WS #6 - Mapping

Wednesday, September 18, 2024

Math 154 - Jo Hardin

Name: _____

Names of people you worked with: _____

Share one or two adjectives that reflect your state of being at this moment.

Task: Explain how `c(1:3)` is being used as an argument in each line of code. Why is the output different?

Random uniform numbers, `runif()`

```
map(c(1:3), runif)
```

```
[[1]]
[1] 0.4426604

[[2]]
[1] 0.1451648 0.6104066

[[3]]
[1] 0.1747427 0.5565376 0.8368712
```

Random uniform numbers, `runif()` as an anonymous function.

```
map(c(1:3), ~runif(n = 2))
```

```
[[1]]
[1] 0.7543646 0.5434261

[[2]]
[1] 0.9530475 0.2760551

[[3]]
[1] 0.1403882 0.1111027
```

Solution:

The idea of an anonymous function is that it creates a full new function, with an argument only if specified.

```
~runif(n = 2)
```

Is exactly the same as:

```
function(.x){
  runif(n = 2)
}
```

Important note: `runif(n = 2)` does not have `.x` as an argument!!! So each time the `map()` goes through the function, it ignores the value of the input and runs `runif(n = 2)`.

```
map(c(10000000:10000002), ~runif(n = 2))
```

```
[[1]]
[1] 0.2816492 0.3273045

[[2]]
[1] 0.28595834 0.04707233

[[3]]
[1] 0.7942943 0.8191787
```

```
map(c("rainbow", "unicorn", "flowers"), ~runif(n = 2))
```

```
[[1]]
[1] 0.004645399 0.150004395

[[2]]
[1] 0.9772333 0.1145855

[[3]]
[1] 0.7994829 0.5119379
```