

7. Session no. 7

Learning goals: continue with the previous week's learning goals

Write a function that can perform some statistical analysis of a set of data. This set of data will be passed to the function as a variable number of arguments, e.g.:

```
analyse_data(14, 5, 13, 2, 3, 4)
analyse_data(14, 20, 0)
```

The function must perform the following analyses:

- Show the number of data points
- Check that all values are between 0 and 20
- Show the sum of the data points
- Sort the data in reverse order using one of the sorting functions included in the slides presented in the classroom.
- Print a bar graph with the information that can be seen in the example.

Example: the following code

```
analyse_data(14, 5, 13, 2, 3, 4)
print("-----")
analyse_data(14, 21, 0)
print("-----")
analyse_data(14, 20, 0)
```

will give the following output when run:

```
Data: 6 elements
Sum of data: 41
Elements:
14 ***** 34.15%
13 ***** 31.71%
 5 ***** 12.20%
 4 **** 9.76%
 3 *** 7.32%
 2 ** 4.88%
-----
Data: 3 elements
*** ERROR: one or more elements is greater that 20
-----
Data: 3 elements
Sum of data: 34
Elements:
20 ***** 58.82%
14 ***** 41.18%
 0 0.00%
```