Lab_02

Megan Mitchell

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1. Show the R code you used to create vec_2. :::{.warn} Your code should be a complete and self-contained example. I should be able to paste your code into a fresh R session on my computer and re-create your v'

```
n = 12345
vec_1 = sample(12, n, replace = TRUE)
vec_1 = sample(12, n, replace = FALSE)
head(vec_1)
vec_2 <- c(vec_1==3)
vec_2
head(vec_2)
tail(vec_2)
```

2. Give two reasons why determining which elements in vec_1 have value 3 by visual inspection is a bad idea

> It would be difficult and hard on the eyes to discern this from such a giant data set. Additionally, visual inspection may lead to errors in R.

3. Why didn't you always get the same count of 3 entries each time?

> The same count of 3 entries was not observed because they are randomly generated integers in R.

4. Considering the different vectors generated each time, explain why using a logical test is a safe way to select entries with a value of 3.

> Using a logical test allows for selecting entries with a value of 3 and minimizes having to visually discern large data sets, associated errors, and data values would not be missed or omitted.

5. Explain why performing logical subsetting is very very bad practice. You may want consider re-usability of code, working with different sized data sets, and sharing code with collaborators.

> Logical subsetting is not as useful with large datasets because data has to be discerned visually and it is difficult to detect the indices you want. Unlike functions, logical subsetting does not allow for sharing codes with collaborators because it only works for certain vectors.

6. Provide the code for your modified loop. It must run as a self-contained example on a fresh R session on my computer.

```
for (i in 1:10)
 {
print(
        paste0(
                "This is loop iteration:", i))}
```

7. Provide the code for the modified loop that executes n times. It needs to be a self contained example. I should be able to set the value of n and then run your loop on my computer.

```
for (n in 1:5)
{
print(
        paste0(
                "This is loop iteration:", n))}
```

8. Provide the code you used to create the n, vec_1, and the loop. As always, it should run as a stand-alone example in a fresh R session on my computer.

```
        n = 17
        vec_1 = sample(10, n, replace = TRUE)
        length(vec_1)
          for (n in 1:17)
          {
          print (
                  Paste0
                          ( "The element of vec_1 at index" , n , " is " , vec_1[n]))
                  }
```

9. Provide the code you used to build your function

```
create_and_print_vec = function(n, min, max)
vec_3 = sample(x= min:max, size=n, replace = TRUE)
for (i in 1:n)
{
print(
  paste(
    "The element of vec at index " , i , "is" , vec_3[i]))}
```