## **LAB-02**

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```
#a)
Fdata <- read.csv('./FlowerData.csv')
#b)
class(Fdata) #dataframe because it's class says so

## [1] "data.frame"</pre>
```

```
#c)
nums <- unlist(lapply(Fdata, is.numeric))
FlowerMatrix <- Fdata[ , nums ]
#d)
colnames(FlowerMatrix) <- c('Age (in days)', 'Height (in cm)')</pre>
```

#e)
head(FlowerMatrix)

```
Age (in days) Height (in cm)
##
## 1
                             5.0
               31
## 2
               48
                            16.0
## 3
               39
                            12.5
                             6.0
## 4
               29
## 5
               32
                             4.0
## 6
               37
                             7.0
```

```
rownames(FlowerMatrix) <- Fdata[ , 'Individual']
head(FlowerMatrix)</pre>
```

```
Age (in days) Height (in cm)
## a
               31
                            5.0
## b
               48
                           16.0
## c
               39
                           12.5
## d
               29
                           6.0
## e
               32
                             4.0
## f
               37
                             7.0
```

```
#a)
average_age_of_flowers <- mean(FlowerMatrix[ ,'Age (in days)'])

#b)
average_height_of_flowers <- mean(FlowerMatrix[ ,'Height (in cm)'])

average_age_of_flowers</pre>
```

```
## [1] 37.42222
```

```
average_height_of_flowers
```

```
## [1] 11.87778
```

```
#c)
tallest_index <- which.max(FlowerMatrix[ ,'Height (in cm)'])
tallest <- max(FlowerMatrix[ ,'Height (in cm)'])

#d)
youngest_index <- which.min(FlowerMatrix[ ,'Age (in days)'])
youngest <- min(FlowerMatrix[ ,'Age (in days)'])</pre>
tallest
```

```
## [1] 19
```

```
tallest_index
```

## [1] 36

youngest

## [1] 26

 ${\tt youngest\_index}$ 

## [1] 8

#e)

tallest\_color <- Fdata[, 'Colour'][tallest\_index]
youngest\_color <- Fdata[, 'Colour'][youngest\_index]</pre>

 $tallest\_color$ 

## [1] "yellow"

 ${\tt youngest\_color}$ 

## [1] "yellow"

#a)

#The issue was that the previous Fdata had the original col names when printed in another block. In order to fix the error and mutate the original csv with the new col names I used the 'names' function.

Fdata

```
##
      Individual Age..days. Height..cm. Colour
## 1
                                     5.0 purple
               а
                         31
## 2
               b
                         48
                                    16.0 yellow
## 3
               С
                         39
                                    12.5
                                            red
## 4
               d
                         29
                                     6.0
                                            red
## 5
               е
                         32
                                     4.0
                                            red
## 6
               f
                         37
                                     7.0 yellow
## 7
                                     8.0 yellow
               g
                         37
## 8
               h
                         26
                                     5.5 yellow
## 9
               i
                         41
                                    10.0 purple
## 10
               j
                                     8.5 purple
                         34
## 11
               k
                         38
                                    12.0
                                             pr
                                    18.0 yellow
## 12
               1
                         40
## 13
                         45
                                    16.0 yellow
## 14
                         40
                                    12.5 yellow
               n
## 15
                                     9.5
               0
                         43
                                            red
## 16
                         33
                                     7.0 yellow
               р
## 17
                         35
                                     6.0 yellow
               q
## 18
                                     6.5 yellow
               r
                         39
## 19
               s
                         37
                                    12.5
                                            red
## 20
               t
                         32
                                    13.0 purple
## 21
                                    10.5 yellow
                         31
               u
## 22
               v
                         36
                                    11.0
                                            red
## 23
               W
                         41
                                    17.0
                                            red
## 24
                                    15.5 yellow
               х
                         39
## 25
                         31
                                     9.5 yellow
               У
## 26
               \mathbf{z}
                         33
                                    10.0 yellow
## 27
                                    11.0 yellow
              aa
                         33
## 28
              bb
                         28
                                     5.5
                                            red
## 29
                                    13.5
              CC
                         35
                                            red
## 30
                         37
              dd
                                    16.0 yellow
## 31
                         42
                                    14.0
              ee
                                            red
## 32
              ff
                         45
                                    17.0
                                            red
## 33
                         37
                                    16.5
                                            red
              gg
## 34
              hh
                         46
                                    18.0
                                            red
## 35
              ii
                         37
                                    17.5 yellow
## 36
                         44
                                    19.0 yellow
              jj
## 37
              kk
                         44
                                    14.0 yellow
## 38
              11
                         37
                                     8.0 yellow
## 39
                         29
                                    10.0 yellow
              mm
## 40
              nn
                         37
                                     9.0
                                            red
## 41
                                    12.0 purple
              00
                         36
## 42
                         47
                                    15.5 purple
              рp
## 43
                         38
                                    16.0 yellow
              qq
## 44
                         40
                                    16.0
              rr
                                            red
## 45
                         45
                                    17.0 purple
              SS
```

```
names(Fdata) <- c('Individual','Age (days)','Height (cm)','Colour')
Fdata</pre>
```

M						LAB-02
##		Individual Age	(davs)	Height (cm)	Colour	
##		a	31		purple	
##		b	48		yellow	
##		C	39	12.5	red	
##		d	29	6.0	red	
##		e	32	4.0	red	
##		f	37		yellow	
##		g	37		yellow	
##		h	26		yellow	
##		i	41		purple	
##			34		purple	
##			38	12.0	pr	
##			40		yellow	
##			45		yellow	
##			40		yellow	
##			43	9.5	red	
##			33		yellow	
##			35		yellow	
##			39		yellow	
##			37	12.5	red	
##			32		purple	
##			31		yellow	
##			36	11.0	red	
##			41	17.0	red	
##			39		yellow	
##						
##			31 33		yellow yellow	
##			33			
##			28	5.5	yellow red	
##				13.5		
##			35 37		red	
					yellow	
##			42	14.0	red	
##			45	17.0	red	
##			37	16.5	red	
##			46	18.0	red	
##			37		yellow	
##			44		yellow	
##			44		yellow	
##			37		yellow	
##			29		yellow	
##			37	9.0	red	
##			36		purple	
##			47		purple	
##			38		yellow	
##			40	16.0	red	
##	45	5 ss	45	17.0	purple	