Comp 401-Learning Resources: From Slide PDFs to Praxes

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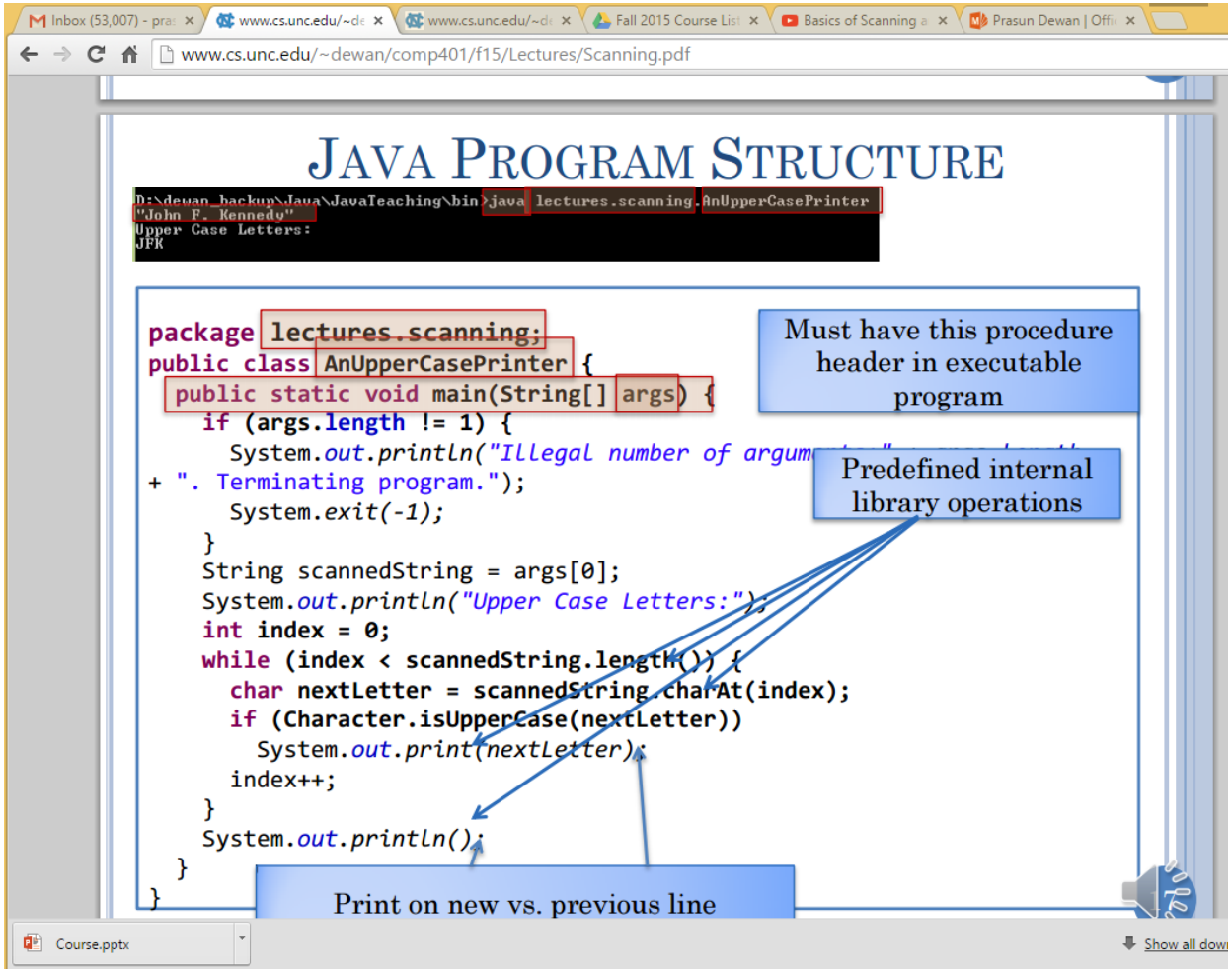
Text Book

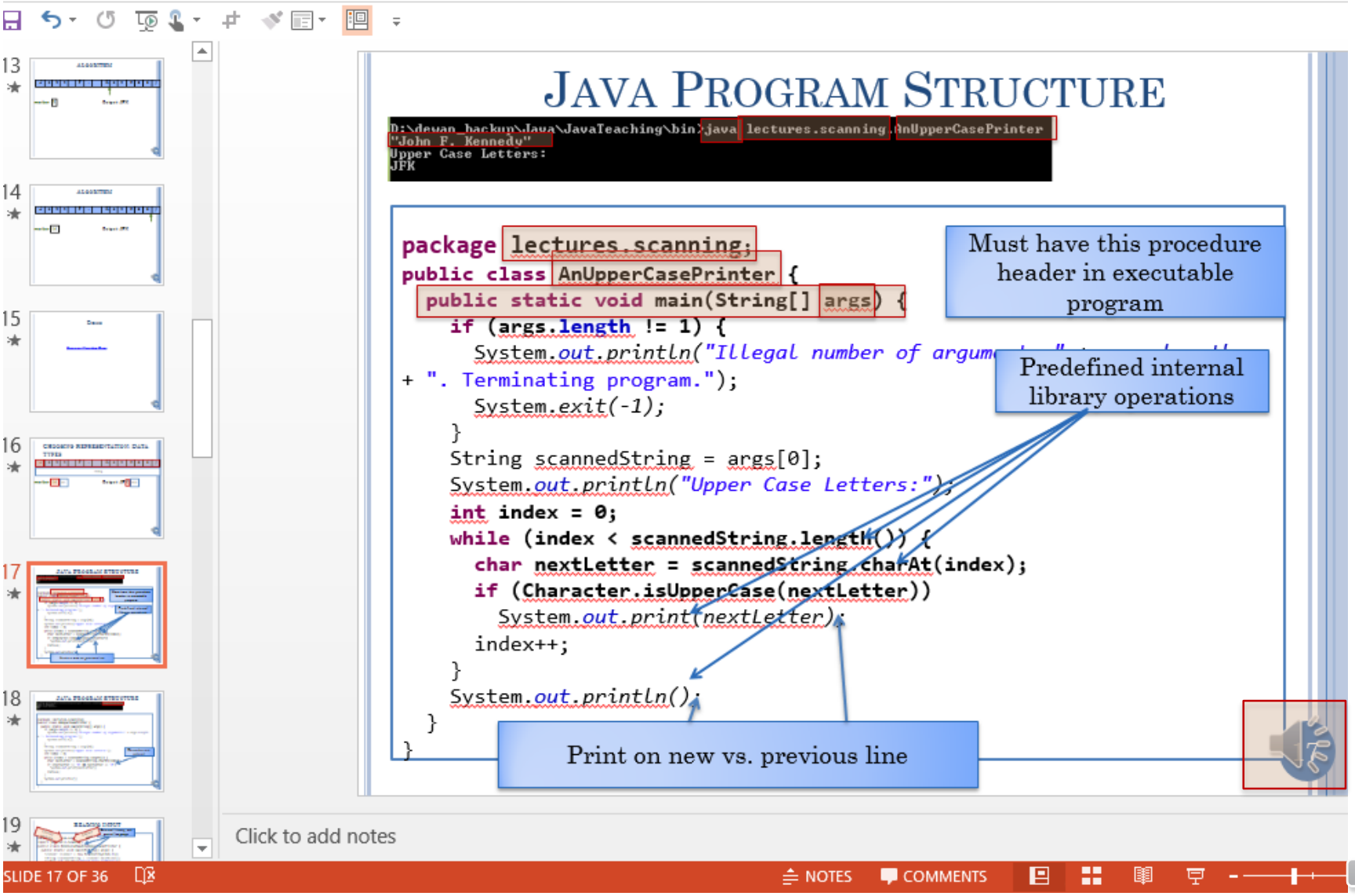
No textbook for this unusual course.

