

Practical Exercises for Tuesday, July 23, 2019, Day 2

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Exercise 6: Defining a new data frame

- (a) Create a data frame with 3 columns.

Exercise 7: Different bracket types within R

What is conceptionally the difference between the bracket types [...] and (...)?

```
chickwts[, 2]  
summary(aov(weight ~ feed, data = chickwts))
```

```
# SOLUTION: [...] the squared brackets we need to select rows and columns of a  
# data frame.  
# (...) the round brackets we need around function calls,  
# e. g.:  
subset(...) # to define a subset  
c(...) # to define a vector  
data.frame(...) # to define a data frame
```

Exercise 8: Data type of perulung_ems data set

- (a) Do all variables have the correct data type (numeric, integer, factor)? If not, do correct and / or define them.

```
head(lung)  
str(lung)  
lung$sex <- factor(lung$sex, levels = c("0", "1"), labels = c("female", "male"))  
# levels(lung$sex) <- c("female", "male")  
# levels(lung$sex)[levels(lung$sex)=="0"] <- "female"  
# levels(lung$sex)[levels(lung$sex)=="1"] <- "male"  
# tapply(lung$fev1, lung$sex, mean)  
lung$respsymptoms <- factor(lung$respsymptoms, levels = c("0", "1"))  
# summary(lung)  
# lung$sex <- factor(lung$sex, levels = c("0", "1"))  
# levels(lung$sex) <- c("female", "male")  
# lung$respsymptoms <- factor(lung$respsymptoms, levels = c("0", "1"))
```