Pointer Arithmetic

A limited set of arithmetic operations can be performed on pointers which are:

```
• incremented (++)
```

- decremented ()
- an integer may be added to a pointer (+ or +=)
- an integer may be subtracted from a pointer (or -=)
- difference between two pointers (p1-p2)

(**Note:** Pointer arithmetic is meaningless unless performed on an array.)

```
// C++ program to illustrate Pointer Arithmetic
#include <bits/stdc++.h>
using namespace std;
void geeks()
{
    // Declare an array
    int v[3] = \{ 10, 100, 200 \};
    // declare pointer variable
    int* ptr;
    // Assign the address of v[0] to ptr
    ptr = v;
    for (int i = 0; i < 3; i++) {
        cout << "Value at ptr = " << ptr << "\n";
        cout << "Value at *ptr = " << *ptr << "\n";
        // Increment pointer ptr by 1
        ptr++;
    }
}
```

Pointer Arithmetic

```
// Driver program
int main() { geeks(); }
```

Output

```
Value at ptr = 0x7ffe58fe1390

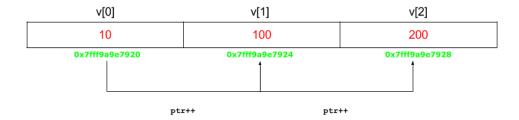
Value at *ptr = 10

Value at ptr = 0x7ffe58fe1394

Value at *ptr = 100

Value at ptr = 0x7ffe58fe1398

Value at *ptr = 200
```



Pointer Arithmetic 2