1. Have you completed the Stat 133 Welcome Survey linked on Ed?

Data in Trees

Consider the file system below where the root is `/`. The shapes following the names aren't part of the file system; they're pointers used in the questions below.

```
/ △
└── fall
    ├── math53 ○
    │   ├── syllabus.pdf
    │   ├── midterm.pdf
    │   └── final.pdf
    ├── stat20
    │   ├── syllabus.docx ●
    │   └── labs ▽
    │       ├── lab1.qmd
    │       ├── lab2.qmd
    │       └── lab3.qmd ▲
    ├── history7B □
        ├── syllabus.pdf
        ├── essay1.docx ■
        ├── essay2.docx
        └── essay3.docx
```

2. What is the absolute path to ■?
3. What is the absolute path to ▽?
4. What is the relative path from □ to ■?
5. What is the relative path from ○ to ■?
6. What is the relative path from ▽ to ●?
7. What is the relative path from □ to ▲?
8. What is the relative path from ▽ to △?

Fill in the blank `_______` with the full command the will generate the output that follows. Let `$` be the character that indicates where you can type at the command line. The working directory at the start of each question is `/`, the root.

9.
```
$ _______
syllabus.pdf essay1.docx essay2.docx essay3.docx
```

10.
```
$ cd fall
$ _______
fall
```

11. In the space below, sketch the file system containing files with the following absolute paths:

```
/yosemite/receipts/gas.jpg
/yosemite/5400.jpg
/yosemite/reservations.pdf
/hawaii/3296.jpg
/yosemite/receipts/lunch.jpg
/hawaii/3295.jpg
/hawaii/3298.jpg
/yosemite/5399.jpg
/hawaii/3297.jpg
/yosemite/receipts/dinner.jpg
```

12. Every directory and file name that you've seen so far in this class has refrained from using special characters. Which characters should you avoid using when naming directories and files?[1]

[1] You can research the answer to this question online.

Intro to R

You're encouraged to work on these at your R console to try things out. The next three questions continue with the same R objects. What output will each code block produce?

13. What will the following code produce?

```
a <- 3 + 5
b <- 4 / 2
a + b
```

14. What will the following code produce?

```
a <- b - (a / a)
```

15. What will the following code produce?

```
a
```

16. What will the following code produce?

```
log(a)
```

For the following questions, consult the functions help file by using `?` (e.g. `?round`).

17. What modified version of this function would return the value 3.14 instead of 3?

```
round(3.141592)
```

```
[1] 3
```

18. What will the following code produce?

```
ceiling(3.14) + floor(3.14)
```