Arrays, c-strings & pointers.

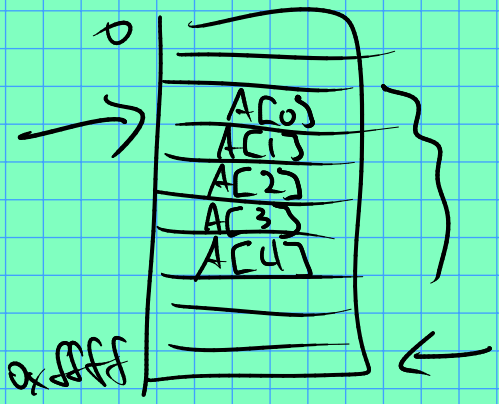
Arrays: dumb version of std::vector

C-string: dumb version of std::string

Arrays are just contiguous blocks of memory, along with convenient syntax random access.

main memory:

```
int A[5];
```



What's really in an array??

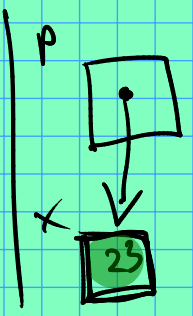
A: The memory address of the first element.

How to access elements? Just like a vector: use A[i].

Pointers

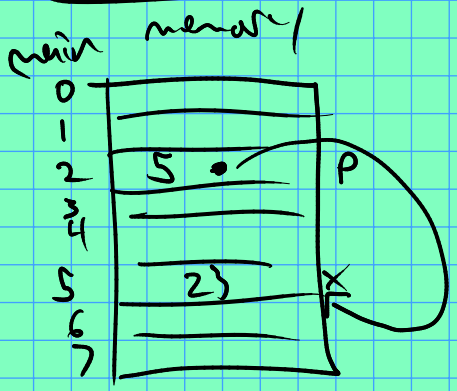
Just like any other variable, but they store memory addresses.

```
int *p;
int x = 23;
p = &x;
// x ≡ *p
// *p = 99
// would set x = 99.
```



p = 0xffab dead

box has two names!
x and *p.



p = &x

C-strings:

Just an array of char with a 0 at the end.

```
cout << "\n";
```

↑ array of 2 characters!

[0] = '\n'

[1] = ∅ (= '\0')

The ∅ (null character) is used to mark the end of a C-string. It's needed since arrays don't know their own length!