Practice: barplots in ggplot2

Introduction to data science (DSC 105) Fall 2022

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1 README

- Practice file for the lecture on plotting
- Create, execute and debug R code blocks as needed
- Emacs + ESS + Org-mode and R must be installed
- You can find the solutions in the PDF repository for the course

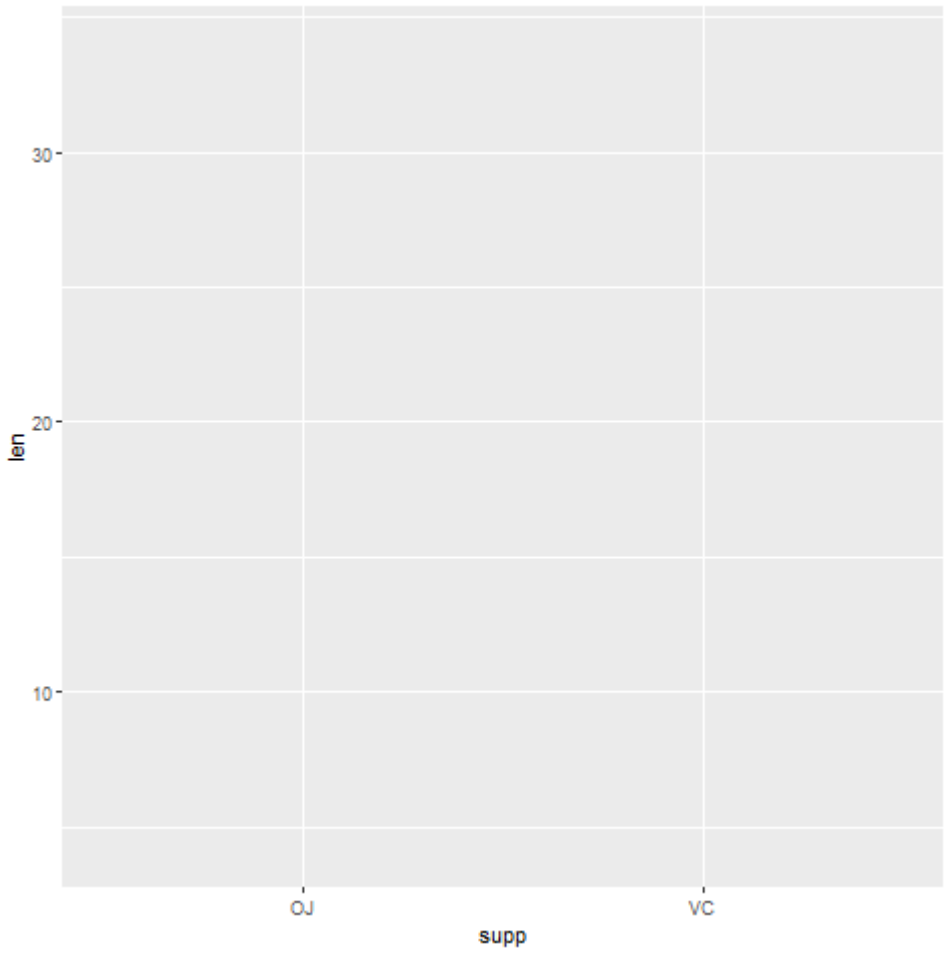
2 DONE IDENTIFY YOURSELF

- Update the `#+AUTHOR:` information in the header
- Add `(pledged)` after your name
- Put your cursor on the headline of this section, and type `S <LEFT>` until you see `DONE` instead of `TODO` next to the title.
- Perform this last step each time you complete a section.

3 TODO Problems

1. Create barplot for the `ToothGrowth` dataset:
   - use the function `ggplot` with the arguments `data=ToothGrowth` and `aes(x=supp,y=len)`
   - store the plot in an object `p`
   - print `p`

