If you plan to participate in the Master Course "Interactive Data Visualization", please try out the following **self-test**. It may take a few minutes or a few hours or a weekend to do so (depending on your level of programming and knowledge of graphics/visualization libraries), but if you do, you will be much better prepared for the assignments of this course.

So, as a self-test, I am challenging you to

- download the Colorado Elevation Data set: **http://www.idvbook.com/teaching-aid/data-sets/the-colorado-elevation-data-set/**
- visualize the data set by displaying data on a 400x400 pixel square on your display in a grey scale: black to grey to white (lower values are black to dark grey; higher values are light grey to white.)
- check yourself if your pictures displays the data correctly, it should look like the picture below. What is the minimum and the maximum of the data? How do these values correspond to the real elevations of Colorado (do a quick check on the internet). Pick a real max and min of the Colorado area in meters and calculate the scaling between the real values and the values used in the Colorado Elevation Data set. (To pick a "real" max and min, you can approximate values from a map on the internet). Python is recommended, but is not mandatory. Any programming language will do for now.
- Optional:
    - Use a color scale to display the data
    - Draw a 2d coordinate system around the border of the visualization
    - Display a corresponding color scale next to your image display of elevations and mark elevations on the scale
    - advanced: Display contour lines for the elevation data
    - advanced: Draw a surface of the elevation data

There are more data sets you can try to read in on **http://www.idvbook.com/teaching-aid/data-sets**. The Data Sets are part of the text book we will be using:

M. Ward, G. Grinstein, D. Keim, "Interactive Data Visualization", CRC Press, AK Peters, 2nd Edition, 2015.