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)

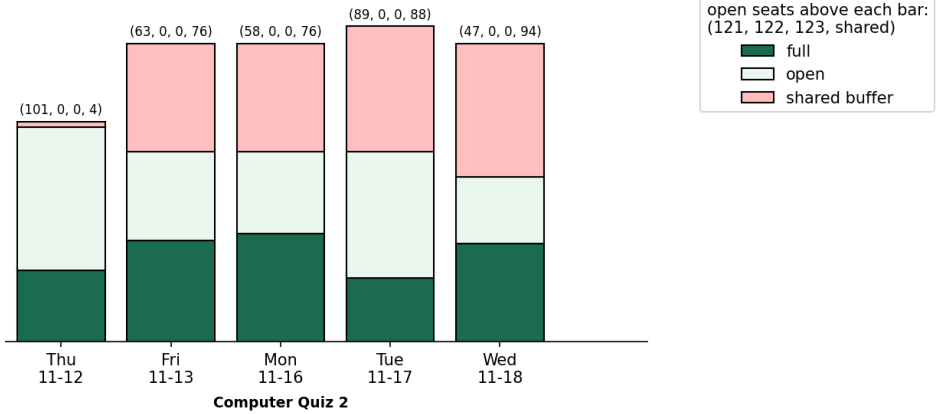
Music: CSE 121 26au Lecture Tunes

Instructor: Miya Natsuhara and Anjali Pal

TAs:

Samrutha	Tamsyn	Owen	Jennie
William	Cedric	Jameson	Anisha
Samvedha	Anum	Paul	TJ
Syreeta	Navya	Gurbax	Ivory
Ryan	Gene	Tony	Sarah W
Anant	Margot	Lucas	Avery
Henry	Sarah K	Alex	
Reese	Ethan	Jesse	
Savannah	Evelyn	Matthew	

Announcements, Reminders



- P2 due next **Tuesday, November 10th**
- Computer Quiz 2 sign ups are open!
  - Window is 11/12 – 11/18
  - Remember, reserve your time slot early!
- Paper Quiz 2 scheduled for Tuesday, November 17th
- Lecture on Wednesday before Thanksgiving (Nov 25) will be on an *optional* topic
  - No PCM
  - Not quizzable material
  - Will still be recorded!

PCM Review: Arrays

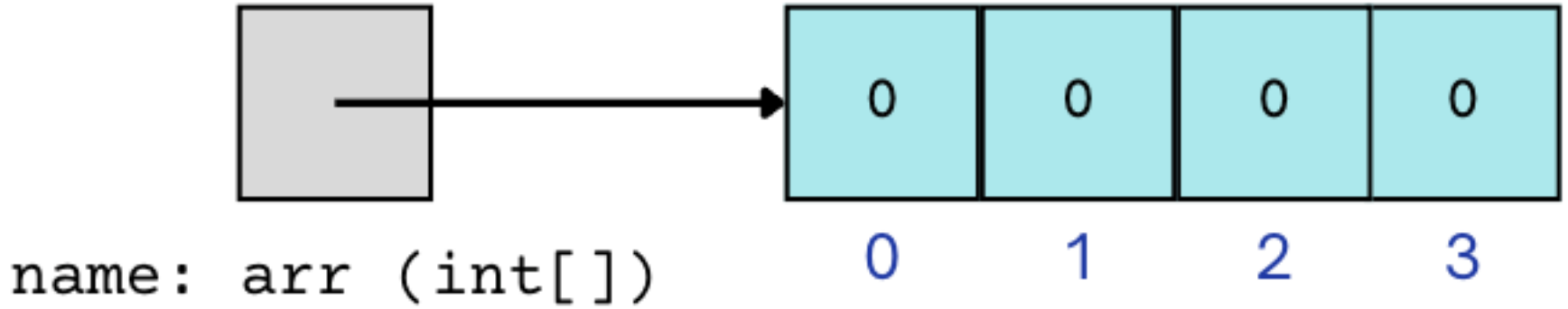
```
int[] arr = new int[4];
```

type: `int[]` name: `arr` array creation code: `new int[4];`

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"

type name value

```
int myNum = 2;
```

CODE

myNum

2

int

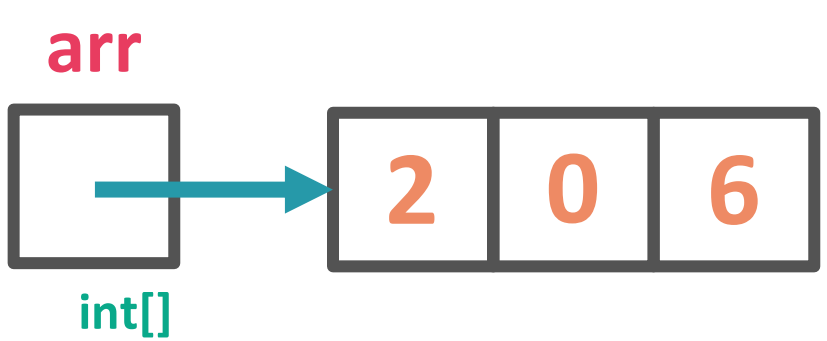
THINK

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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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]`