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 25sp Lecture Tunes](#) ❀

Instructor: Miya Natsuhara

TAs:

Chloë	Hibbah	Sushma
Ailsa	Julia	Kelsey
Johnathan	Sahej	Shayna
Christian	Ruslana	Hannah
Merav	Hanna	Zach
Judy	Maitreyi	
Janvi	Ayesha	

Announcements, Reminders

- P2 out & due **Tuesday, May 20th**

- R3 out yesterday and due **Thursday, May 15th**
  - **P0**, C1, P1, C2 eligible
  - P0 cycling out of eligibility for resubmission

- Quiz 1 is **Thursday, May 15th**, in your registered quiz section
  - `for` loops, nested `for` loops, `Random`, `Math`, methods, parameters, returns, conditionals, `while` loops
  - Will post some practice quizzes!

Practice: Think

```java
public static void mystery(Random randy,
                           int lucky) {

  int roll = -1; // "priming" the loop
  int x = -1;

  while (roll != lucky) {
    roll = randy.nextInt(20) + 1;
    if (x < roll) {
      x = roll;
    }
  }
  System.out.println("Lucky number "
                     + roll);

}
```

How would you describe what the variable x calculates?

A. The largest value rolled

B. The smallest value rolled

C. The last value rolled

D. The first value rolled

E. The sum of all values rolled

Practice: Pair

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public static void mystery(Random randy,
                           int lucky) {

  int roll = -1; // "priming" the loop
  int x = -1;

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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

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

```java
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

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

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