

Introduction to Computer Programming and Data Structures

Practice Set 2

Exam Date: **2022-Aug-17**

Problem # PP0201

- Problem: Find the possible output of the following program.

```
#include <stdio.h>
int main() {
    int 2nd_value=10;
    2nd_value = 2nd_value*2nd_value;
    print ("%d\n", 2nd_value);
    return 0;
}
```

Problem # PP0202

- Write a program that computes and prints the n th prime number.
- Input: n
- Output: n th prime
- Hint: For $a, b \in \mathbb{N}$, if $a \% b == 0$, then a is divisible by b .

Problem # PP0203

- Write a program that computes the sum of the logarithms of all the primes from 2 to some number n , and print out the sum of the logs of the primes, the number n , and the ratio of these two quantities. Test this for different values of n .
- Input: n
- Output: n th prime
- Hint: For $a, b \in \mathbb{N}$, if $a \% b == 0$, then a is divisible by b .