Data Science 2

Introduction to advanced data science - spring 2023

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3_ifelse_practice.org

From: Davies, Book of R (2016) p. 185

Use the confirmation of (3) in the loop section (loop over the vectors).

1. Create two vectors:

   ```
   vec1 <- c(2,1,1,3,2,1,0)
   vec2 <- c(3,8,2,2,0,0,0)
   vec2-vec1
   ```

   ```
   [1]  1  7  1 -1 -2 -1  0
   ```

2. Without executing them, determine which of the following `if` statements would result in the string being printed to the console. Confirm your answers in R.

   Tip: the `all` functions checks if all of its logical argument values are true.

   ```
   if((vec1[1]+vec2[2])==10){cat("Print me!\n")}
   ```

   ```
   Print me!
   ```

   ```
   if(vec1[1]>=2&&vec2[1]>=2){cat("Print me!\n")}
   ```

   ```
   Print me!
   ```

```
(vec2-vec1)[c(2,6)]
(vec2-vec1)[c(2,6)]<7
all((vec2-vec1)[c(2,6)]<7)
if(all((vec2-vec1)[c(2,6)]<7)){cat("Print me!\n")}
```

```
[1]  7 -1
[1] FALSE  TRUE
[1] FALSE
```

```
vec2[3]
if(!is.na(vec2[3])){cat("Print me!\n")}
```

```
[1] 2
Print me!
```

3. Using `vec1` and `vec2`, write and execute a line of code that multiplies the corresponding elements of the two vectors together if their sum is greater than `3`. Otherwise, the code should simply sum the two elements.

   Condition: do not use `for` or `apply` functions to solve this exercise but only conditional functions `if`, `else`, `ifelse`).

```
ifelse(
  test = (vec1+vec2)>3,
  yes = vec1*vec2,
  no = vec1+vec2)
```

```
[1] 6 8 3 6 2 1 0
```