

## Week 1: Day 3 - Exercises

(recap)

1. Get GC-content:
  - do it first with a for loop and if-statement
  - then do it using `list.count(element)`
2. FizzBuzz exercise (see *fizzbuzz.py*)
3. Analyse DNA (see *analyse\_dna.py*)
4. Sequential squares: Write a script that takes a number and prints the sum of the squares of all integers less than that number. Bonus points for doing it in one line!
5. Lowercase checker: Write a script that checks if there are lowercase characters in a string. Then print only the lowercase characters in the string.

(functions)

1. Mean calculator: Write a function that calculates the mean of a list of numbers.
2. String case reverser: Write a function that returns a string input in reversed case.
3. Factorial calculator: Write a function that returns the factorial of any number.
4. Mean calculator 2.0: Write 3 functions, each calculating one of the following:
  - arithmetic mean
  - geometric mean
  - harmonic mean

Then write one function that unites them into one and allows for the user to choose which mean they want to use. Set a default using something of the form

```
def function(param1, param2='default')
```