Data Science 2

Introduction to advanced data science - spring 2023

January 27, 2023

2_arguments_practice.org

1. ☐ Is `matrix` elliptic?

   ```
   args(matrix) # no

   function (data = NA, nrow = 1, ncol = 1, byrow = FALSE, dimnames = NULL)
   NULL
   ```

2. ☐ Use positional matching with `seq` to create a sequence of values between -4 and 4 that progresses in steps of 0.2.

   ```
   seq(-4,4,0.2)

    [1] -4.0 -3.8 -3.6 -3.4 -3.2 -3.0 -2.8 -2.6 -2.4 -2.2 -2.0 -1.8 -1.6 -1.4 -1.2
   [16] -1.0 -0.8 -0.6 -0.4 -0.2  0.0  0.2  0.4  0.6  0.8  1.0  1.2  1.4  1.6  1.8
   [31]  2.0  2.2  2.4  2.6  2.8  3.0  3.2  3.4  3.6  3.8  4.0
   ```

3. ☐ Identify, which style of argument matching is being used: exact, partial, positional, or mixed. If mixed, which arguments are specified?

   (a) `array`

   ```
   array(8:1,dim=c(2,2,2)) # mixed, data is positional

   , , 1

        [,1] [,2]
   ```

```
[1,]    8    6
[2,]    7    5

, , 2

     [,1] [,2]
[1,]    4    2
[2,]    3    1
```

(b) rep

```
rep(1:2,3)  # positional
```

```
[1] 1 2 1 2 1 2
```

(c) seq

```
seq(from=10,to=8,length=5)  # exact
```

```
[1] 10.0  9.5  9.0  8.5  8.0
```

(d) sort

```
sort(decreasing=T,x=c(2,1,1,2,0.3,3,1.3)) #exact
```

```
[1] 3.0 2.0 2.0 1.3 1.0 1.0 0.3
```

(e) which

```
matrix(c(T,F,T,T),2,2)
which(matrix(c(T,F,T,T),2,2))  # positional
```

```
      [,1] [,2]
[1,]  TRUE TRUE
[2,] FALSE TRUE
[1] 1 3 4
```

(f) which

```
which(matrix(c(T,F,T,T),2,2),a=T) # mixxed, arr.ind as a
args(which)
```

```
     row col
[1,]   1   1
[2,]   1   2
[3,]   2   2
```

```
function (x, arr.ind = FALSE, useNames = TRUE)
NULL
```