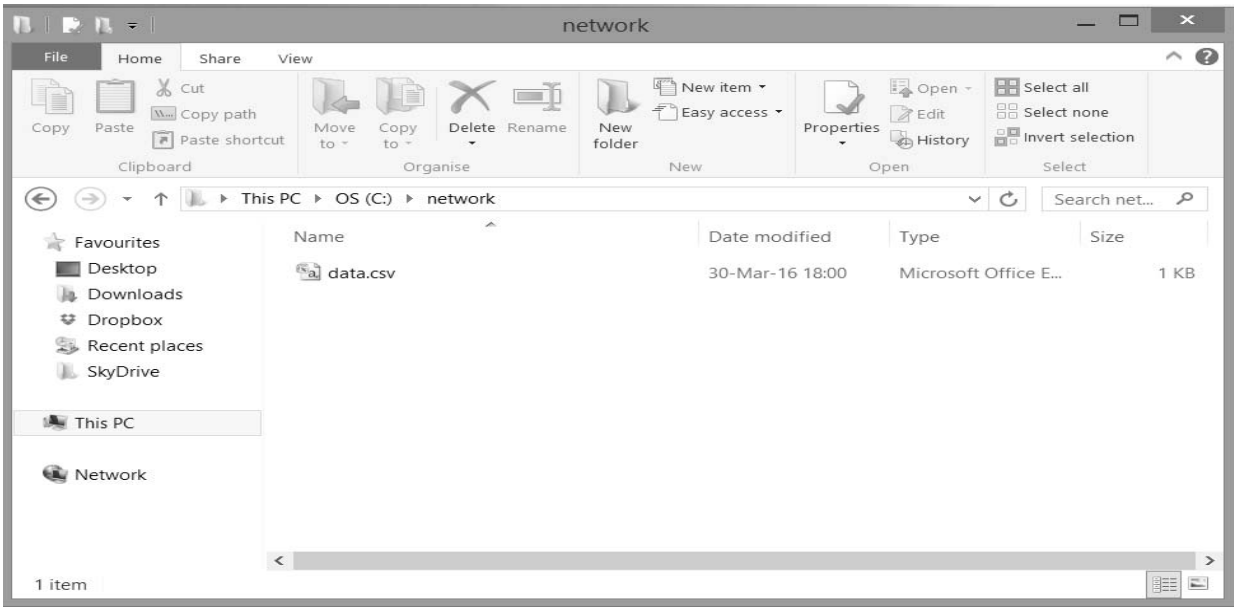


Save as a .csv file



Two warnings: ok

Create a new folder and move the .csv



This is your file path