Visual Tutorial: Where to Code R

by ProfessorF

*I’m assuming you’ve done the software installation tutorial. So, the next question you’re probably asking is: How do I program in R? But there’s another question you need to answer 1st: Where do I program R? The answer is RStudio.*

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| --- | --- |
| **ACTION** | **REACTION** |
| Assume you want to write an R program to calculate the total cost of a $100 shoe at a 7.875% sales tax rate. On the right is the R code.  If you’re confused, don’t worry. I’ll eventually teach you how to write the code.  Our immediately concern is where do we put the code? |  |
| 1. **Running RSTUDIO and Creating a Project Folder** | |
| 1. Run RStudio on your computer. |  |
| 1. Locate the menu item: *File > New Project…* |  |
| 1. Click on *New Project…* |  |
| 1. Click on *New Directory* |  |
| 1. Click on *New Project* (top item on list) |  |
| 1. Click the *Browse* button and select a folder on your computer, e.g., ~/MGMT-330-R then 2. Enter a Directory name:, e.g., Week2   Note:   * I already had a folder named MGMT-330-R |  |
| 1. Click the *Create Project* button |  |
| 1. **Creating an R Notebook to hold your code** | |
| 1. Locate the Menu Item *File* > *New File* > *R Notebook* |  |
| 1. Click on *R Notebook*   Notes:   * The upper-left panel is your editor where you will enter all your code. * For the early half of the semester we’ll be using Notebooks for coding. Notebooks allows you to easily mix comments with code, and to print out your homework. |  |
| 1. Delete all the boilerplate after “output:” 2. Change the title to something appropriate, e.g., Homework 2 3. Place your cursor somewhere after the *---* and enter a comment, e.g., Sample Problem 0: |  |
| 1. **Creating a Code Chunk and Entering Code** | |
| 1. Create a new Code Chunk by either:    1. Typing CTRL-ALT-I on Windows (Mac & Linux users have a different keyboard shortcut)    2. Typing: ```{r}  ```    3. Code (menu) > Insert Chunk   Note:   * in b., those are back-quotes, not single quotes. |  |
| 1. Enter each line from the sample code on Page 1/Row 1, paying attention to the capitalization of letters (also known as *case*).   Notes:   * R is a case-sensitive language, so a *variable* like taxRate is not the same thing as taxrate, or Taxrate or TaxRate or TAXRATE and you will get errors if you misspell a variable—errors that are hard to find for beginners! |  |
| 1. **Running your Code Chunk** | |
| 1. Click on the green button in the upper-right corner of your code chunk   Note:   * The answer appears after your code chunk: [1] 107.875 * The answer also appears in the console window in the lower left. |  |
| 1. **Saving your Notebook** | |
| 1. Click *File* (menu) > *Save* 2. Enter a file name, e.g., HW2 |  |
| 1. Click the *Save* button.   Important Note:   * You should see *filename*.Rmd in the lower-right file panel, e.g., HW2.Rmd * After saving, you can quit, start up R, open your project, and just click on HW2.Rmd to continue adding to it. |  |

Important ending notes:

1. If you’re doing this as part of a class, you will typically create a new project every week, i.e, you will do Parts A-E each week.
2. For homeworks, you will generally create a code chunk for each problem, numbering the problem before the code chunk (see *Problem 1:* below):

*A screenshot of a computer

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