

LEC 13

CSE 121

Arrays

Questions during Class?

Raise hand or send here

sli.do #cse121



BEFORE WE START

Talk to your neighbors:

*What is your favorite potato-based dish?
(e.g. fries, aloo gobhi, gnocchi)*

Music:  [CSE 121 26sp Lecture Tunes](#) 

Instructors: Matt Wang

TAs:	Abdul	Amogh	Anant	Anum	Cayden
	Dalton	Ethan	Hayden	Jesse	Jessica
	Johnathan	Minh	Navya	Paul	Reese
	Ruslana	Sam	Savannah	Spencer	Shayna
	Tamsyn	TJ	Trey		

Announcements, Reminders

- P2 due next **Tuesday, May 19th**
- R4 released, due **Thursday, May 21st** (eligible: **C1**, P1, C2)
- Quiz 2 on **Thursday, May 28th**
 - Includes everything through next Wed's lecture ("Reference Semantics")
 - Can't make it? Email me (Matt) *before* your quiz!
- Quiz 1 grades released before Quiz 2
- Additional changes (from your feedback!)
 - Tuesday Pre-Section Work now released on **Saturday**
 - Working on comments for Ed solutions – most have them!

PCM Review: Arrays

`int[]`

type

`arr`

name

=

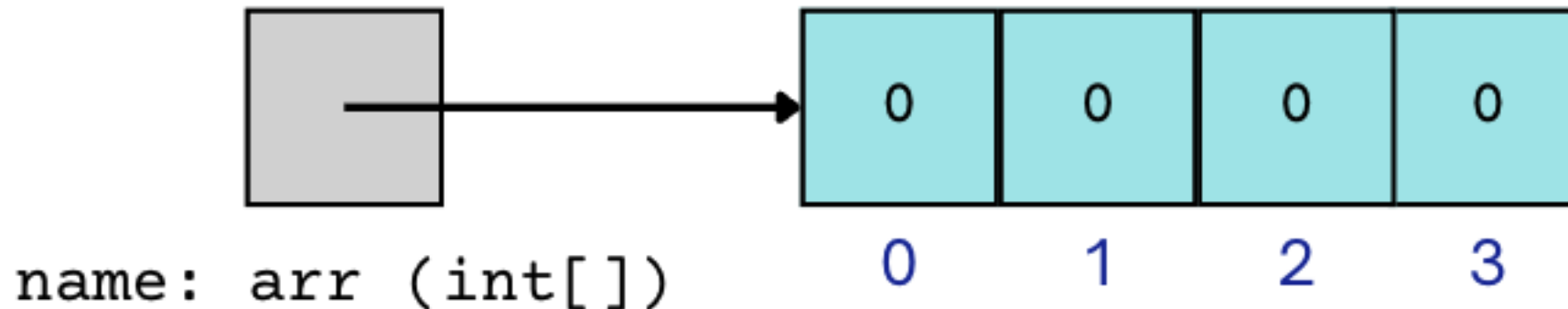
`new int[4];`

array creation code

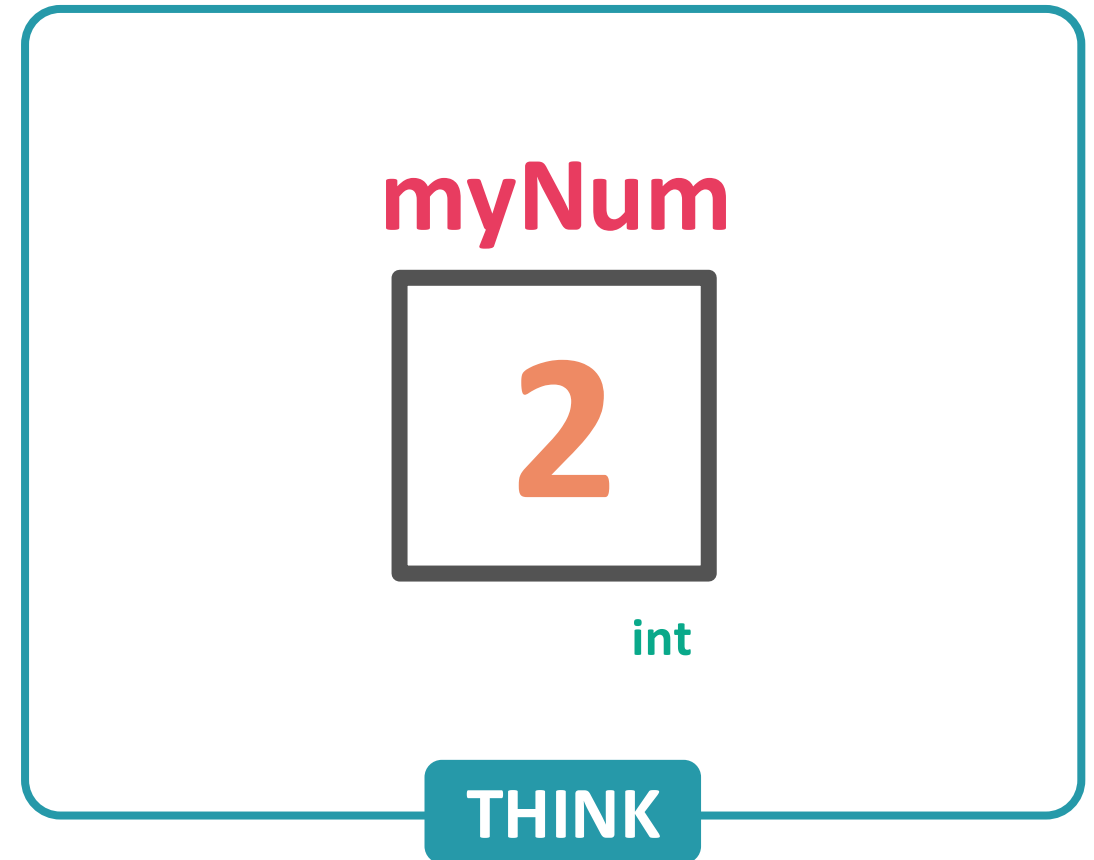
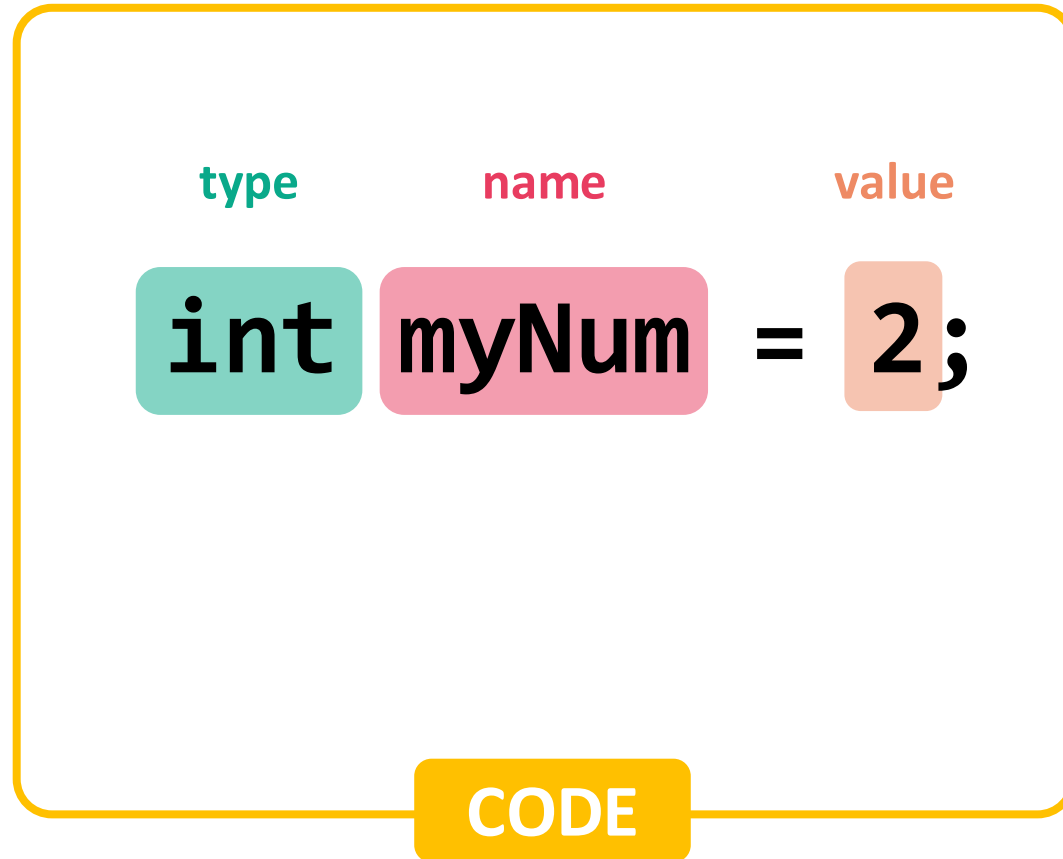
New **data structure** that stores multiple items, in order

- Elements must all be the same type
