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:

What's your favorite sunny-weather activity?

Music: ♣ [CSE 121 25su Lecture Tunes](#) ♣

Instructor: Hannah Swoffer

TAs:
Abby	Merav
Hannah	Trey
Julia	

Announcements, Reminders

- P2 released; due Tuesday, August 5th

- R4 released; due Tuesday, August 5th

  - Eligible: **C1**, P1, C2

  - Note: C1 is cycling out of eligibility for resubmission

- Quiz 1 was yesterday

  - I hope it went well!

  - Grades will be released before Quiz 2 (exact date TBD)

PCM: 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: 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: `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

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

```java
public static void mystery() {
    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

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

```java
public static void mystery() {
    Scanner console = new Scanner(System.in);
    int amt = console.nextInt();
    String firstName = console.next();
    String secondName = console.next();
    double price = console.nextDouble();
}
```
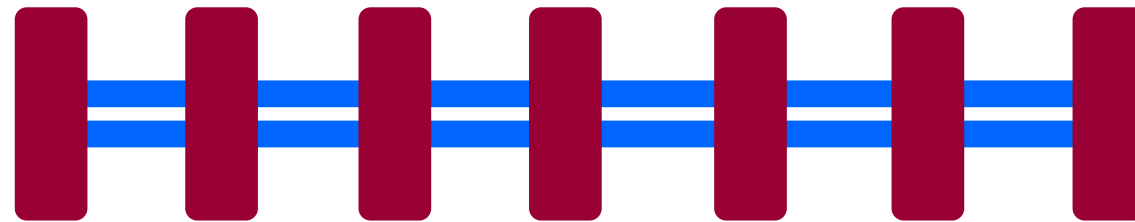
A. 6 Gumball's Treats $12.48

B. 3 Sesame Latte 16.47

C. 2 The Hunger Games 21.98

D. 4 Gumballs 900.24

E. 2 Grammy Awards 90095

Reminder (again): Fencepost Pattern

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

L-a-u-f-e-y-!

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

enter an artist how many listens? enter an artist how many listens? … enter an artist