LEC 04

CSE 121

for Loops

Questions during Class?

Raise hand or send here

sli.do #cse121

BEFORE WE START

Talk to your neighbors:

What's your favorite TV show right now?

Respond on sli.do!

Music: 🎷 CSE 121 25au Lecture Tunes 🎶

Instructors: Brett Wortzman & James Weichert

TAs:

Trey	Ava	Caleb	Elden	Anya
Amogh	Reese	Anum	Suyash	Minh
Samrutha	Hayden	Abdul	Sthiti	TJ
Dalton	Aki	Janvi	Paul	Zach
Ailsa	Spencer	Navya	Shayna	Cayden
Ryan	Savannah	Sam	Jesse	Johnathan
Anant	Tamsyn	Jessica	Nhan	

Announcements, Reminders

- Feedback for C0 released yesterday!
  - Please view your feedback – crucial part of learning process
  - For regrades (not resubs), please make a private Ed post
- C1 releasing later today, due Tuesday, October 14th
- Quiz 0 is *next* Thursday, October 16th (in your registered quiz section)
  - Can't make it? Email Brett and James ASAP
- Resubmission Cycle 0 (R0) opening tomorrow, due Thursday October 16th

Reminder: Resubmissions (or "resubs")

- Each week, you may resubmit one Programming Assignment or Creative Project with **no penalty**. The grade of your resubmission will completely replace your previous grade.

- This is a huge opportunity: you get to resubmit your work after we grade it and give you feedback! Please take advantage of this :)

- If you miss an assignment and/or only finish it late – use a resub!

Resub Logistics

Some logistics:

- There are 7* total resub cycles this quarter (and 8 assignments)
- Assignments eligible to resubmit for 3 cycles after feedback is out

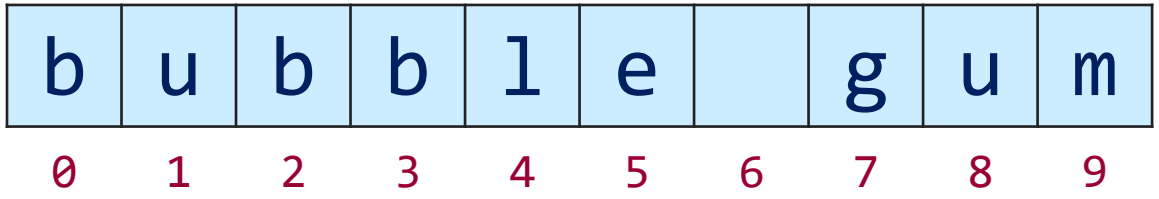
To resubmit:

1. Make and submit your changes
2. Set the submission you want graded as “Final”
3. **Submit a Google Form**, with a reflection, to confirm your resub
   - You **must** submit the form before the deadline for resub to count

Chaining methods in expressions

Suppose `s` contains the String `"bubble gum"`.

Which statement would result in `s` containing `"Gumball"` instead?



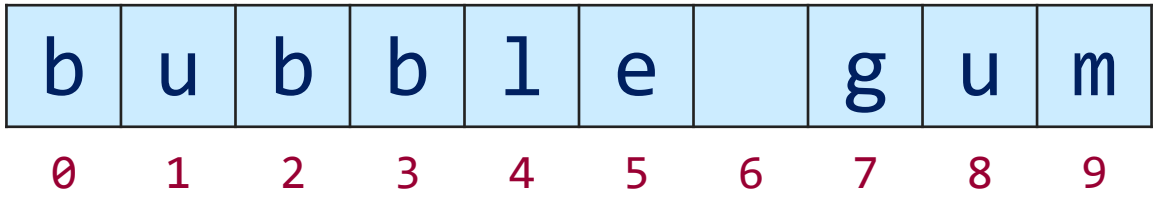
A.
```
s.substring(7) + "ball";
```

B.
```
s = s.substring(7, 9) + "ball";
```

C.
```
s = ("" + s.charAt(7)).toUpperCase()
  + "ball";
```

D.
```
s = s.substring(7, 8).toUpperCase()
      + s.substring(8) + "ball";
```

Chaining methods in expressions




```
s.substring(7, 8).toUpperCase() + s.substring(8) + "ball"

"g".toUpperCase() + s.substring(8) + "ball"

"G" + s.substring(8) + "ball"

"G" +      "um"      + "ball"
```

PCM Review: for loops!

