CS2121B Lab 7

1. Log into OWL and navigate to the Lab Folder (Assignments->Lab7) and download the file **Lab7.pdf**.
2. Complete the tasks outlined in Lab7.
3. Submit the code and the output report in a **zip file** on OWL.

Exercise

Fibonacci Sequence

- ## The Fibonacci sequence

  ```
  1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, ...
  ```

  ## can be solved recursively

$$\text{fib}(n) = \begin{cases} \text{fib}(n-1) + \text{fib}(n-2), & \text{if } n > 1 \\ 1 & \text{if } n = 0 \text{ or } n = 1 \end{cases}$$

- Provide recursive and non-recursive implementations of the Fibonacci sequence. Verify the implementations by generating the first 2000 values and compare the execution time of recursive and non-recursive versions.
  - Which one is more efficient? Elaborate your answer.