## Cultural Data Science 2022 Rikke Uldbæk 202007501

## **6:W43: Practicing functions with Gapminder**

## **DESCRIPTION**

Use the gapminder dataset from Week 43 to produce solutions to the three tasks below. Post the .R script or .Rmd and .html in your au##### github repository and link it here:

Link to my repository containing an .Rmd, pdf, and html: https://github.com/Digital-Methods-HASS/AU674347\_uldbaek\_rikke.git

- 1. Define a defensive function that calculates the Gross Domestic Product of a nation from the data available in the gapminder dataset. You can use the population and GDPpercapita columns for it. Using that function, calculate the GDP of Denmark in the following years: 1967, 1977, 1987, 1997, 2007, and 2017.
- 2. Write a script that loops over each country in the gapminder dataset, tests whether the country starts with a 'B', and prints out whether the life expectancy is smaller than 50, between 50 and 70, or greater than 70. (**Hint:** remember the grepl function, and review the <u>Control Flow</u> tutorial)
- 3. **Challenge/Optional**: Write a script that loops over each country in the gapminder dataset, tests whether the country starts with a 'M' and graphs life expectancy against time (using plot() function) as a line graph if the mean life expectancy is under 50 years.

Hint: If you are struggling with the gapminder tibble format, consider converting it into a dataframe, either by downloading it from the internet and loading it via read.csv (not read\_csv), and/or using as.data.frame() conversion function and then appropriately subsetting.