**INTERNATIONAL UNIVERSITY VNUHCM**

PRINCIPLES OF PROGRAMMING LANGUAGES

**LAB 2. PYTHON COLLECTIONS**

**PURPOSE:** After this lab, you can use Python strings[[1]](#footnote-1) and functions[[2]](#footnote-2).

**EXERCISES:**

L2E1. In Lab 1, you have written the first simple version of a calculator. In this advanced version, write a calculator that receives a single user input – as a whole – with *only one* arithmetic operator (+, -, \*, /) and two integers; and finally, outputs the relevant calculation result; e.g., for the input: 2 \* 3, the calculator will output its result: 6.

L2E2. Write a program to solve a quadratic equation (*ax2 + bx + c = 0)*, given user-inputs *a, b, c*,by defining your own Python functions.

a. Version 1: *a, b, c* are prompted to enter separately.

b. Version 2: *a, b, c* are entered as a single input from a user; e.g., 5x2 + 2x + 1 = 0

**SUBMISSION:** By the end of the lab, please download your Python notebook (\*.ipynb) and submit it into the Blackboard.

**ABBREVIATIONS**: L*x*E*y* = Lab *x* Exercise *y*

1. https://www.w3schools.com/python/python\_strings.asp [↑](#footnote-ref-1)
2. https://www.w3schools.com/python/python\_functions.asp [↑](#footnote-ref-2)