**In-class Exercise 1: Pair Programming**

**Background**

Pair programming is a special method used by software developers for programming. Rather than working alone, you must work with one person and follow the instructions on this page. In pair programming, you and your partner work collaboratively at **one** computer. One person is the "driver" and types the code into the computer. The other person is called the "navigator" and actively checks the work entered by the driver. Each partner spends about one-half of the time for each assignment as the driver and the other half as the reviewer. Together, you and your partner should discuss and implement the design, produce the code and run the tests on the code. Each solution must be a true joint effort equally owned, created and understood by both students.

**Instructions of Pair Programming**

* When working together, you must work together on **one** computer to edit and compile code.
* Periodically, change who controls keyboard and mouse so that each has a chance to drive.
* Any work done alone must be reviewed by the partner.

**A. Programming Tasks:** write programs for the programming tasks below with java

1. Given an array of integers, return **indices** of the two numbers such that they add up to a specific target. You may assume that each input would have exactly one solution, and you may not use the same element twice. Example:

Given nums = [2, 7, 11, 15], target = 9,

Because nums[0] + nums[1] = 2 + 7 = 9, return [0, 1].

2. Write a function to find the longest common prefix string amongst an array of strings.

Input: ["flower", "flow", "flight"] Output: "fl"

Input: ["dog", "racecar", "car"] Output: ""

Explanation: There is no common prefix among the input strings.

**B. Question Tasks:** Answer the following questions briefly

1. What do you think is the difference between pair programming and traditional way of programing (developing programs alone)?

2. Do you think it worked well, or, it did not work? And why?

**What to turn in?**

1. only one submission is required on Blackboard (please write both names)

2. a pdf file with title as “E1\_lastname1\_lastname2.pdf”, lastname1 and lastname2 are the last name of the two students who finished the assignment together. The pdf file should include the shot screen of your code solutions and output results of programming task 1 and task, and the answer the question task 1 and task.

2. a .zip file with title as “E1\_lastname1\_lastname2.zip”, inside the .zip, you should have all source code of your programming solutions.

Example Submission:

Student1: Alice Brown

Student2: Tom Jackson

.pdf file: E1\_Brown\_Jackson.pdf

Programming task 1 code solution shot screen

Programming task 1 output result shot screen

Programming task 2 code solution shot screen

Programming task 2 output result shot screen

Answer for question 1

Answer for question 2

.zip file: E1\_Brown\_Jackson.zip

Source code for programming task 1 and 2.