1 Getting started with R

- Download the R Users Guide from vUWS.
- The lab demonstrator will demonstrate the use of R based on the sections "Getting started with R" and "Using R in Chapter 1" of the R Users Guide. During this time, observe how the instructor is interacting with R and try out some of the code on your own computer.

2 Lab exercise

- Write an R script that performs the following tasks:

  1. Load the data set `StudentSurvey` from the `Lock5Data` package.
  2. Display the number of variables and the number of cases in the data set `StudentSurvey`.
  3. Take a random sample of size 20 from the data set `StudentSurvey`, and display the values of the variable `Weight` for all cases in your sample.

  The whole script should run without errors. Make sure to save the script in your directory.

- Add comments to your code, so that you can look back on it later and understand what you have done. (From personal painful experience: That clever trick that seems so obvious now may puzzle you for days in a few months; be kind to your future self and add an explanatory comment!)

  To add comments to your script, use the hash character (`#`); if R encounters a hash character, it ignores the rest of the line. The only purpose of a comment is to provide a description of what the code does.

  For example:

```r
# Create a vector of ages and add them
ages = c(19, 22, 21, 19, 24, 18, 19, 20)
sumAges = sum(ages)
# divide by the number of ages
meanAges = sumAges/length(ages)
# print the result
print(meanAges)
```

3 Practice Workshop Exercise

- Download the Workshop Exercise task sheet and the R Markdown template from the subject's vUWS site.
- Answer all questions, editing the R Markdown file as required.
- Use R Studio to produce ("knit") a MS Word document from your R Markdown file. You may have to use the package manager in R Studio to install the packages `knitr` and `rmarkdown`.
- Use MS Word to convert the Word document to PDF.
- Submit your solution in PDF format on vUWS by clicking on the link **"Practice Workshop Exercise"**.