CastigadorPractExam#1

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```
summary(cars)
```

```
##      speed           dist       
##  Min.   : 4.0   Min.   :  2.00  
##  1st Qu.:12.0   1st Qu.: 26.00  
##  Median :15.0   Median : 36.00  
##  Mean   :15.4   Mean   : 42.98  
##  3rd Qu.:19.0   3rd Qu.: 56.00  
##  Max.   :25.0   Max.   :120.00
```

```
#A.Load the built-in warpbreaks dataset
  summary(warpbreaks)
```

```
##      breaks      wool   tension
##  Min.   :10.00   A:27   L:18   
##  1st Qu.:18.25   B:27   M:18   
##  Median :26.00          H:18   
##  Mean   :28.15                 
##  3rd Qu.:34.00                 
##  Max.   :70.00
```

```
  data("warpbreaks")
  warpbreaks
```

```
##    breaks wool tension
## 1      26    A       L
## 2      30    A       L
## 3      54    A       L
## 4      25    A       L
## 5      70    A       L
## 6      52    A       L
## 7      51    A       L
## 8      26    A       L
## 9      67    A       L
## 10     18    A       M
## 11     21    A       M
## 12     29    A       M
## 13     17    A       M
## 14     12    A       M
## 15     18    A       M
## 16     35    A       M
## 17     30    A       M
## 18     36    A       M
## 19     36    A       H
```

```
## 20     21    A       H
## 21     24    A       H
## 22     18    A       H
## 23     10    A       H
## 24     43    A       H
## 25     28    A       H
## 26     15    A       H
## 27     26    A       H
## 28     27    B       L
## 29     14    B       L
## 30     29    B       L
## 31     19    B       L
## 32     29    B       L
## 33     31    B       L
## 34     41    B       L
## 35     20    B       L
## 36     44    B       L
## 37     42    B       M
## 38     26    B       M
## 39     19    B       M
## 40     16    B       M
## 41     39    B       M
## 42     28    B       M
## 43     21    B       M
## 44     39    B       M
## 45     29    B       M
## 46     20    B       H
## 47     21    B       H
## 48     24    B       H
## 49     17    B       H
## 50     13    B       H
## 51     15    B       H
## 52     15    B       H
## 53     16    B       H
## 54     28    B       H
```

```
#1. Find out, in a single command, which columns of warpbreaks are either numeric or integer. What are
```

```
  str(warpbreaks)
```

```
## 'data.frame':    54 obs. of  3 variables:
##  $ breaks : num  26 30 54 25 70 52 51 26 67 18 ...
##  $ wool   : Factor w/ 2 levels "A","B": 1 1 1 1 1 1 1 1 1 1 ...
##  $ tension: Factor w/ 3 levels "L","M","H": 1 1 1 1 1 1 1 1 1 2 ...
```

```
  typeof(warpbreaks$breaks)
```

```
## [1] "double"
```

```
  typeof(warpbreaks$wool)
```

```
## [1] "integer"
```

```
  typeof(warpbreaks$tension)
```

```
## [1] "integer"
```

```
#2.How many observations does it have?
 # It has 54 observatons in warpbreaks
 wa <- nrow(warpbreaks)
 wa
```

```
## [1] 54
```

```
#3. Is numeric a natural data type for the columns which are stored as such? Convert to integer when ne
```

```
#4. Error messages in R sometimes report the underlying type of an object rather than the user-level cl
```

```
#B.Load the exampleFile.txt

  file <- file("exampleFile.txt")
  read <- readLines(file)
  read
```

```
## [1] "// Survey data. Created : 21 May 2013"
## [2] "// Field 1: Gender"
## [3] "// Field 2: Age (in years)"
## [4] "// Field 3: Weight (in kg)"
## [5] "M;28;81.3"
## [6] "male;45;"
## [7] "Female;17;57,2"
## [8] "fem.;64;62.8"
```

```
#2b

com <- read[grepl("^//",read)]
com
```

```
## [1] "// Survey data. Created : 21 May 2013"
## [2] "// Field 1: Gender"
## [3] "// Field 2: Age (in years)"
## [4] "// Field 3: Weight (in kg)"
```

```
vect <- read[!grepl("^//", read)]
vect
```

```
## [1] "M;28;81.3"      "male;45;"       "Female;17;57,2" "fem.;64;62.8"
```

```
#3b
subsetCom <-com[1]
date <- gsub("//Survey data. Created:","", subsetCom)
date
```

```
## [1] "// Survey data. Created : 21 May 2013"
```

```
cat ("It was Created,",date)
```

```
## It was Created, // Survey data. Created : 21 May 2013
```

```
vec_Split <- (strsplit(vect,";"))
vec_Split
```

```
## [[1]]
## [1] "M"    "28"   "81.3"
##
## [[2]]
## [1] "male" "45"
```

```
##
## [[3]]
## [1] "Female" "17"     "57,2"
##
## [[4]]
## [1] "fem." "64"   "62.8"
```

```
#4b
max_vec <-max(length(vec_Split))
max_vec
```

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

```
appendRow <- lapply(vec_Split, function(x) c(x,rep(NA, max_vec - length(x))))
appendRow
```

```
## [[1]]
## [1] "M"    "28"   "81.3" NA
##
## [[2]]
## [1] "male" "45"   NA     NA
##
## [[3]]
## [1] "Female" "17"     "57,2"   NA
##
## [[4]]
## [1] "fem." "64"   "62.8" NA
```

```
#B4c

unlistdata <- unlist(appendRow)
unlistdata
```

```
##  [1] "M"      "28"     "81.3"   NA       "male"   "45"     NA       NA
##  [9] "Female" "17"     "57,2"   NA       "fem."   "64"     "62.8"   NA
```

```
dat_matrix <- matrix(unlistdata, ncol=4, nrow = 3,
                     dimnames = list(c("row1","row2","row3")))
```

```
## Warning in matrix(unlistdata, ncol = 4, nrow = 3, dimnames = list(c("row1", :
## data length [16] is not a sub-multiple or multiple of the number of rows [3]
```

```
dat_matrix
```

```
##      [,1]   [,2]   [,3]     [,4]
## row1 "M"    NA     NA       "17"
## row2 "28"   "male" NA       "57,2"
## row3 "81.3" "45"   "Female" NA
```