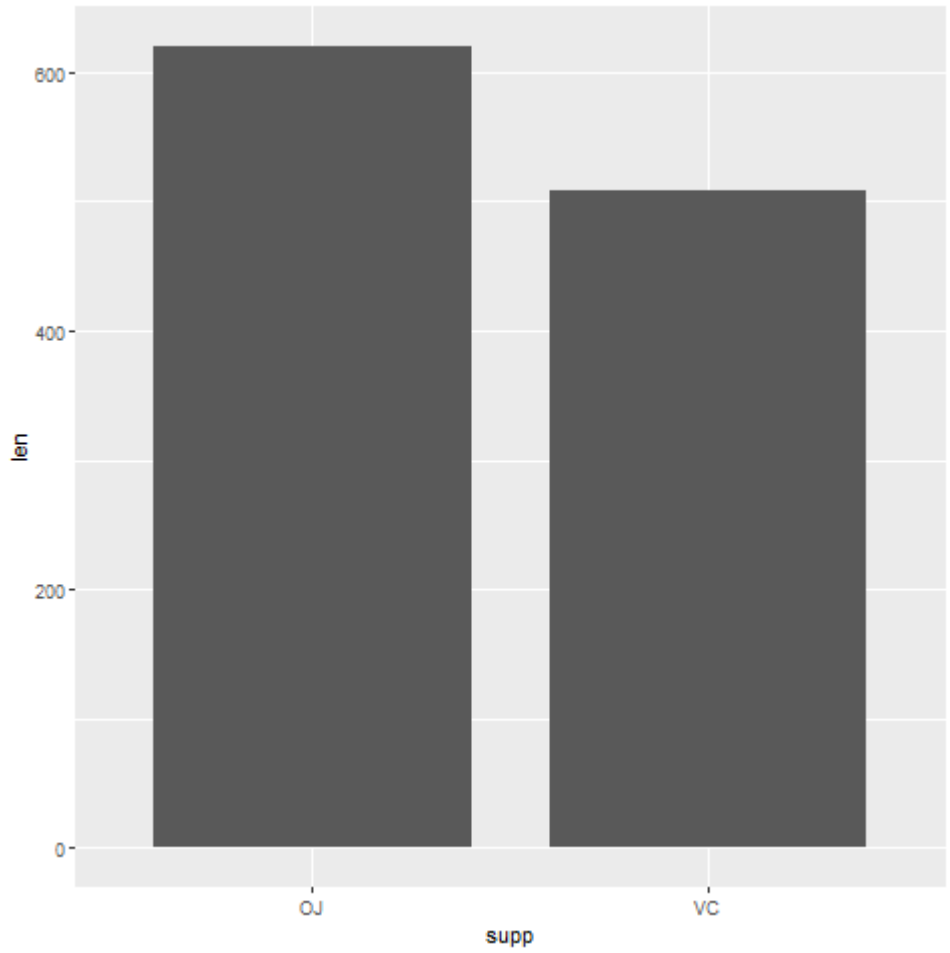
```
library(ggplot2)
ggplot(
  data = ToothGrowth,
  aes(x=supp,y=len)) -> p
p
```



2. Add a barplot geometry layer to the plot `p`:

   - add (+) `geom_bar(stat="identity", width=0.8)`
   - store the new plot in `p1` and print it
   - note that adding with `+` on a new line gives an error!

