East West University
Department of Computer Science and Engineering

CSE 303: Statistics for Data Science
LAB 01 (Exercise)
Course Instructor: Dr. Mohammad Rezwanul Huq

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1. Given two integer numbers, write a Python program to return their product. If the product is greater than 1000, then return their sum. Read inputs from the user.
2. Write a Python program to find the area and perimeter of a circle. Read inputs from the user.
3. Write a Python program to calculate the compound interest based on the given formula. Read inputs from the user.
   $A = P * (1 + R/100)^T$ where P is the principle amount, R is the interest rate and T is time (in years).
   Define a function named as compound_interest_<your-student-id> in your program.
4. Given a positive integer N (read from the user), write a Python program to calculate the value of the following series.
   $$1^2 + 2^2 + 3^2 + 4^2 \ldots\ldots + N^2$$
5. Given a positive integer N (read from the user), write a Python program to check if the number is prime or not. Define a function named as prime_find_<your-student-id> in your program.
6. Given a positive integer n (read from the user), write a Python program to find the n-th Fibonacci number based on the following assumptions.
   $F_n = F_{n-1} + F_{n-2}$ where $F_0 = 0$ and $F_1 = 1$
7. Given a list of numbers (hardcoded in the program), write a Python program to calculate the sum of the list. Do not use any built-in function.
8. Given a list of numbers (hardcoded in the program), write a Python program to calculate the sum of the even-indexed elements in the list.
9. Given a list of numbers (hardcoded in the program), write a Python program to find the largest and smallest element of the list. Define two functions largest_number_<your-student-id> and smallest_number_<your-student-id> in your program. Do not use any built-in function.
10. Given a list of numbers (hardcoded in the program), write a Python program to find the second largest element of the list.
11. Given a string, display only those characters which are present at an even index number. Read inputs from the user.
12. Given a string and an integer number n, remove characters from a string starting from zero up to n and return a new string. N must be less than the length of the string. Read inputs from the user. Do not use any built-in function.
13. Given a string, find the count of the substring “CSE303” appeared in the given string. Do not use any built-in function.
14. Given a string, write a python program to check if it is palindrome or not. Define a function named palindrome_checker_<your-student-id> in your program.
15. Given a two list of numbers (hardcoded in the program), create a new list such that new list should contain only odd numbers from the first list and even numbers from the second list.

Submission Instruction:

Create a zip file containing your python (.py) files along with the report. Name of the file should be: **<your-student-id>_Lab01.zip**

Submit in the link given in the classroom.