LEC 11

CSE 121

User Input (Scanner)

Questions during Class?

Raise hand or send here

sli.do #cse121

BEFORE WE START

Talk to your neighbors:

(In honor of Friday the 13th) what's your favorite spooky movie?

Music: ❄ CSE 121 26wi Lecture Tunes ❄

Instructor: Miya Natsuhara

TAs:

Amogh
William
Johnathan
Anant
Reese

Hayden
Aki
Spencer
Savannah
Tamsyn

Anum
Abdul
Janvi
Navya
Ruslana

Sam
Ethan
Jessica
Paul
Carson

Shayna
Jesse
Minh
Cayden

Announcements, Reminders

- P2 due **Tuesday, February 24th**
- R3 out yesterday and due **Thursday, February 19th**
  - **P0**, C1, P1, C2 eligible
  - last opportunity to resubmit P0
- Quiz 1 is **Thursday, February 19th**, in your registered quiz section
  - Resources posted on Ed today!
  - `for` loops, nested `for` loops, `Random`, `Math`, methods, parameters, returns, conditionals, `while` loops
- Monday (Feb 16) is a university holiday (Presidents' Day)
  - IPL will be closed
  - Miya's office hours cancelled
- I'm out of town for a conference next week, but you will be in good hands!
  - Matt Wang will be teaching on Wednesday
  - Hayden Feeney will be teaching on Friday

PCM Review: Scanner

An **object** that we can use to *read in input*

In the `java.util` "package"!

Scanner console = new Scanner(System.in);

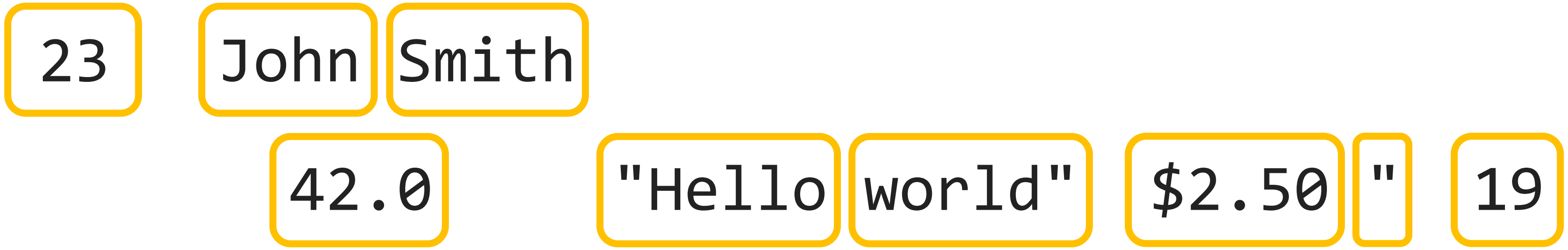
type name Scanner construction code

Methods	Description
`nextInt()`	Reads the next token from the user as an `int` and returns it.
`nextDouble()`	Reads the next token from the user as a `double` and returns it.
`next()`	Reads the next token from the user as a `String` and returns it.
`nextLine()`	Reads an *entire line* from the user as a `String` and returns it.

PCM Review: Tokens

A unit of user input, as read by the Scanner

Tokens are separated by *whitespace* (spaces, tabs, new lines)



```
23   John Smith
        42.0     "Hello world"  $2.50 "  19
```

PCM Review: `InputMismatchException`

Exceptions are errors that occur *while a program is running* that stops the program from running.

There are different types of exceptions that can occur, and the **name of the exception** can help you understand what caused the error!

An `InputMismatchException` occurs when the Scanner tries to read input in as a specific type, but the input cannot be interpreted as that type.

(e.g., trying to read in `"hello"` as an `int`)

Practice: Think

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When calling the following method, which of these user inputs would not cause an error? (choose multiple)

```
public static void cornbear() {
  Scanner console = new Scanner(System.in);
  int amt = console.nextInt();
  String firstName = console.next();
  String secondName = console.next();
  double price = console.nextDouble();
}
```

A. 6 Gumball’s Treats $12.48

B. 3 Sesame Latte 16.47

C. 2 The Hunger Games 21.98

D. 4 Gumballs 900.24

E. 2 Grammy Awards 90095

Practice: Pair

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When calling the following method, which of these user inputs would not cause an error? (choose multiple)

```
public static void cornbear() {
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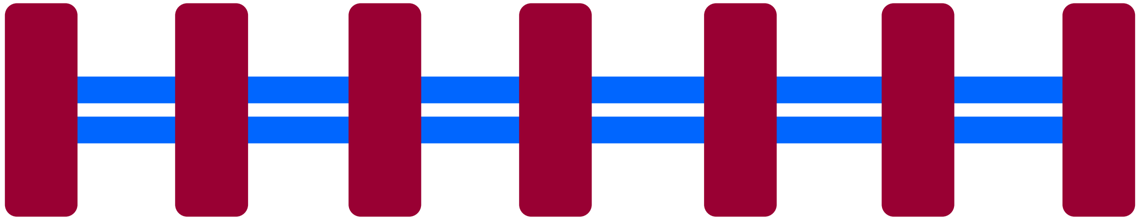
A. 6 Gumball’s Treats $12.48
B. 3 Sesame Latte 16.47
C. 2 The Hunger Games 21.98
D. 4 Gumballs 900.24
E. 2 Grammy Awards 90095

Reminder (again): Fencepost Pattern

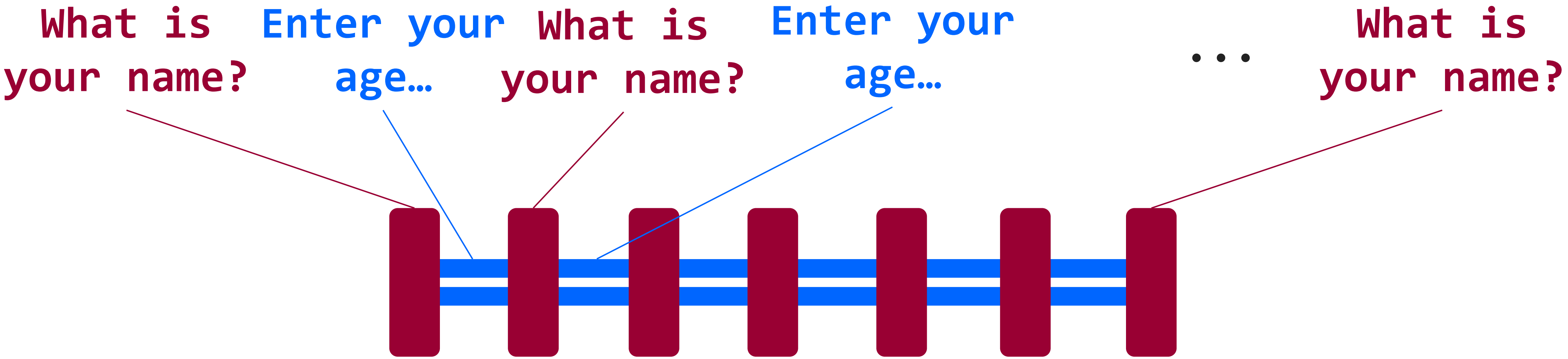
Some task where one piece is repeated *n* times, and another piece is repeated *n-1* times and they alternate

```
g-u-m-b-a-l-l
```



Fencepost Pattern … for User Input?

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



What is your name?

Enter your age…

What is your name?

Enter your age…

. . .

What is your name?