C++

Tiene Clases (El trabajo de Clases es parecido a Java) OOP

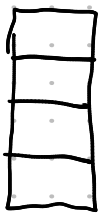
Crear Funciones (Se parece a python) OFP

```
class Student
{
   private:
      string name;
      int id;
   public:
      string get_degree()
      {
         return "Physics";
      }
{
```

Pointers.

Pointers, (Punteros), indican donde esta guardada la información

```
int height;
height = 305
```



1 byte = 8 bits

1 $2^8 = 256$

0 $= 4294967256$

$256 \times 256 \times 256 \times 256$

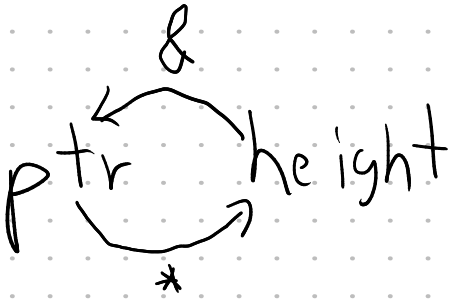
Pointer es una varible que guarda la dirección en el amputador del objeto.

```
int height = 305
int* ptr = &height
```

dirección

```
cout << ptr
```

9a0e14



Dereferenáing

Dado un pointer encuentre el valor que indica es pointer

```
cout << *ptr
```

Resultado: 305

Python

```
def swap(a, b):
    b_temp = b
    b = a
    a = b
```

```
a, b = swap(a, b)
```

C++

```
void swap(int* pa, int* pb)
{
    int b_temp = *pa
    *pb = *pa
    *pa = b_temp
}
```

Problem in Class

Function Description

Complete the update function in the editor below.

update has the following parameters:

- int *a: an integer
- int *b: an integer

Returns

- The function is declared with a `void` return type, so there is no value to return. Modify the values in memory so that a contains their sum and b contains their absoluted difference.
- $a' = a + b$
- $b' = |a - b|$

Input Format

Input will contain two integers, a and b, separated by a newline.

Sample Input

```
4
5
```

Sample Output

```
9
1
```

```c
#include <stdio.h>

void update(int *a,int *b) {
    // Complete this function
}

int main() {
    int a, b;
    int *pa = &a, *pb = &b;

    scanf("%d %d", &a, &b);
    update(pa, pb);
    printf("%d\n%d", a, b);

    return 0;
}
```

Problem in Class

Input Format

The first line of the input contains N,where N is the number of integers.The next line contains N space-separated integers.

Constraints

$1 <= N <= 1000$

$1 <= A[i] <= 10000$, where $A[i]$ is the i^{th} integer in the array.

Output Format

Print the N integers of the array in the reverse order, space-separated on a single line.

Sample Input

```
4
1 4 3 2
```

Sample Output

```
2 3 4 1
```