THE UNIVERSITY OF TEXAS AT AUSTIN
McCOMBS SCHOOL OF BUSINESS

Introduction to R

Lecture 2

STA 371G

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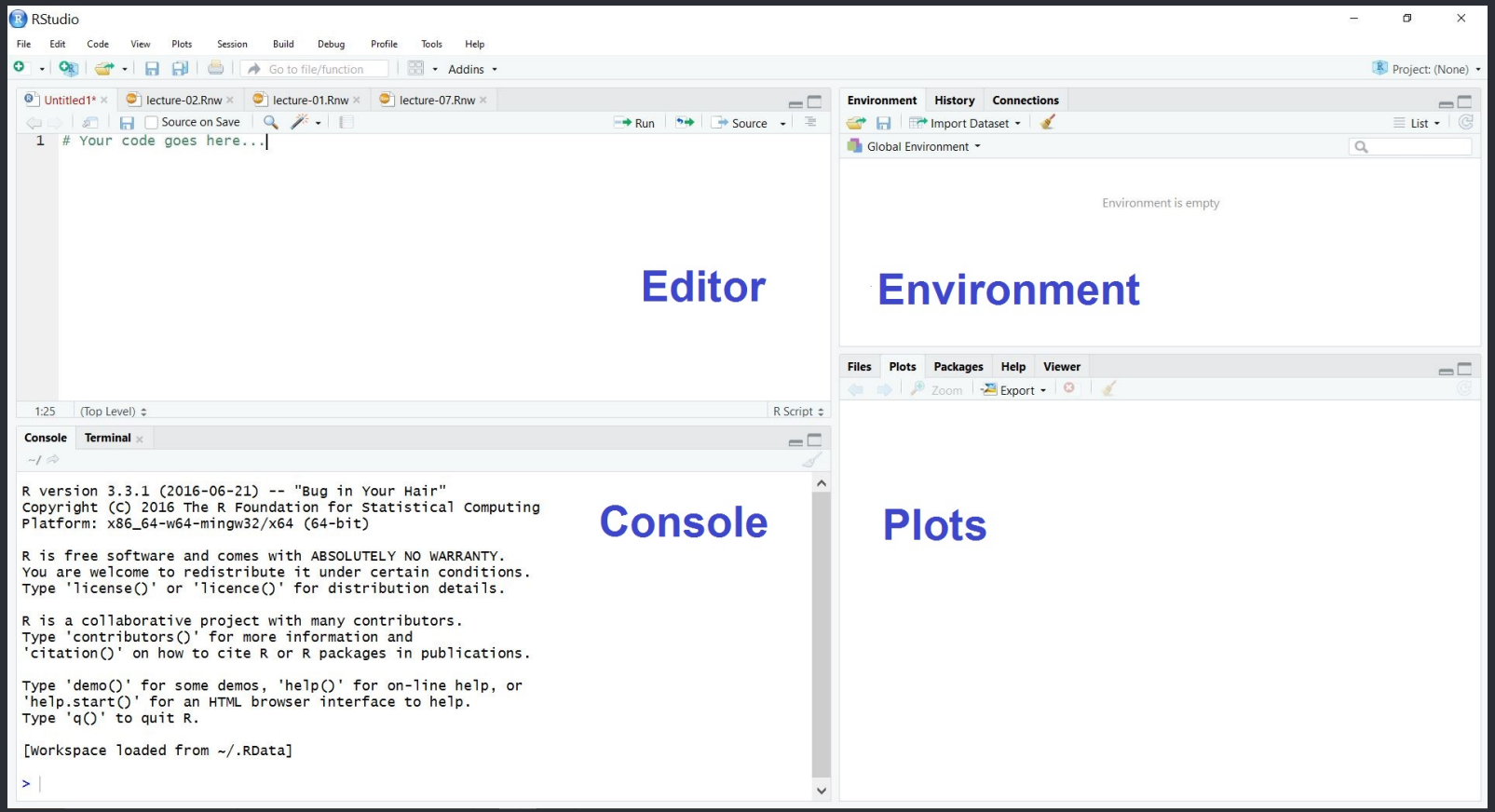