Alternatives?

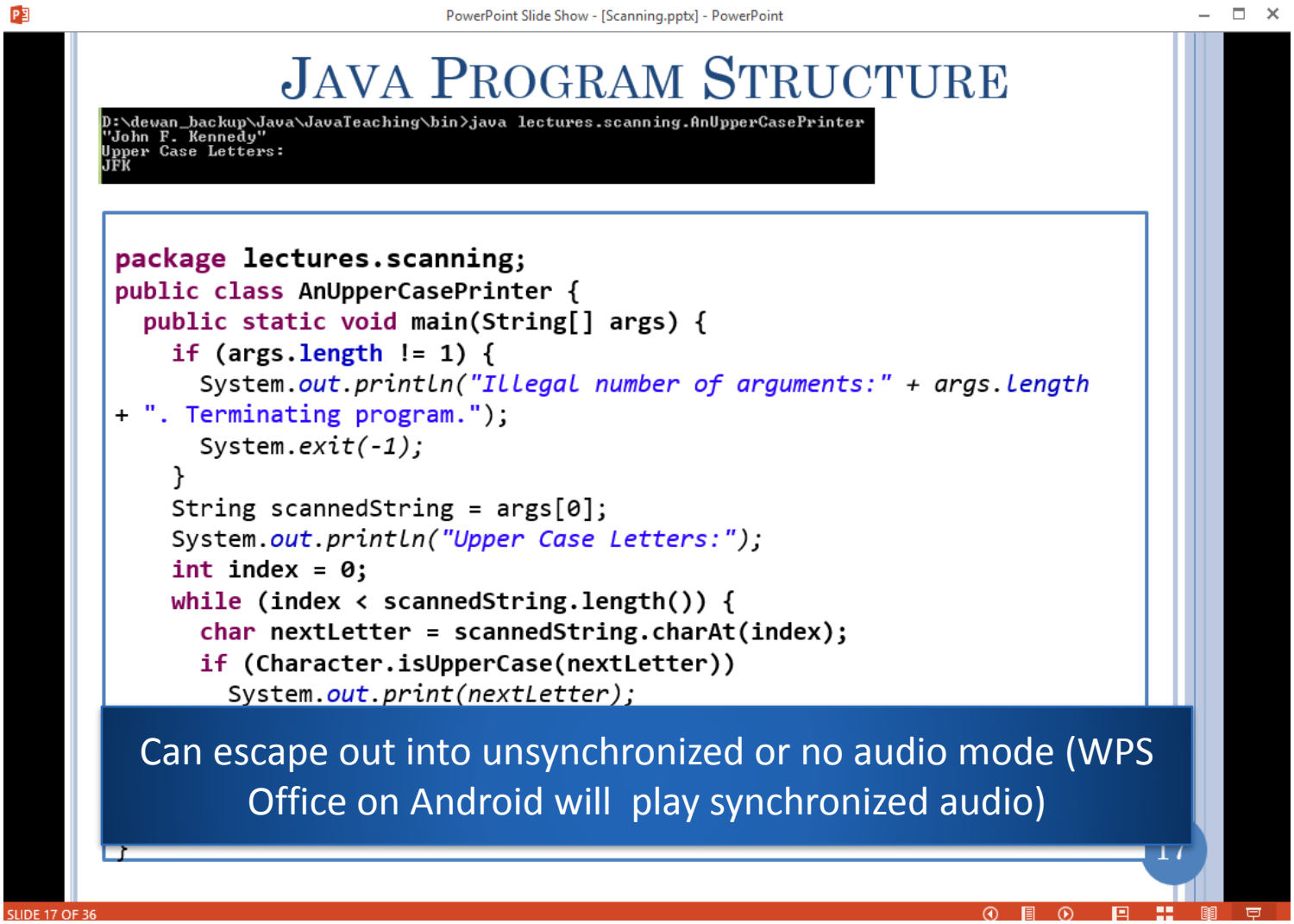
PDF of Slides



