

# Pointers in C



## Objective

In this challenge, you will learn to implement the basic functionalities of pointers in C. A **pointer** in C is a way to share a memory address among different contexts (primarily functions). They are primarily used whenever a function needs to modify the content of a variable, of which it doesn't have ownership.

In order to access the memory address of a variable, **val**, we need to prepend it with **&** sign. E.g., **&val** returns the memory address of **val**.

This memory address is assigned to a pointer and can be shared among various functions. E.g.

**int\* p = &val** will assign the memory address of **val** to pointer **p**. To access the content of the memory to which the pointer points, prepend it with a **\***. For example, **\*p** will return the value reflected by **val** and any modification to it will be reflected at the source (**val**).

```
void increment(int *v) {
    (*v)++;
}

int main() {
    int a;
    scanf("%d", &a);
    increment(&a);
    printf("%d", a);
    return 0;
}
```

## Task

You have to complete the function **void update(int \*a, int \*b)**, which reads two integers as argument, and sets **a** with the sum of them, and **b** with the absolute difference of them.

- $a' = a + b$
- $b' = |a - b|$

## Input Format

The input will contain two integers, **a** and **b**, separated by a newline.

## Output Format

You have to print the updated value of **a** and **b**, on two different lines.

*P.S.:* Input/output will be automatically handled. You only have to complete the function described in the 'task' section.

## Sample Input

```
4
5
```

## Sample Output

```
9
1
```

## Explanation

- $a' = 4 + 5 = 9$

- $b' = |4 - 5| = 1$