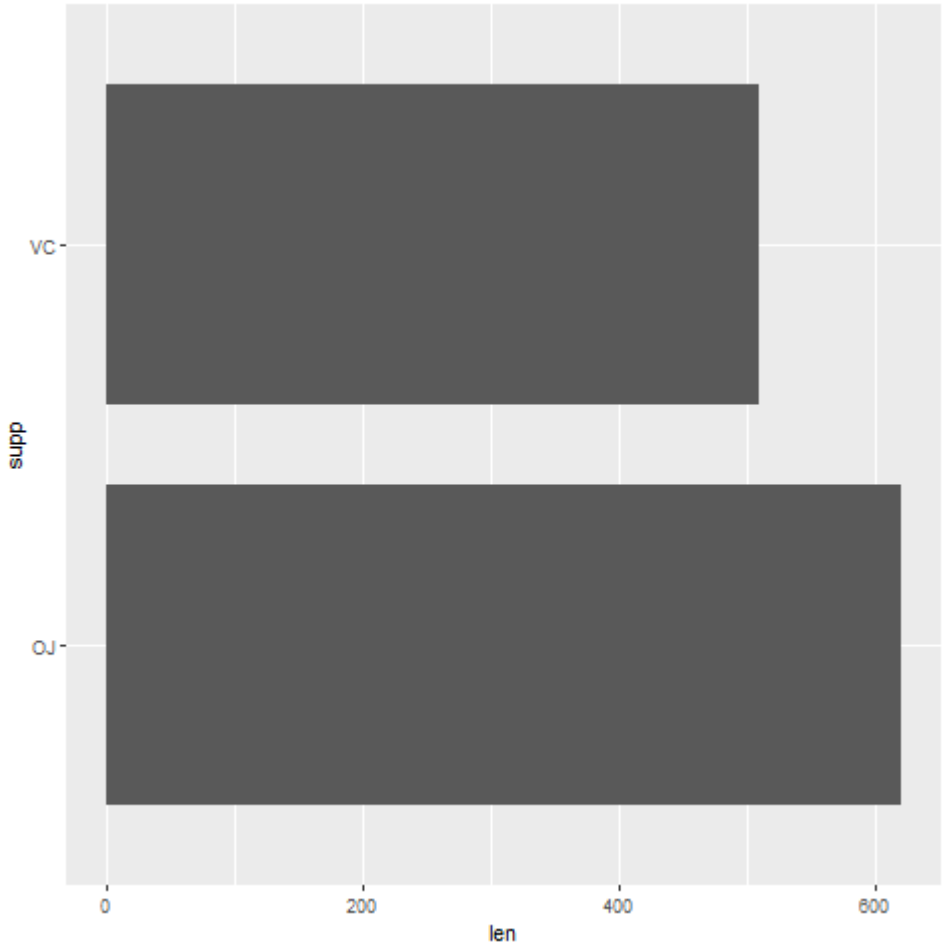
```
p + geom_bar(
 stat="identity",
 width=0.8) -> p1
 p1
```



3. Turn the plot on its side:

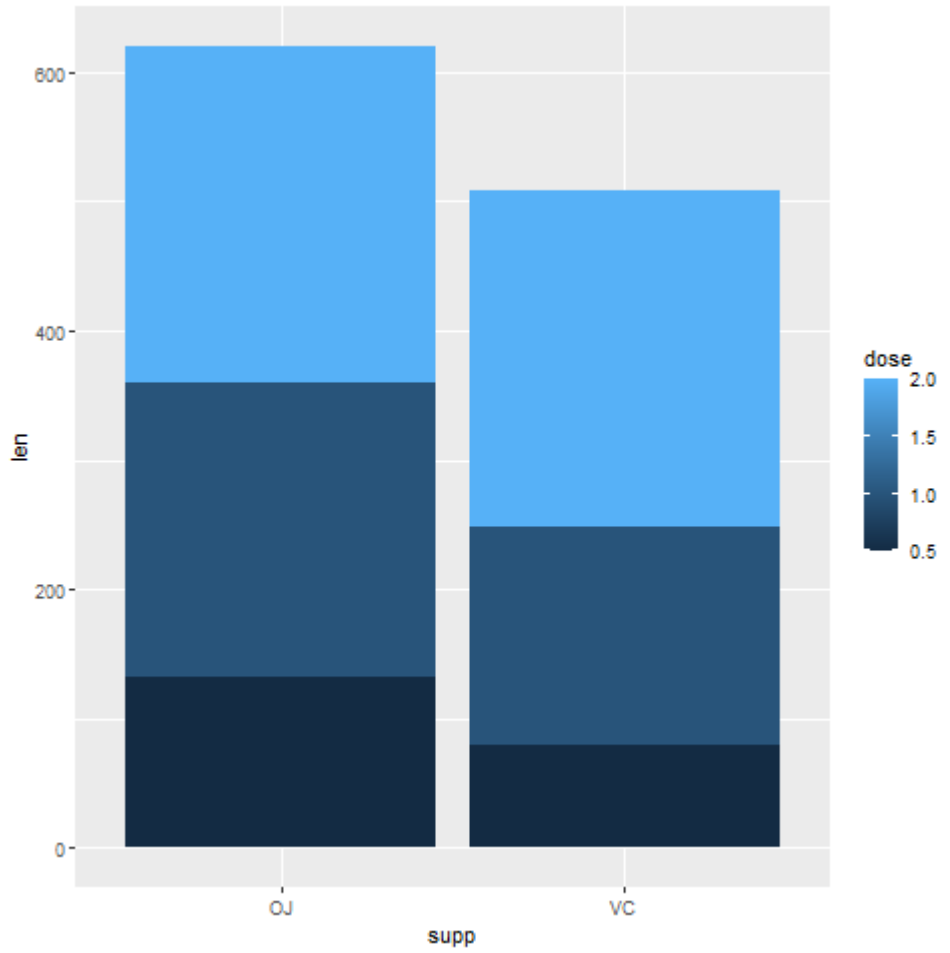
    - Add `coord_flip()` to `p1`
    - Store it in `p2` and print it

```
p1 + coord_flip() -> p2
p2
```



