

## 창의적 소프트웨어 프로그래밍 Lab 4

Handed out : Thu, Sep 22, 2022

Due : Thu, Sep 22, 2022, 23:59 (NO SCORE for late submissions!)

Submit your file on LMS.

**There will be NO class tomorrow!!! (Fri, Sep 23, 2022)**

1. Write a program that works as follows.
  - A. Take a sentence of arbitrary length (including spaces), and store it to a `std::string` type variable `str`.
  - B. Print out the `str`.
  - C. Note that
    - i. Read the input sentence at once. Do not read it word by word.
  - D. **Input:** A sentence of arbitrary length
  - E. **Output:** The input sentence
  - F. Files to submit:
    - i. C++ source file

```
$ ./sentence
I have an apple
I have an apple
```

2. Write a program that works as follows.
  - A. Take two strings from the user. Assume these strings do not contain spaces.
  - B. Print out
    - i. The concatenated string of the two input strings.
    - ii. The first letter of the concatenated string.
    - iii. The last letter of the concatenated string.
  - C. Note that
    - i. Each input string must be stored in a `std::string` type variable.

- ii. You must use `std :: cin` and `std :: cout` for input and output of strings.
  - iii. The concatenated string should be stored in a separate variable and then be printed out.
- D. **Input:** Two strings
- E. **Output:** The concatenated string and its first and last letter
- F. Files to submit:
- i. A C++ source file

```
$ ./string
abc
def
abcdef
a
f
```

3. Write a program that works as follows.

- A. Implement two versions of `add()`.
- i. `int add(int a, int b); // returns a + b`
  - ii. `std::string add(std::string a, std::string b); // returns a concatenated string with the '-' inserted between a and b`
- B. Takes two integers and two strings from the user.
- C. By calling the above two functions, print out the result of adding the two input integers and the "concatenated" string of the two input strings.
- D. **Input:** Two integers and two strings
- E. **Output:** Sum of integers, concatenated string of strings
- F. Files to submit:
- i. A C++ source file

```
$ ./function_overloading
11 22 aaa bbb
33
aaa-bbb
```