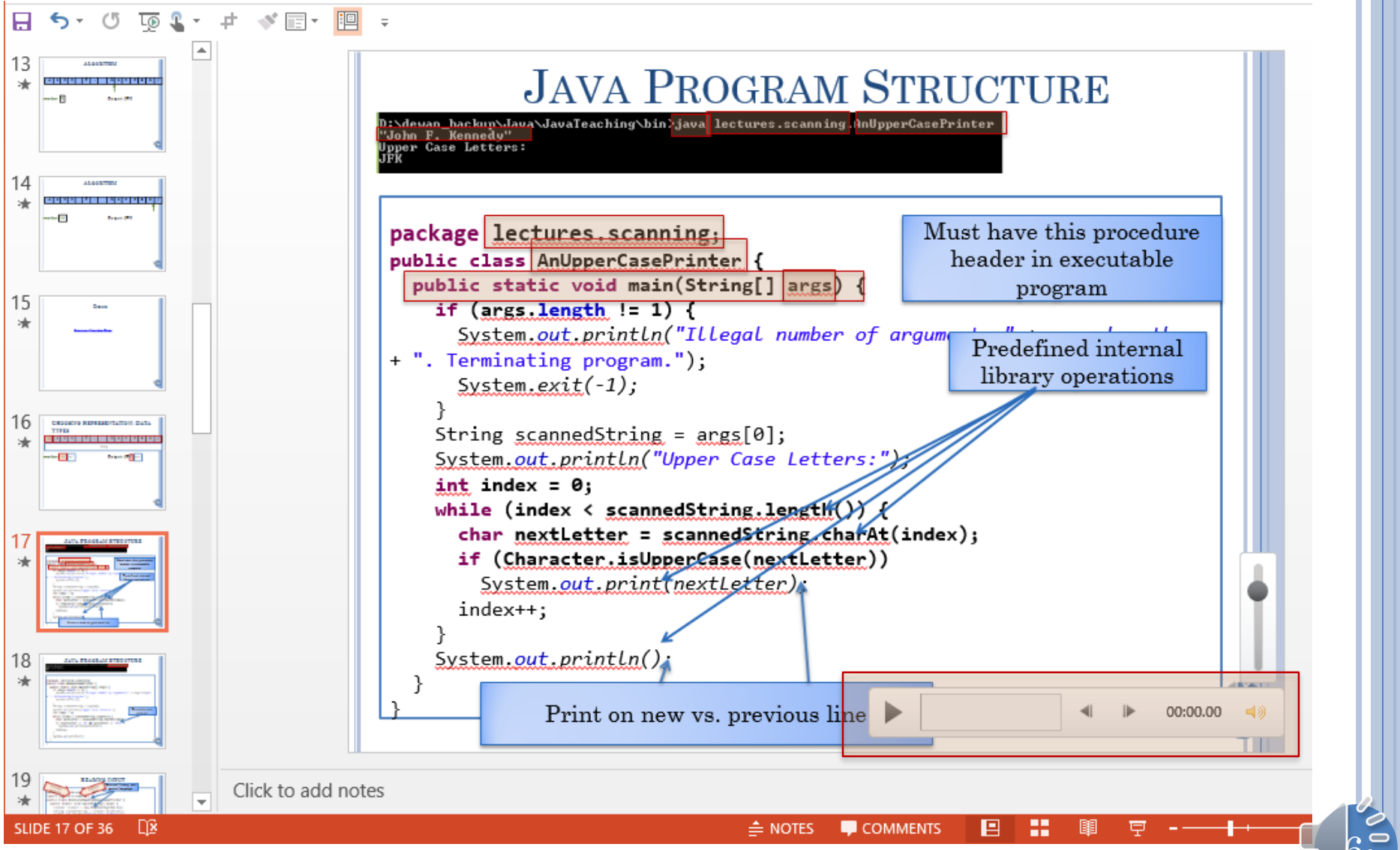
PowerPoint of Slides



