Object-Oriented Programming

ASSIGNMENT 2

박태성/2015722031/2019 년 5 월 3 일

1. Read informations from a file and write a program that calculates the expected arrival time. You should enter the depature date, departure time, and the destination. This program should print the result to a file.

```
C:₩Users₩박태성₩Desktop₩Assignement2_2015722031_박태성₩Assignment2-1₩Assignment2-1₩Debug₩ConsoleApplication2.exe
flight_time.txt
Sapporo: [180]
Tokyo: [150]
Boracay: [210]
DaNang: [160]
--------------------------
Input from users
Departure date:2019/04/05
Departure time:23:59
Destination: Tokyo

--------------------------
Departure date : 2019/04/05
Departure time : 23:59
Destination : Tokyo
Arrival date : 2019/04/06
Arrival time : 02:29
계속하려면 아무 키나 누르십시오 . . .
```

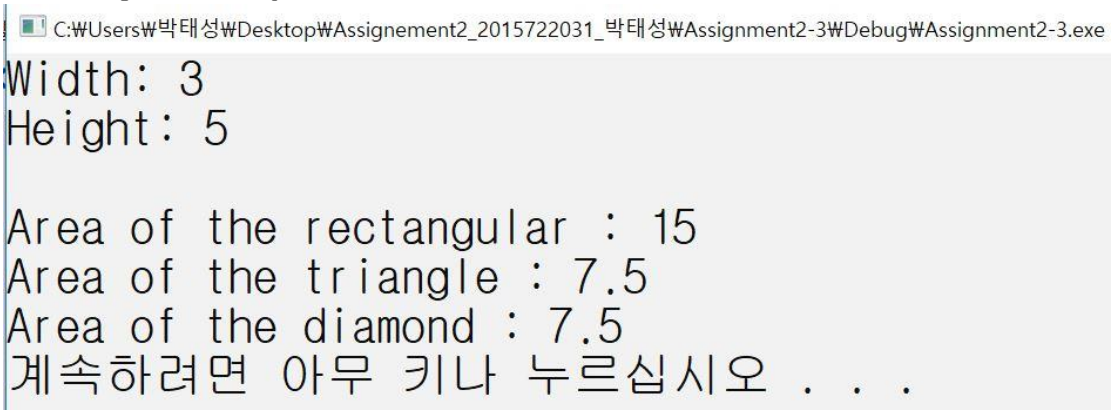
I focused on separating the information of the destination and the flight time form given file. Then, I took much time to convert input string to integer type to allow data to calculate.

2. Write a function CMPandCAT. The program has three functions. First, comparing src1 and src2. You could compare strings by ASCII code. Second, copying src1 and scr2 to copy_result. Third, returning an integer value that is result of comparing.

```
C:₩Users₩박태성₩Desktop₩Assignement2_2015722031_박태성₩Assignment2-2₩Debug₩Assignment2-2.exe
Input string :
src1 : Hello
src2 : How
Output string :
return_value : -1
copy_result : HowHello
계속하려면 아무 키나 누르십시오 . . .
```

