Lab 08 – CW revisions

You can check for sample code here: https://github.com/vptuan/COMP1819ADS

1. A thought that counts

Look through the previous labs, can you come up with a similar question? Have you looked at the provided samples in Moodle?

Write the description of the problem you just came up with for Exercise 1.

2. Solve the problem

For the chosen question that you designed, can you solve it using Python? You **might have to simplify the question** to provide an answer/solution.

If you work individually, try to come up with a basic solution and then make some improvement for a better optimized solution. Please discuss with your tutor if you need help.

3. Scale the input up

Now, you can start measuring time for the solution with different inputs. Do your solution run very fast with 0.00 sec running time? Can you make a very big input (with random) and/or with more repetitions of the running? Does your solution run well with larger inputs? Refer to sample solutions that were provided during labs.

Can you improve your own solution or come up with a different solution? What is the Big-O notation for the best solution?

4. Plot the running time vs input size

Now, you have more input test cases with the running time. Please plot a diagram for running time to compare the difference.

Note: please follow the instructions in the coursework instruction in Moodle. Missing programming exercises, here we go.

5. Palindromes

Write a program to read a text file and list out all palindrome words in the file but removing the duplications. A palindrome is a word or sentence which is read the same backwards as it is forwards, such as the name, "Hannah", a word “civic” or the sentence, "Never odd or even"