CSE 121 Lesson 12:
Arrays

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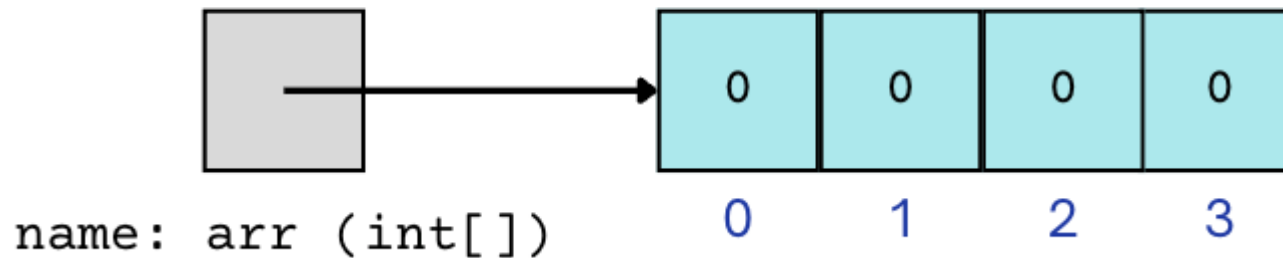
Announcements, Reminders

- P2 due next Tuesday, 8/6 @ 11:59 pm

- R4 released yesterday, due next Thursday @ 11:59 pm

- Quiz 2 in section **next Thursday**
  - Quiz 1 grades will be released by **Monday**
  - Extra quiz drop to account for quiz 2 difficulty (updated syllabus and grade calculator)

- Final Reflection Assignment Released
  - Double check gradescope!
  - More information in Ed post

(PCM) Arrays

- Elements (must <u>all</u> be the same type)
- Indices (starting at 0)
- <u>Must</u> decide size when created!
- `arr.length` to get `arr`'s length
- `Arrays.toString(arr)` to get a nice `String` version

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

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


name: arr (int[])

| 0 | 0 | 0 | 0 |
| 0 | 1 | 2 | 3 |

(PCM) Array Traversal Pattern

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

Poll in with your answer!

How can we get 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]`

Poll in with your answer!

What would the array a store at the end of this arrayMystery method if
{-20, 20, 26, 32, 50, 3} was passed in?

```java
public static void arrayMystery(int[] a) {
  for (int i = a.length - 1; i >= 1; i--) {
    if (a[i] > a[i - 1] + 10) {
      a[i - 1] = a[i - 1] + 5;
    }
  }
}
```

A. {-20, 20, 26, 32, 50, 3}

B. {-15, 25, 31, 37, 55, 8}

C. {-15, 25, 31, 37, 50, 3}

D. {-15, 20, 26, 37, 50, 3}

E. error (index out of bounds)