

# R Coding Basics

1. Why does this code not work?

```
my_variable <- 10
my_variable

## Error:
## ! object 'my_variable' not found
```

Look carefully! (This may seem like an exercise in pointlessness, but training your brain to notice even the tiniest difference will pay off when programming.)

**why it fails:** 1) You created the object named `my_variable`. 2) On the next line you typed `my_variable` — that looks the same, but it uses a different character: `i` (dotless i), not the normal `i`. 3) R is picky (in a good way): different characters = different object name, so it says “object not found”.

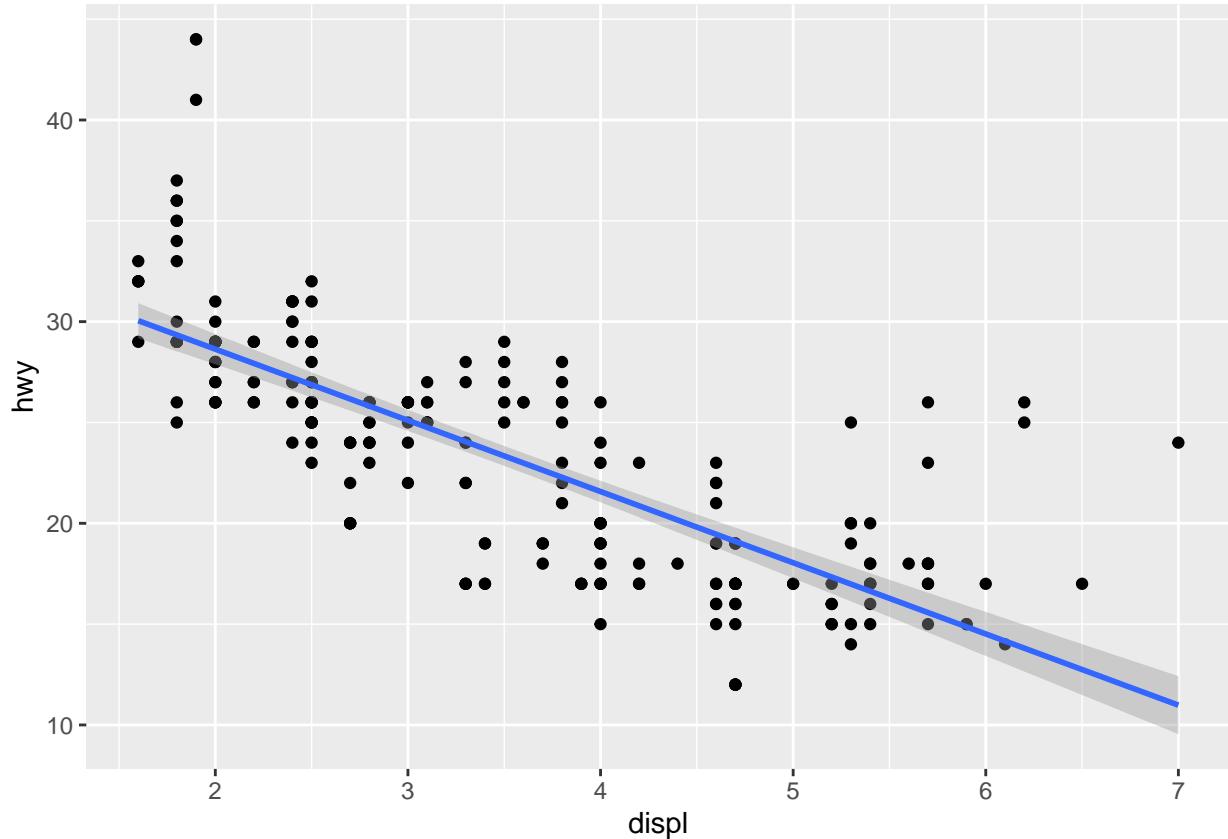
**Fix:** type the exact same name you created: `my_variable`.

2. Tweak each of the following R commands so that they run correctly:

```
# Step 1: load the package correctly
library(tidyverse)

# Step 2: fix the ggplot code (spelling + commas + quotes + parentheses)
ggplot(mpg, aes(x = displ, y = hwy)) +
  geom_point() +
  geom_smooth(method = "lm")

## 'geom_smooth()' using formula = 'y ~ x'
```



3. Press Option + Shift + K / Alt + Shift + K. What happens? How can you get to the same place using the menus?

**What happens (step-by-step):**

- 1) RStudio opens the **Keyboard Shortcuts Help** window.
- 2) You can scroll/search to see shortcuts.

**Same place using menus:** Tools → Keyboard Shortcuts Help.

4. Run the following lines of code. Which of the two plots is saved as `mpg-plot.png`? Why?

```
my_bar_plot <- ggplot(mpg, aes(x = class)) +
  geom_bar()
my_scatter_plot <- ggplot(mpg, aes(x = cty, y = hwy)) +
  geom_point()
ggsave(filename = "mpg-plot.png", plot = my_bar_plot)
```

**Answer**

- 1) `ggsave()` saves `my_bar_plot`.
- 2) Why? Because you told it exactly which plot to save: `plot = my_bar_plot`.
- 3) If you remove `plot = ...`, then `ggsave()` saves the **last plot you printed**.