[실습] 5월 20일

다음 문제에 해당하는 c 코드를 작성하고, 실행 결과를 캡쳐하여 문서로 만들어 제출하시오. 코드도 압축해서 제출하세요.

1. A Pythagorean triplet is a set of three natural numbers, x < y < z, for which, $x^2 + y^2 = z^2$. For example, $3^2 + 4^2 = 9 + 16 = 25 = 5^2$. There exists exactly one Pythagorean triplet for which x +y + z = 1000. Write a C programming to find the product xyz.
2. A prime number is a natural number greater than 1 that cannot be formed by multiplying two smaller natural numbers. A natural number greater than 1 that is not prime is called a composite number. For example, 5 is prime because the only ways of writing it as a product, 1 × 5 or 5 × 1, involve 5 itself. However, 6 is composite because it is the product of two numbers (2 × 3) that are both smaller than 6. The sum of the primes below 10 is 2 + 3 + 5 + 7 = 17. Write a C programming to find the sum of all the primes below ten thousand.
3. Write a C program to get the indices of the two numbers of a given array of integers, such that the sum of the two numbers equal to a specific target.
    a. example
        i. `Original Array: 4  2  1  5`
        `Target Value: 7`
        `Indices of the two numbers whose sum equal to target value: 1 3`
4. Write a C program to find all unique triplets in a given array integers whose sum equal to zero.
    a. example

```
Original Array: -2  0  0  1  1
Unique triplets of the said array whose sum equal to zero: -2 1 1
```

5. Write a C program to find the length of the longest valid (correct-formed) parentheses substring of a given string.
    a. example

```
Original Parentheses string: ((()))
Length of longest parentheses: 4
```