Assignment 2

Task 1 - Scales and Visual Mapping

a)

Ratio has a true value of zero and can not be below zero. interval instead can also have negative values.
For intervals the difference between values e.g. 10°C and 20°C is the same as the difference between 110°C and 120°C.
Because ratio have a true zero value it can be used to define e.g. 100K is two times warmer then 50K.
The term interval might result from the ability to declare intervals and ratio might result from the ability to declare ratios between all values.

b)

- degree Celsius   = interval
- degree Kelvin   = ratio
- dates   = interval
- durations   = ratio
- Cartesian coordinates   = interval
- weight   = ratio
- account balance   = ratio
- length   = ratio

c)

- Persons:

Max	Ben	Alice	Bob	Johanna	Tiffany	Andrea

  We wanted to concretely distinguish between all the names, therefore we used 7 different colors.

- Grades:

| very good	satisfactory	good	sufficientient	unsatisfactory	poor

  Usually green indicates e.g. eatable or drive (traffic light). Red instead indicates e.g. poisonous or dangerous. Therefore we used green for good things and red for bad things.

- Degree Celsius:

  Red usually means hot and blue means cold. therefore value zero is a mixture and in our case purple.

-6.0-3.5 -0.0+2.1+5.2   +13.5 +18.3 +22.7
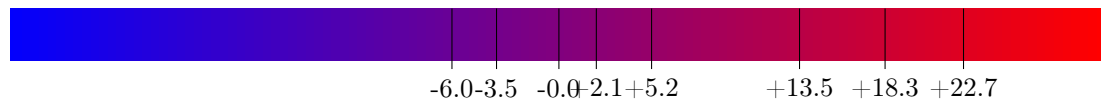
d)

visual variables:

- bar chart:
  - lenght
  - position

- pie chart:
  - angle
  - area

If we had to sort the values in increasing order, we would choose the bar chart over the pie chart. With respect to the visual variables it is easier to interpret and detect differences in length and position than in angle and area. If something can be expressed in percentage the pie chart provides a better understanding of the data.

Task 2 - Storytelling