Class 07: R functions and packages

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April 24, 2019

More on function writing

First we will revisit our function from last day

```
source('http://tinyurl.com/rescale-R')
```

```
x <- c(1:10, 'foobar')
is.numeric(x)
```

```
## [1] FALSE
```

```
#rescale2(x)
```

Function practice

Write a function to identify NA elements in two vectors

Simple example where I know what the answer should be

```
x <- c(1,2,NA, 3, NA)
y <- c(NA,3,NA,3,4)
```

```
is.na(x)
```

```
## [1] FALSE FALSE  TRUE FALSE  TRUE
```

```
is.na(y)
```

```
## [1]  TRUE FALSE  TRUE FALSE FALSE
```

```
both.na <- is.na(x) & is.na(y) # this gives true when both are NA
which(both.na) # index of true
```

```
## [1] 3
```

```
print(paste('There are', sum(both.na), 'instances when both vectors are NA'))
```

```
## [1] "There are 1 instances when both vectors are NA"
```

This is my working snippet of code!

```
both.na <- function(vec1, vec2) {
  sum(is.na(vec1) & is.na(vec2))
}
```

```
both.na(x,y)
```

```
## [1] 1
```

Stress testing now....

```
both.na(rep(NA, 5), c(rep(NA, 4), 3))
```

```
## [1] 4
```

```r
both.na(rep(NA, 5), rep(NA,2))
```

```
## Warning in is.na(vec1) & is.na(vec2): longer object length is not a
## multiple of shorter object length
```

```
## [1] 5
```

Check that lengths of inputs are equal

```r
x <- rep(NA, 5)
y <- rep(NA, 3)

length(x) != length(y) # check if lengths NOT equal
```

```
## [1] TRUE
```