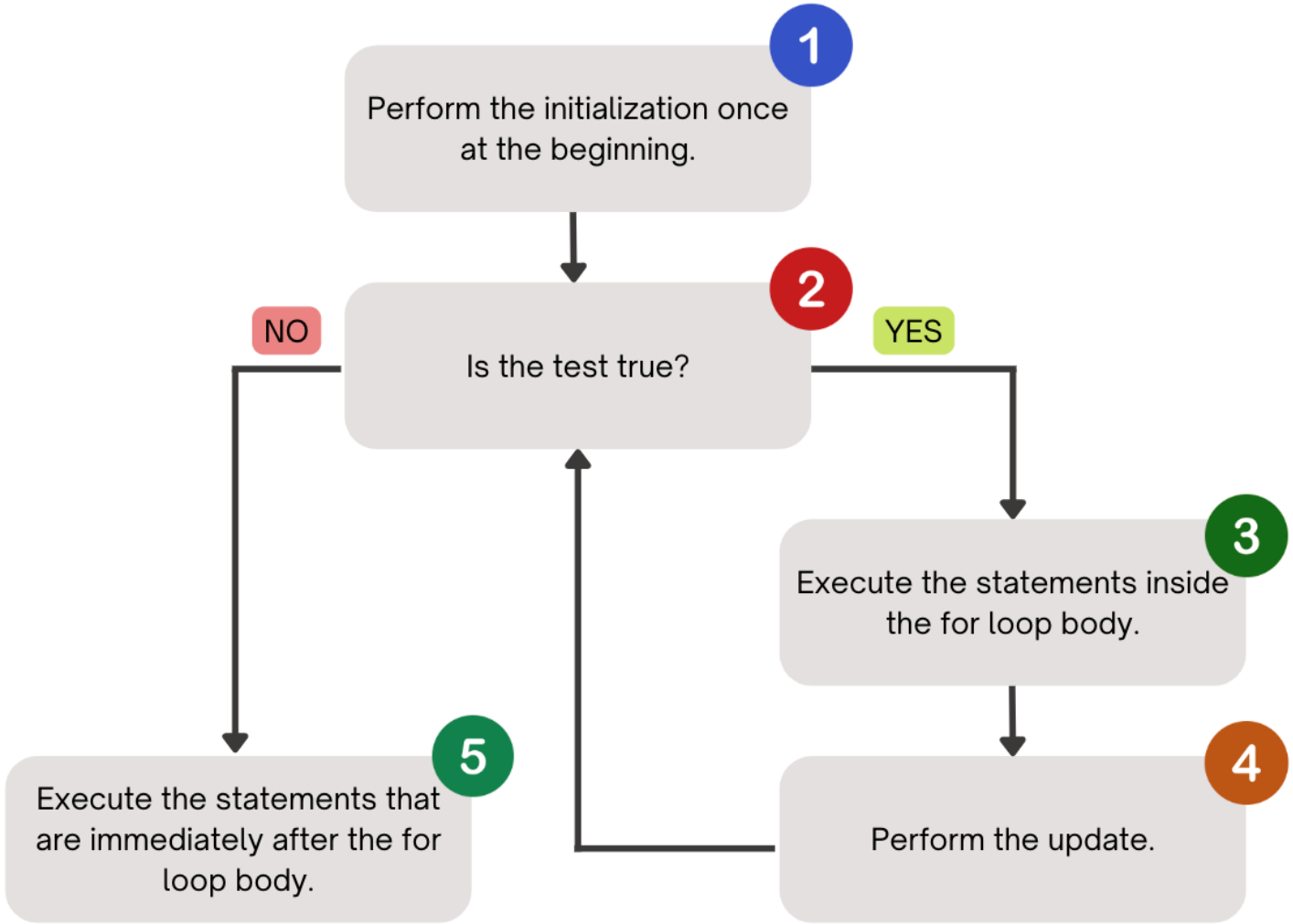
For loops are our first **control structure**: a syntax *structure* that *controls* the execution of other statements.

```
for ( initialization ; test ; update ) {
    body (statements to be repeated)
}
```

PCM Review: for loops (example)

```
for (int counter = 1; counter <= 5; counter++) {
    System.out.println("I love CSE 121!");
}
```

PCM Review: for loops (a helpful flowchart)



