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ECO 634
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ECO 634 Lab 2: R Fundamentals 2

1. **Show the R code you used to create vec_2**

```
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's a bad idea due to it being difficult to find all the 3 values in a giant data set like this one. Also, visual inspection usually leads to errors in R and that is always a bad thing.

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

   I didn't always get the same count of 3 entries because the output is created by 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.**

   A logical test allows R to select all entries with a value of 3, without any being missed. As well as reduces the need for visually discerning large data sets.

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

   Performing logical subsetting on large datasets isn't very practical because the data has to be visually discerned and it's difficult to detect the value entries you want. Logical subsetting also doesn't permit sharing codes with collaborators.

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.**

```
n=sample(45, 1)
for (i in 1:n)
{
  print(i)
}
```

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 = c(sample(10, n, replace = TRUE))
for (i in 1:n)
{
  print(
    paste('The element of vec_1 at index', i, 'is', vec_1[i]))
  }
```

9. **Provide the code you used to build your function.**

```
create_and_print_vec = function(n, min = 1, max = 10)
{n = sample(min:max, 1)
  vec_1 = c(sample(min:max, n, replace = TRUE))
for (i in 1:n)
{
  print(
    paste('The element of vec_1 at index', i, 'is', vec_1[i]))
}}
create_and_print_vec(n)
```