

# Computer Organization Lab Assignment 1

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1.

**Problem:**

You are trapped in a mysterious room filled with various puzzles, codes, and mechanisms. The only exit is a door engraved with strange symbols, which is said to only open when the correct password is entered. You must use the clues around you and your wits to find the correct password and escape from this room.

**Input Format:**

A single line of any string, where each character is an ASCII character.

**Output Format:**

The same string as the input.

**Sample 1:**

**Input:**

```
Hello world!
```

**Output:**

```
Hello world!
```

**Sample 2:**

**Input:**

```
CS202 lab assignment 1.
```

**Output:**

```
CS202 lab assignment 1.
```

2.

**Problem:**

Given two positive integers  $n$  and  $k$ , calculate the combination number  $C(n, k)$ . The combination number  $C(n, k)$  represents the number of ways to choose  $k$  elements from  $n$  different elements.

**Input Format:**

The input contains two positive integers  $n$  and  $k$ , representing the combination number  $C(n, k)$  to be calculated.

**Output Format:**

Output a single integer representing the value of the calculated combination number  $C(n, k)$ .

**Sample 1:**

**Input:**

```
5
2
```

**Output:**

```
10
```

**Sample 2:**

**Input:**

```
5
5
```

**Output:**

```
1
```

### 3.

**Problem:**

Given a sequence of integers, the first number of the sequence indicates the length of the sequence, and the subsequent numbers are the elements to be sorted (the maximum length of the sequence is 50, and all numbers in the sequence are positive integers, so negative numbers do not need to be considered). Please write a program to sort the sequence in ascending order and output the sorted result.

**Input Format:**

The first line contains the length  $n$  of the sequence, and each subsequent line contains the individual numbers of the sequence.

**Output Format:**

A series of numbers sorted in ascending order (note to include line breaks).

**Sample 1:**

**Input:**

```
5
1
3
2
4
6
```

**Output:**

1  
2  
3  
4  
6

**Sample 2:**

**Input:**

4  
1  
34  
22  
42

**Output:**

1  
22  
34  
42