

# Survival kit

## Special characters

Some characters are somewhat difficult to write on the Czech keyboard:

Character	Shortcut	Alternative
#	Alt + 35	Alt + x
\$	Alt + 36	Alt + ů
&	Alt + 38	Alt + c
~	Alt + 126	Alt + +
		Alt + w
>		Alt + .
{ }		Alt + b/n
[ ]		Alt + f/g
‘ ’		Alt + ý + Space
^	Alt + 94	

## RStudio shortcuts

Sign/Action	Shortcut
->	Ctrl + Alt + -
%>%	Ctrl + Shift + m
run selected row	Ctrl + Enter
run whole script	Ctrl + Shift + Enter

## Function reference

code description

## Basics

`install.packages("packagename")` installs a package  
`library(packagename)` attaches a package from a library

Getting help on anything:

`?function`  
`help(function)`

Lookign at data:

`head(x)` and `tail(x)`  
`View(x)`

## Summary functions

`mean(x)` returns mean `meadian(x)` returns median

## Data manipulation with dplyr

load package `library(dplyr)`

`%>%` *pipe* operator, `x %>% f()` equals `f(x)`, allows chaining functions in a pipeline  
(in newer versions of R, there is a native pipe operator `|>`)

`count(data)` count how many observations there are in a data frame

`summarise(data,...)` applies summary functions to a data frame

`group_by(data, x)` group *data* by values in variable *x*

Chain this for example like this:

```
data %>%  
  group_by(y) %>%  
  summarise(prumer = mean(x),  
            median = median(x))
```

## Plotting with ggplot2

Load package `library(ggplot2)`.

Alert: in `ggplot2`, individual pieces of code are chained using `+`!

`ggplot()` basic function call for each plot

`aes(x, y, color, fill...)` aesthetics

## Geometries

`geom_histogram()` produces histogram

`geom_point()` produces scatterplot

Create a plot like this:

```
data %>%  
  ggplot() +  
  aes(x) +  
  geom_histogram()
```