

Exercise 1

Read the help for the `cumsum` function. What argument(s) does the function take? What does the function do with the argument? What is the return value (type, length, ...)? What are the cumulative sums of all natural numbers up to 5, 8, and 12. The help page for `cumsum` also covers related functions. What is the cumulative minimum of 10, 6, 3, 5, 2, 1, 8, 7, 4, 9?

Exercise 2

Create a variable `x` that holds 1000 standard normally distributed random numbers using the following code.

```
x <- rnorm(1000)
```

Plot a histogram of these values. For this, read the help page of the `hist` function. Make sure to plot the density, not the frequencies. Give the axes some meaningful labels and add a title to the plot.

*Exercise 3

This exercise is for the upcoming lecture to prepare you for the content or to sensibelize you for something.

Data can be classified as either structured or unstructured. Structured data is everything with a defined structure like tables but also FASTA files and most other bioinformatic data types. Unstructured data is virtually everything else including texts, video, audio, etc. We are almost always working with structured data and most of the time this data can be tabulated. Try to find characteristics for nicely formatted tabular data. What should a column contain, what a row? What should a single cell contain? When would you put data not in the same table but split them across multiple tables?