Lab 1

Due Date: August 5.

1. Add two numbers

Given two integers as input, write a program that adds those two numbers.

Input: Two numbers separated by a space. Each number will be ≤ 1000.

Output: A single integer which is the sum of two numbers.

Input	:	1 4
Output	:	5

2. Minimum

The if else condition can be written in C in the following way:

```
if(condition1)
{
   statement1;
}
else  if(condition2)
{
  statement2;
}
else
{
  statement3
}
```

Note that the else part in the above structure is optional. In this problem, we will use if else statements to solve the following problem. Given three distinct integers, write a program to find the minimum of the three numbers.

Input: Three numbers separated by a space. Each number will be ≤ 1000.

Output: A single integer which is the minimum of the three numbers.

Input	:	3 1 9
Output	:	1

3. Sorting four numbers

Given four numbers, write them in sorted order.

Input: Four numbers separated by a space. Each number will be ≤ 1000.

Output: Four numbers written in the sorted order separated by a space.

Input	:	3 1 9 5
Output	:	1 3 5 9

4. Sorting Small Numbers

A for loop in C can be written as follows:

```
  for( initializationStatement; condition; updateStatement )
  {
    statement1;
    statement2;
  }
```

The updateStatement is executed at the end of each iteration. For example, the following program prints all numbers from 1 to 10.

```c
int i;
for( i=1; i <= 10; i++ )
{
  printf(”%d ”, i);
}
```

Given n numbers, each 0,1 or 2, sort the array and output them in ascending order.

Input: The input will consist of two lines. The first line is the number n where $n \leq 1000$. In the second line, we will have n numbers separated by a space. Each number will be 0,1, or 2.

Output: The array in the sorted order. A space will separate the numbers.

Input	:	10
		1 0 2 1 0 1 2 1 0 2
Output	:	0 0 0 1 1 1 1 2 2 2

5. Postive Negative

An array can be defined in C as follows

```c
int arr[10];
```

In the above statement, arr is an array of integers. The size of this array is 10. arr[0] is the first element of this array and arr[9] is its last element.

In this question, you will be given n numbers. Some of the numbers are negative, while some are non-negative. Your job is to print all the negative numbers and then all the non-negative numbers. All the negative numbers should appear in the same order as in the input. Similarly, all the non-negative numbers should appear in the same order as in the input.

Input: The input will consist of two lines. The first line is the number n where $n \leq 1000$. In the second line, we will have n numbers $a_1, \ldots, a_n$ seperated by a space. Each number $-1000 \leq a_i \leq 1000$.

Output: All the negative numbers in the input are followed by all the non-negative numbers.

Input	:	10
		-1 0 -2 3 0 1 -2 10 0 -3
Output	:	-1 -2 -2 -3 0 3 0 1 10 0

6. Print in Reverse

Given a number, write its digits in the reverse order.

Input: A single positive integer. The number will be ≤ 10000000.

Output: The same number written with its digits in the reverse order.

Input	:	14351
Output	:	15341