

창의적 소프트웨어 프로그래밍 Lab 7

Handed out : Thu, Oct 6, 2022

Due : Thu, Oct 6, 2022, 23:59 (NO SCORE for late submissions!)

Submit your file on LMS.

There will be NO class tomorrow!!! (Fri, Oct 07, 2022)

1. Write a program that works as follows.

- A. Take a string (s) and an integer (n) as command line arguments.
- B. Print out the string s n times.
- C. **Input:** A string and an integer (as command line arguments)
- D. **Output:** Strings n times
- E. Files to submit:
 - i. A C++ source file
 - ii. A **CMakeLists.txt** to generate the executable

```
$/command_argument asdf 3  
asdf  
asdf  
asdf
```

2. Write a program that works as follows.

- A. Define a structure named Person that can store the name and score of a person.
- B. Take arbitrary pairs of the name and score as command line arguments.
 - i. The type of the score should be **double**.
- C. Create a Person type array of length N (the number of input pairs) and fill the array with inputs.

- D. Print out the contents of the array.
- E. Note that
 - i. You must use new [] operator to allocate the array.
 - ii. Do not forget to free the memory by using delete[] operator after using the array.
 - iii. Only <iostream> and <string> are allowed to include.
- F. **Input:** N pairs of name and score (as command line arguments)
- G. **Output:** The stored name and score in the array
- H. Files to submit:
 - i. A C++ source file
 - ii. A **CMakeLists.txt** to generate the executable

```
$ ./print_people John 95.2 Amy 80.7 Emma 52.9  
Name:John, Score:95.2  
Name:Amy, Score:80.7  
Name:Emma, Emma:52.9
```

- 3. Write a program that works as follows.
 - A. Take arbitrary number of integers as command line arguments.
 - B. Create an array of length N (the number of input integers), and fill the array with input integers.
 - C. Find the min and max values in the array using getMinMax() in the following form.
 - i. void getMinMax(int* arr, int len, int& min, int& max);
 - D. Print out the min and max values.
 - E. Note that
 - i. You must use new [] operator to allocate the array.

- ii. Do not forget to free the memory by using `delete[]` operator after using the array.
 - iii. Only `<iostream>` is allowed to include.
- F. **Input:** Integer values (as command line arguments)
- G. **Output:** Min and max values
- H. Files to submit:
- i. **main.cpp** – `main()` must be in this file.
 - ii. **minmax.cpp, minmax.h** – `getMinMax()` must be in these files.
 - iii. A **CMakeLists.txt** to generate the executable

```
$ ./dynamic_min_max 1 2 2 -1 -1  
min: -1  
max: 2
```