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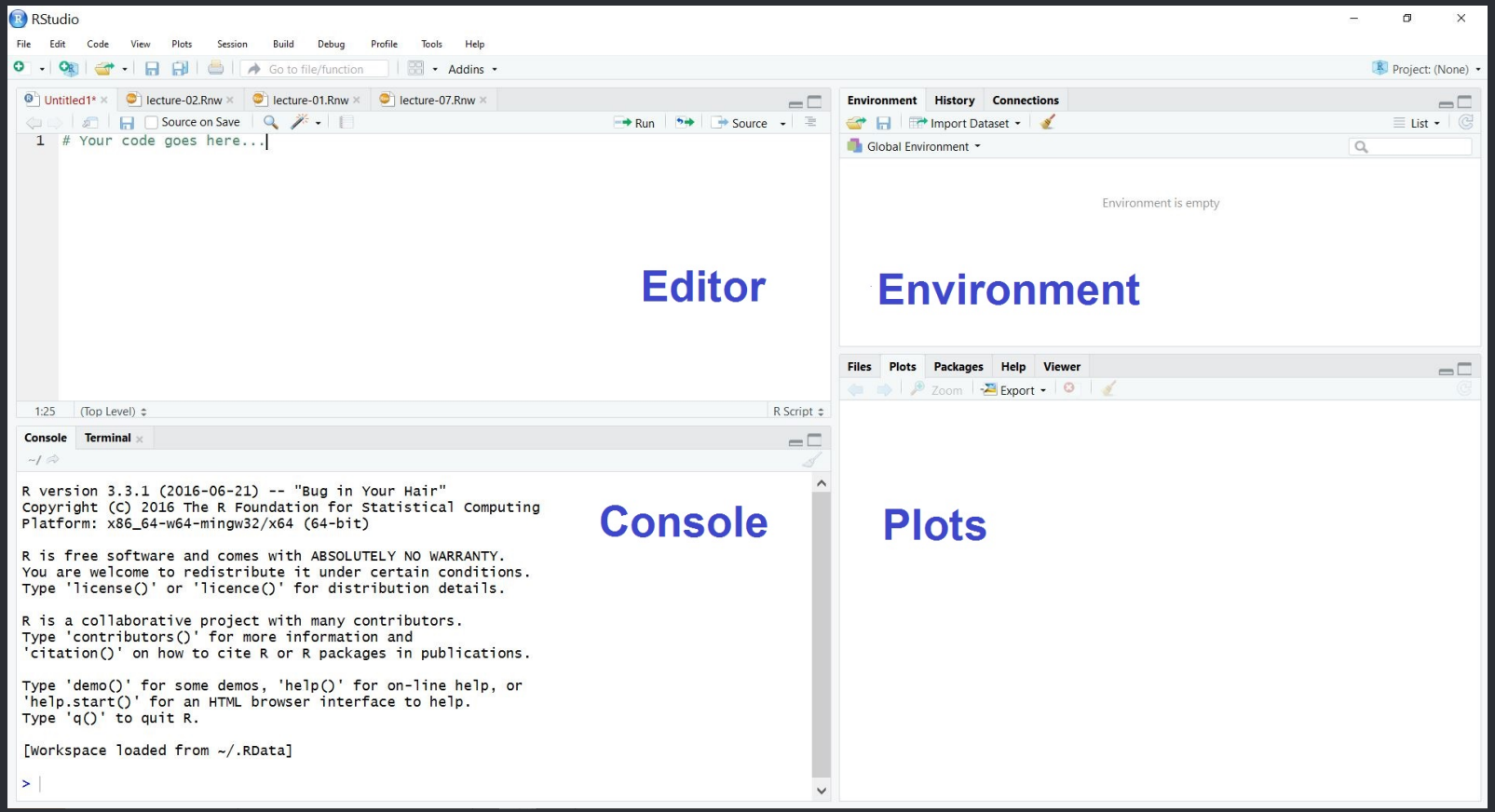

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- Plots: When we plot things, they will first appear here.

Let’s get started...

Assume you want to calculate your course grade.

Assignment	Weight	Grade
Class participation	5%	91
Reading assignments	5%	95
Homework	15%	86
Project	15%	83
Midterm 1	20%	88
Midterm 2	20%	76
Final exam	20%	84

Using the console

First try this in console.

```
0.05 * 91 + 0.05 * 95 + 0.15 * 86 + 0.15 * 83 + 0.2 *
    88 + 0.2 * 76 + 0.2 * 84

[1] 84.25
```

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It makes sense to save the result to a variable to be able to use later.

```
my371 <- 0.05 * 91 + 0.05 * 95 + 0.15 * 86 + 0.15 *
    83 + 0.2 * 88 + 0.2 * 76 + 0.2 * 84
```

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Working with vectors is also common, which are simply data containers.

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# This is the same calculation, using vectors.
weights <- c(0.05, 0.05, 0.15, 0.15, 0.2, 0.2, 0.2)
grades <- c(91, 95, 86, 83, 88, 76, 84)
weighted_grades <- weights * grades
my371 <- sum(weighted_grades)
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“sum” is a predefined function in R, which sums all the elements in a vector.

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Simply type "help(sum)" in the console...