- Zero-based indexing (like Strings!)

```
int[] arr = new int[4];
```



Recall: Variables and “Mental Models”

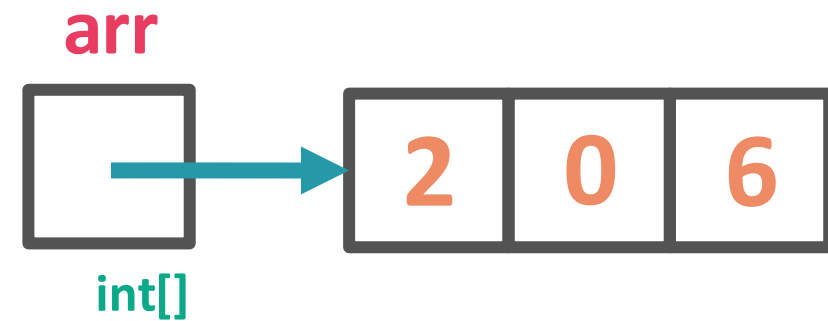


The Mental Model for Arrays

type name value

`int[]` `arr` = `{2, 0, 6};`

CODE



THINK

Arrays vs Strings

Unlike Strings...

- refer to individual elements via bracket notation (e.g. `arr[3]`)
- must decide (and fix) size when created
- `arr.length` to get `arr`'s length
 - *no* parentheses. this is called a “field”, *not* a method. (more on this in CSE 122!)
- `Arrays.toString(arr)` to get a nice `String` version
 - if not: “gobbledygook” (printing the “reference”)
 - requires `import java.util.*;`

PCM Review: Array Traversal Pattern

```
for (int i = 0; i < arr.length; i++) {  
    // do something with arr[i]  
}
```



Practice: Think



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Which of these expressions gives us the last element of an array `arr`?

- A. `arr[arr.length()]`
- B. `arr[length()]`
- C. `arr[arr.length]`
- D. `arr[arr.length() - 1]`
- E. `arr[arr.length - 1]`



Practice: Pair

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- C. `arr[arr.length]`
- D. `arr[arr.length() - 1]`
- E. `arr[arr.length - 1]`