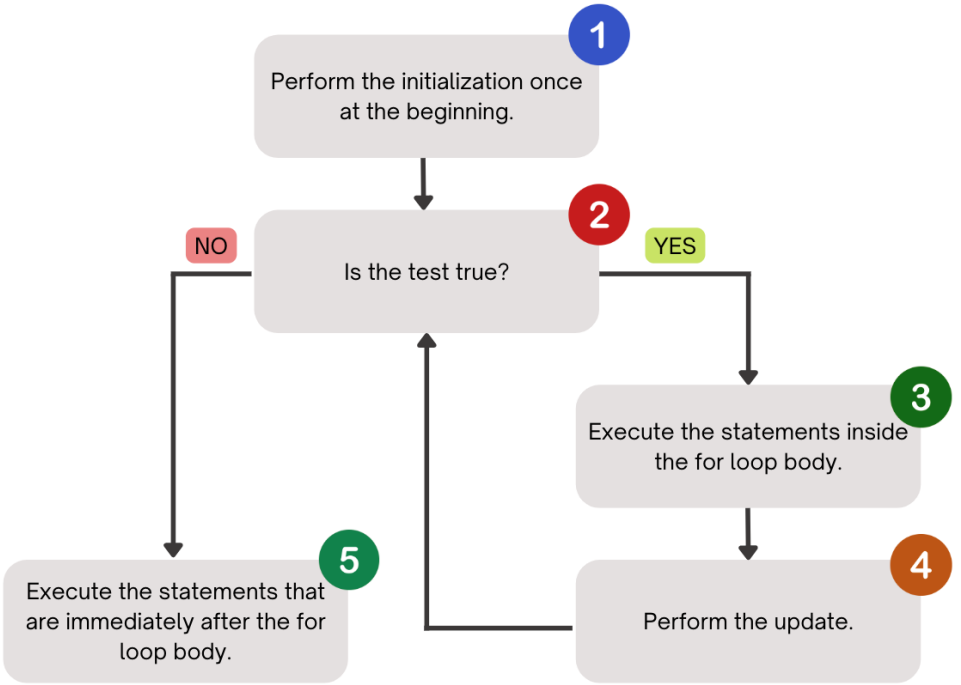
Thinking about for loops

counter

6

```
for (int counter = 1; counter <= 5; counter++) {
    System.out.println("I love CSE 121!");
}
```

```
I love CSE 121!
I love CSE 121!
I love CSE 121!
I love CSE 121!
I love CSE 121!
```



Practice: Think

sli.do #cse121

What output does the following code produce?

```
for (int i = 1; i <= 7; i++) {
  System.out.println(i + " squared = " + i * i);
}
```

A.

```
i squared = i * i
i squared = i * i
i squared = i * i
i squared = i * i
i squared = i * i
i squared = i * i
```

B.

```
i squared = i * i
i squared = i * i
i squared = i * i
i squared = i * i
i squared = i * i
i squared = i * i
i squared = i * i
```

C.

```
1 squared = 1
2 squared = 4
3 squared = 9
4 squared = 16
5 squared = 25
6 squared = 36
```

D.

```
1 squared = 1
2 squared = 4
3 squared = 9
4 squared = 16
5 squared = 25
6 squared = 36
7 squared = 49
```

Practice: Think

sli.do #cse121

What output does the following code produce?

```
for (int i = 1; i <= 7; i++) {
  System.out.println(i + " squared = " + i * i);
}
```

A.

```
i squared = i * i
i squared = i * i
i squared = i * i
i squared = i * i
i squared = i * i
i squared = i * i
```

B.

```
i squared = i * i
i squared = i * i
i squared = i * i
i squared = i * i
i squared = i * i
i squared = i * i
i squared = i * i
```

C.

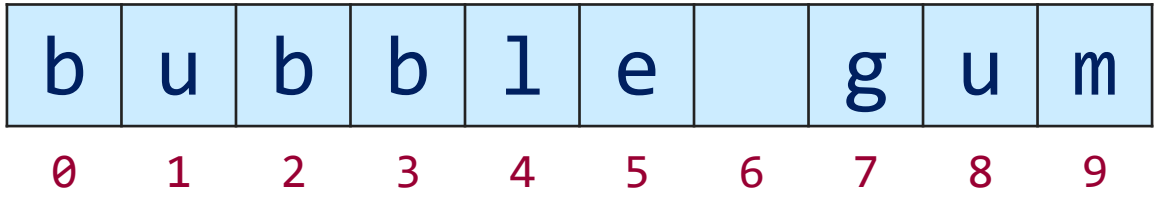
```
1 squared = 1
2 squared = 4
3 squared = 9
4 squared = 16
5 squared = 25
6 squared = 36
```

D.

```
1 squared = 1
2 squared = 4
3 squared = 9
4 squared = 16
5 squared = 25
6 squared = 36
7 squared = 49
```

PCM Review: String Traversals

```
// For some String s
for (int i = 0; i < s.length(); i++) {
    // do something with s.charAt(i)
}
```



Go Huskies?

```
h-u-s-k-i-e-s
```

The Fencepost Pattern

Some task where one piece is repeated *n* times, and another piece is repeated *n-1* times and they alternate