

## Problem set 1: Variables and control structures

1. Find if  $n$  is prime number.
2. Find sum of prime numbers between 1000 and 2000.
3. Read  $n$  numbers and store them in a list. Find the following parameters without using any python functions and methods available with list data structure:
  - a. Total
  - b. Average
  - c. Maximum
  - d. Minimum
  - e. Second maximum
  - f. Second minimum
  - g. Solve (c)-(f) using python functions and/or methods available with list, if possible.
4. The numbers 0, 1, 1, 2, 3, 5, 8,..., etc, form Fibonacci series, defined as  $f(n) = f(n-1) + f(n-2)$  where  $f(0) = 0$  and  $f(1) = 1$ . Now:
  - a. Find the  $n^{\text{th}}$  value of the series
  - b. Find the sum of first  $n$  Fibonacci numbers