CSE 121 – Lesson 14

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Spring 2023

Music: 121 23sp Lecture Vibes 🌸

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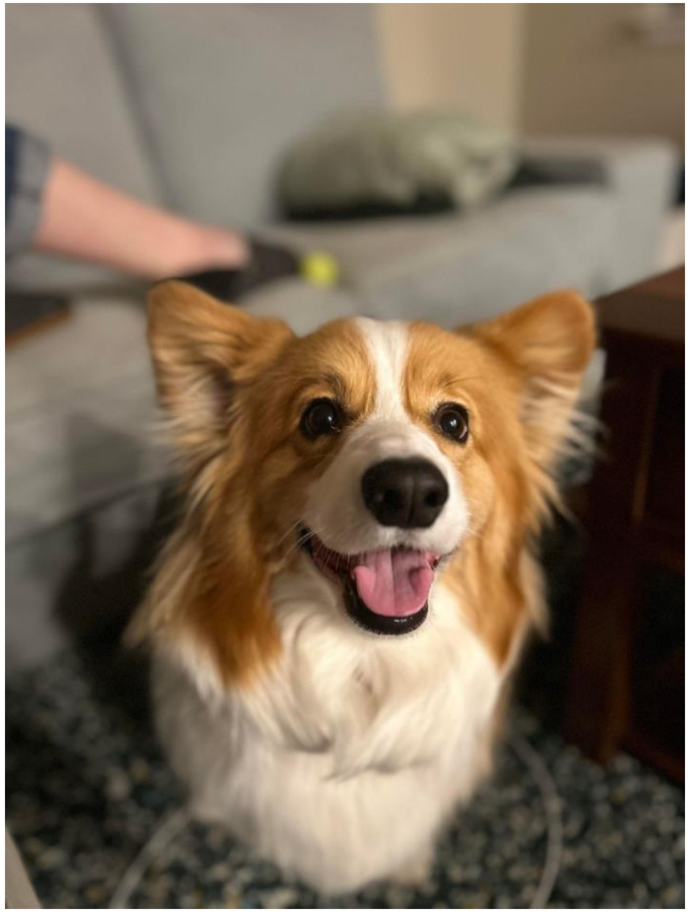
Announcements, Reminders

- Quiz 2 tomorrow (Thursday, May 18) in quiz sections
    - While loops, user input
- Quiz Retakes – May 23
    - Form will be posted soon
    - Quiz 1 and Quiz 2 will be eligible for retake **(last opportunity for Quiz 1)**
- Creative Project 2 will be released later tonight
    - Due Tuesday **May 23**
- Study Participation Opportunity!
- Reminder: **Final exam Thursday, June 8 2:30pm-4:20pm**

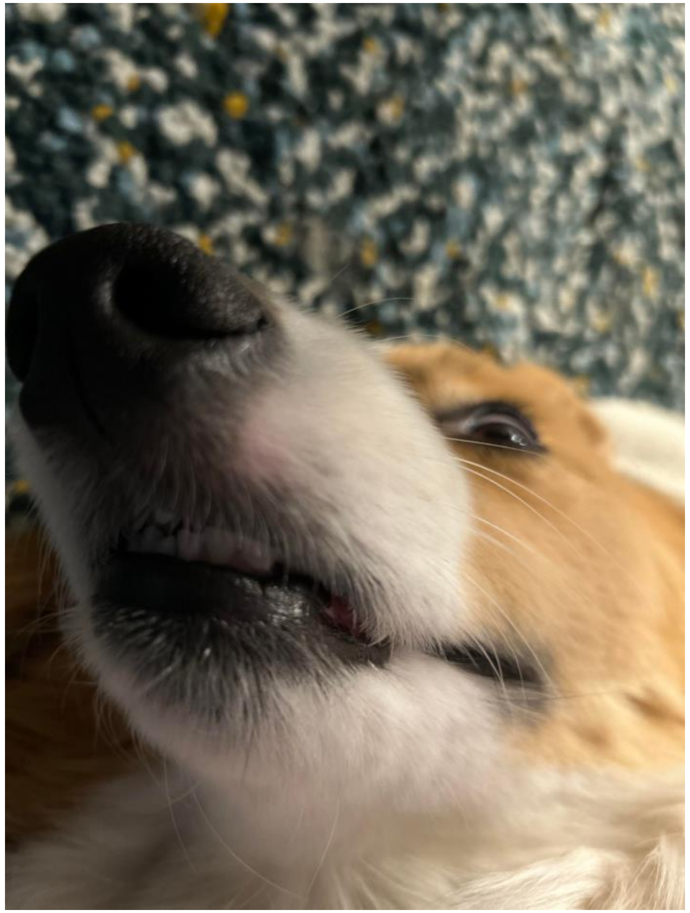
Formative Feedback: Closing the Loop



The Good…

- Resubmission and Retake Opportunities
- Pre-Class Work
- In-Class Demos
- Quiz Sections
- IPL

Formative Feedback: Closing the Loop



Suggestions…

- More practice problems for Quizzes
- Assignment specification improvements
- Gradebook

Formative Feedback: Closing the Loop

Reminders…

- Practice Problems & Resources tab
- Slides from Quiz Section
- Resubmission Deadlines

(PCM) Scanner & File for File I/O

File is defined in the java.io package

```
import java.io.*;
```

```
File newFile = new File("newFile.txt");
Scanner fileScan = new Scanner(newFile);
```

Scanner 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
hasNextInt()	Returns true if the next token can be read as an int, false otherwise
hasNextDouble()	Returns true if the next token can be read as a double, false otherwise
hasNext()	Returns true if there is another token of input to be read in, false otherwise
hasNextLine()	Returns true if there is another line of input to be read in, false otherwise

(PCM) Checked Exceptions

If you try to compile a program working with file scanners, you may encounter this error message:

```
error: unreported exception FileNotFoundException; must be
caught or declared to be thrown
```

To resolve this, you need to be `throws FileNotFoundException` at the end of the header of any method containing file scanner creation code, or any method that calls that method!

This is like signing a waiver and telling Java – "Hey, I hereby promise to not get mad at you when you bug out and crash my program if I give you a file that doesn't actually exist."

(PCM) Typical Line-Processing Pattern

```
while (fileScan.hasNextLine()) {
    String line = fileScan.nextLine();
    // do something with line
}
```

(PCM) Typical Token-Processing Pattern

```
while (fileScan.hasNext__()) {
    __ nextToken = fileScan.next__();
    // do something line nextToken
}
```

(PCM) Typical Hybrid Pattern

```
while (fileScan.hasNextLine()) {
    String line = fileScan.nextLine();
    Scanner lineScan = new Scanner(line);
    while (lineScan.hasNext__()) {
        __ nextToken = lineScan.next__();
        // do something with nextToken
    }
}
```