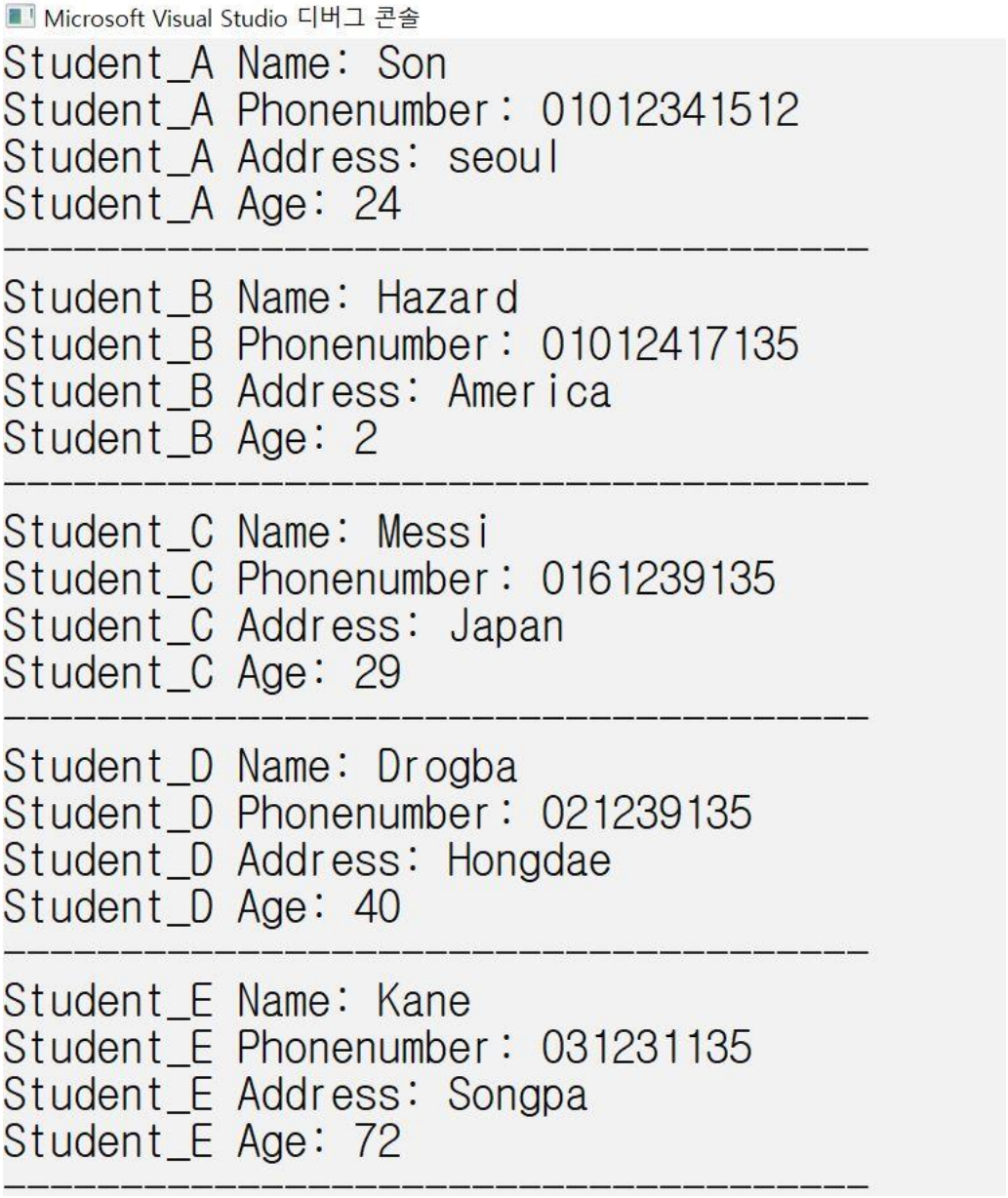
Since I was not allowed to use any string functions, I used character type array and pointer. Also, I compared, copied, and combined characters by loops. Be careful that pointer just stored the address of first character of string.

3. Write three functions which calculates area of rectangle, triangle, and diamond shape. You should enter width and height. You should write a program through function pointer array.



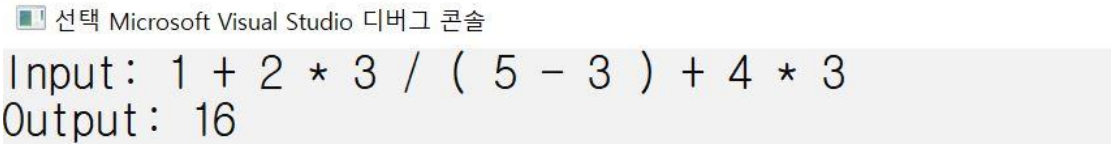
Function pointer array takes address of function as parameter. By using function pointer array I could simply make the code..

4. Write a Namecard class that saves personal informations. Implement member functions that retrieve and modify member variables.



Since I didn't allocate any array, I had no neccesary to deallocate or used destructor. Therefore, I initialized varialbes at destructor. I learned that 'm_' is used at MFC.

5. Write a calculator program. It should keep the arithmetic order and support parentheses. Print the result of caculation.



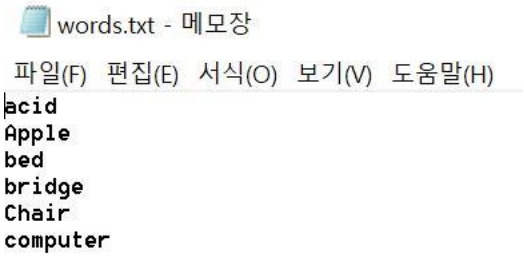
There are diffence compared vector with stack. Vector stored data sequentially. However stack is called "Last in First out". Stack is useful than vector to solve the assignment2-5. I was confused because of experience of using calculation function at Python. Python prints the results directly without any special process.

