

9c - Pointer Arithmetics

Friday, 14 August 2026

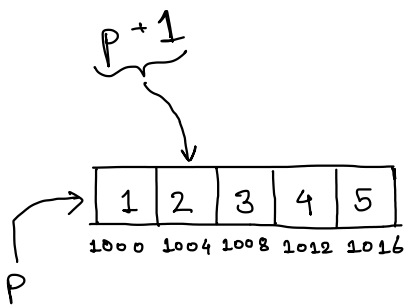
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If we add 1 to a given address, it increments by 4 instead for integer pointer

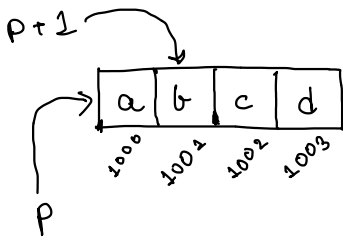
eg:

```
int a = { 1, 2, 3, 4, 5 }
```

```
int *p = a;
```



For Character Pointer



Only increments address value by 1 for character array

If we point an int pointer to $a[0]$,
+1 would lead ptr to $a[4]$

Increment in pointer happens based on data type of pointer, not the array.

$int *p \quad p+1 \equiv p + \text{sizeof}(int)$

`char *t` $t+1 \equiv t + \text{sizeof}(\text{char})$
`long int *z` $z+1 \equiv z + \text{sizeof}(\text{long int})$

$$q+1 \equiv q + \text{sizeof}(*q)$$

Pointer Arithmetic is usually done only on different indexes of the same array.