Pointer Arithmetic & Arrays

You can change the location where a pointer points by incrementing or decrementing it. You can also **generate new pointer** values by adding or subtracting integers from an existing pointer. The **effective address** depends upon the **base type** of the pointer.

Given `4`-byte `int` and `8`-byte `double`, if you add `1` to an integer address, the new address produced is `4` bytes larger than the original pointer value; if you add `1` to a `double` address, the new address is `8` bytes larger.

```
int array[] = {1, 2, 3, 4, 5};
int *p = array;     // p <- &array[0]
p = array + 1;      // p <- &array[1]
p = array + 4;      // p <- &array[4]
```

Of course, unlike a pointer, you **cannot increment or decrement** an array name.