4. Using `ggplot`, make a stacked barplot of `ToothGrowth` which shows the dosage `dose` for each `supp` category, and add `theme_minimal`: save in `p3` and print plot

```
ggplot(
  data = ToothGrowth,
  aes(x=supp,
      y=len,
      fill=dose)) +
  geom_bar(stat="identity") +
  theme_grey() -> p3
p3
```

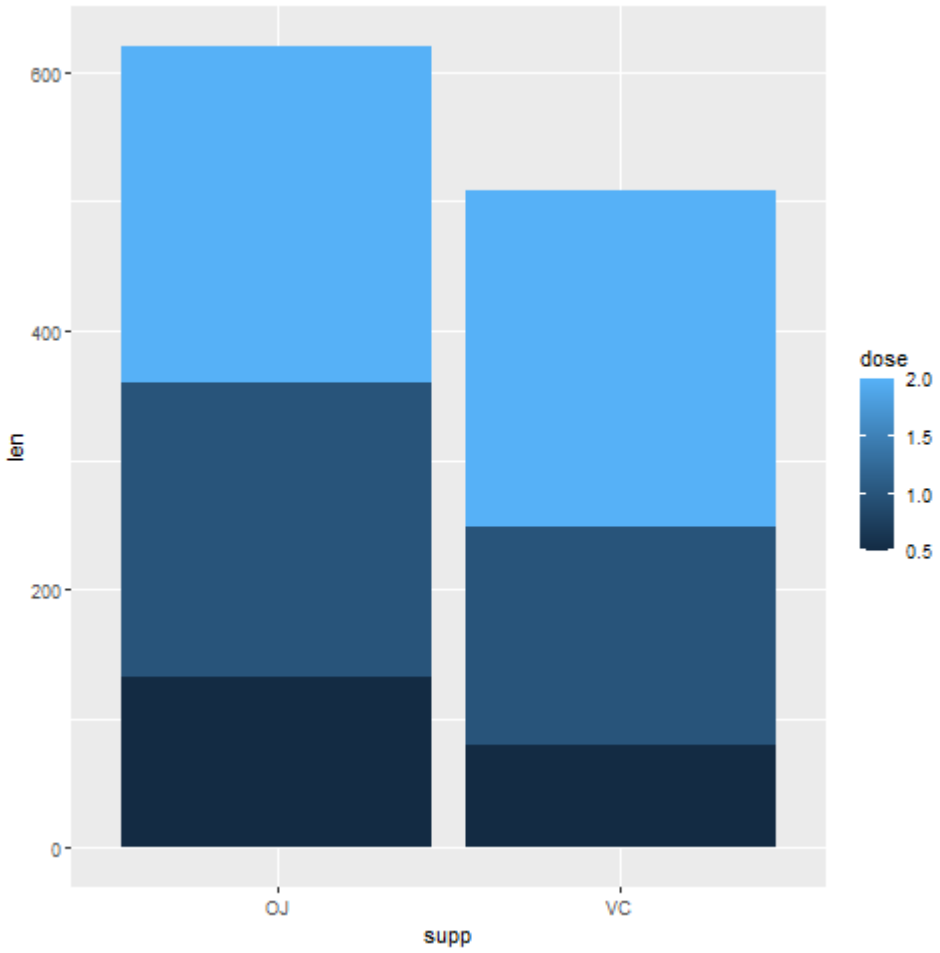



```
ls()
p3
```

```
[1] "p"  "p1" "p2" "p3"
```

ggplot2 plots cannot be put in arrays using base R `par`.

```
par(mfrow=c(2,2))
p;p1;p2;p3;
```



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Created: 2022-11-09 Wed 08:00