6. Write a program that counts the number of words in a string. You should keep in mind a word is case-intensitive.

```
C:₩Users₩박태성₩Desktop₩Assignement2_2015722031_박태성₩Assignment2-6₩Debug₩Assignment2-6.exe
Rainbow is made up of red color orange Color yellow color green coLor blue color indigo co
lor purple ColOR
Output: 13
계속하려면 아무 키나 누르십시오 . . .
```

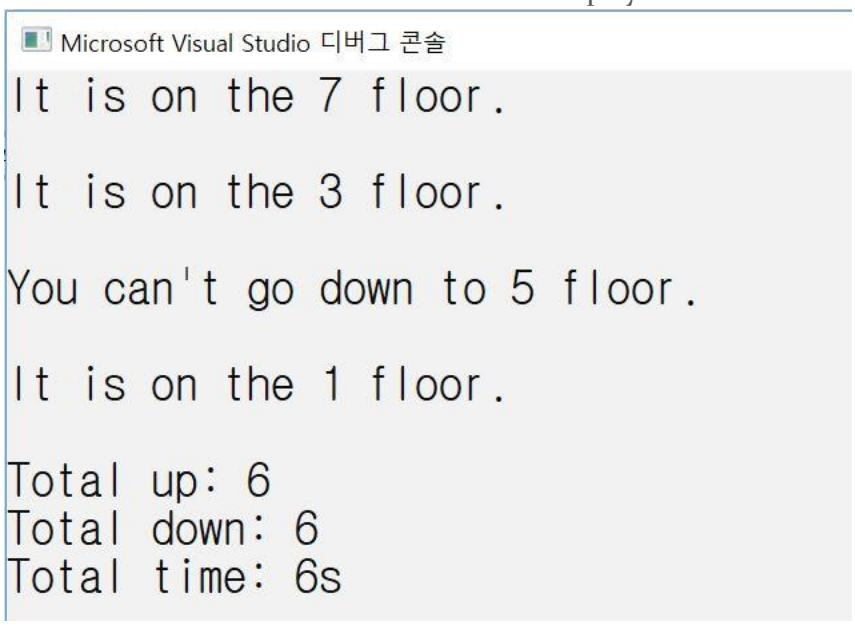
The number of words in a sentence can be found by subtracting the number of times the same word overlaps the number of words in the input file.

7. Read a text file and then print all the words in the text file in ascending order. Sorting is case-intensitive.



I recommend to write a program by using file pointer since char array is hard to combine and compare characters. I could easily set and get position through file pointer.

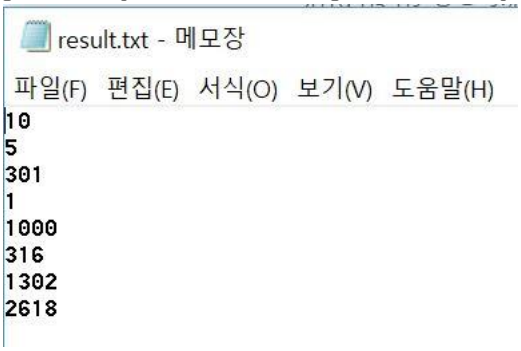
8. Define Elevator class for the elevator function. It is implemented with a single button. You could create one instance and display the function.



I could make more instances through inheritance. If I append more function such as, making the nearest elevator move first, I could apply it to make actual elevator.

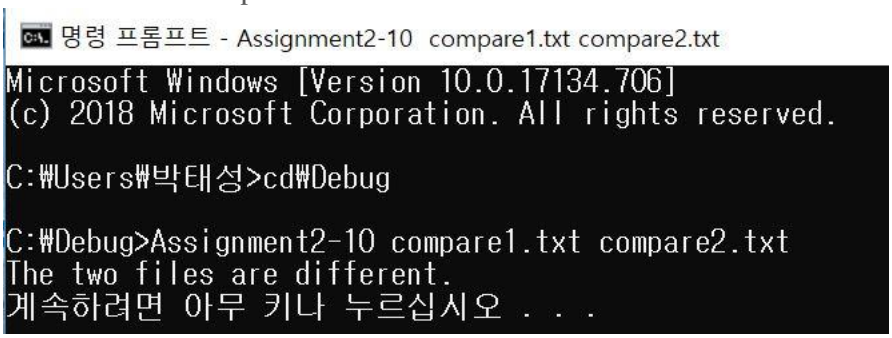
9. First, Read the three number of the file from the bottom. and write the result to the end. Second, perform the addition from the last number that was read

previously. Continue this process until you cannot read the three numbers.



It could easily solved by using file pointer such as Ios::beg, ios::end. I could get length of string or get position of the current character.

10. Write a program that checks whether two text files are the same or not. Get the text file name as a parameter of the main function.



Note that argv[0] contains the name of executable name. Note that two text files are located in the same folder with execute file.