

Python Exercises, Modules 1-4

총 5 문제가 있으며, 다 완벽히 풀지는 않아도 좋지만 시도는 해봤으면 좋겠고, 과정과 중간 결과물을 보여줘도 좋습니다. 구글에 답을 찾아봐도 좋습니다. ROS 하면서도 느끼겠지만, 결국에 코딩은 풀다가 막히면 다른 사람이 적은 코드를 참고하는 경우가 많기 때문에 Google Search 하는것도 결국에 실력입니다.

주석 처리도 엄청 중요합니다. 꼭 주석 처리 해주세요. 제발. 보는 사람 코딩하는 사람 주석 잘 된 코드 볼때 기분이 아주 좋습니다.

각자 코드는 문제별로 .py 파일을 만들고, 다 zip file 로 압축해서 dongwan123@gmail.com 으로 월요일 밤까지 보내주세요.

문제 1: Difficulty 1

Find all numbers between 2000 and 5000 (include 2000 and 5000) that are divisible by 7 but not by 5. Print the numbers one by one, separated by commas on a single line.

문제 2: Difficulty 2

Write a program that takes the test scores of students as an input and outputs more useful information, such as the max score, mean (평균) score, and minimum score. The program should do the following:

1. Take input of # of students
2. Take input of each students score

The output should look something like this:

```
In [3]: runfile('C:/Users/dongwan123/.spyder-py3/temp.py', wdir='C:/Users/
dongwan123/.spyder-py3')
Enter the number of students

6
Input score of student number 1

100
Input score of student number 2

90
Input score of student number 3

80
Input score of student number 4

70
Input score of student number 5

50
Input score of student number 6

30
Max Score: 100
Min Score: 30
Average Score: 70.0
```

문제 3: Difficulty 1

Create a countdown timer that starts at a given user input, and ticks every second until it reaches 0.

문제 4: Difficulty 3

Write a module `def int_to_binary(int_input):` that converts integers to 8-bit binary (이진수). Write another module `def binary_to_int(binary_input):` that converts 8-bit binary to integers. In the main function, allow the user to select between `int_to_binary` and `binary_to_int`. You may **NOT** use the `bin()` function.

Extra: Add some code so that the program will not run into errors when the user inputs a negative number, or a string.

문제 5: Difficulty 3

A user is creating a password. Create a program that assures the user creates a complex password. The password must satisfy the following criteria:

1. At least 1 letter must be upper case
2. At least 1 letter must be lower case
3. At least 1 number must be included
4. The password must be at least 8 characters long

If the user's password satisfies ALL the criteria, he/she must enter the password again.

Hint: Use **google** to search for useful functions.