Assignment 2

Forfall 28. aug. 2020 av 23.59 **Poeng** 100 **Tilgjengelig** til 4. okt. 2020 i 23.59

Denne oppgaven ble låst 4. okt. 2020 i 23.59.

Notes

Directory names work as they did in assignment 1, e.g. *assignment_2_1*.

2.1

Write an application that asks for numbers until 0 is given as input and:

- Prints out the average
- Prints out the median
- Prints out the numbers sorted, in descending order

Note: The 0 should not be counted or used in the calculations.

Areas of interest: std::cin, std::list, std::vector, <algorithm> header

Expected output:
Average : 2.5
Median : 7
Descending : 3 2 1

2.2

Write an application that reads a file containing country code / country name pairs and:

Asks the user if he wants to:

1. Look up a country name by country code
   or
2. Look up a country code by country name

and completes the command. The user inputs 1 or 2 to select in the menu.

The file must be called countries.txt, be in this format and contain at least these entries:

```
0045
Danmark
0046
Sverige
0047
Norge
```

Areas of interest: std::ifstream, std::getline, std::map

Tip: You should open the file as "*countries.txt*" and set Working Directory to your project directory in CLion. Do this under Run -> Edit Configurations. Do not use an absolute path inside your program as it will fail in Docker/Bamboo.

Tip 2: Both the code and the country are strings in my tests.

2.3

Write an application that asks for words until "stop" is given and:

- Prints how many unique words have been entered
- Prints how many words in total have been entered
- Prints how many times each word has been entered

Areas of interest: std::map

Expected output:
Unique : 3
Total : 7
banana : 5 *(for each word)*

2.4

Write an application that:

1. Asks for the name of a student
2. asks for the name of a course and the grade the student got
3. Does this until course name is "stop"
4. Then asks for a new student until the name is "stop"
5. Then prints out the grades gathered for each student

Areas of interest: std::getline, std::map, std::vector, std::list

Expected output: Lars - dat210 - C *(for each student)*

Delivery

1. Test locally

see *Local testing* in Canvas

Test the solution on your own computer. You can fix your code and retest as many times as you want.

2. Deliver and test in Bamboo

See *Delivery and Bamboo testing* in Canvas

Finally deliver and test the solution in Bamboo. This is what updates your score in Canvas which is the score I can see. You can test as many times as you want here as well.