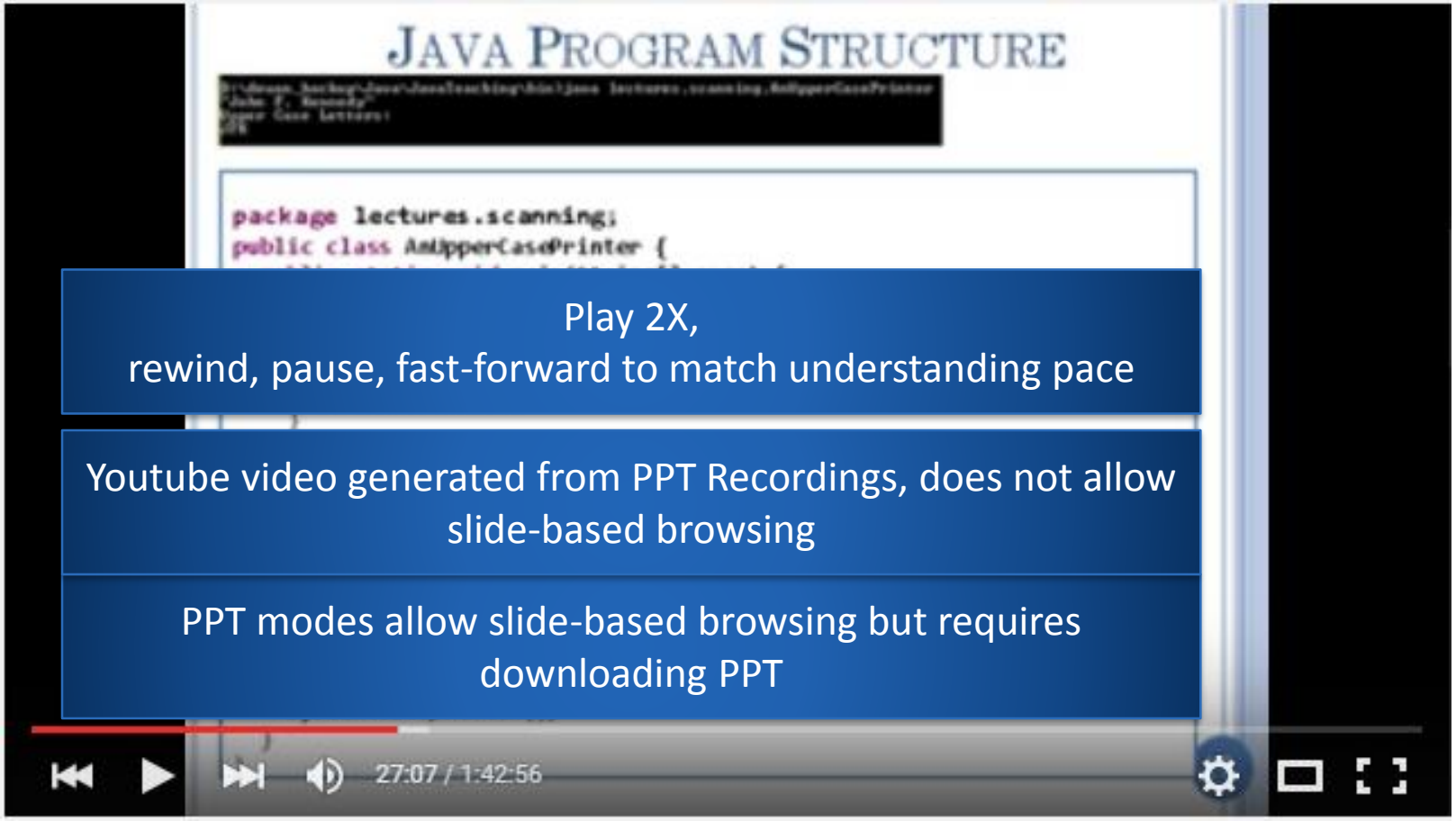
Slide Show → Synchronized Recording and Animations



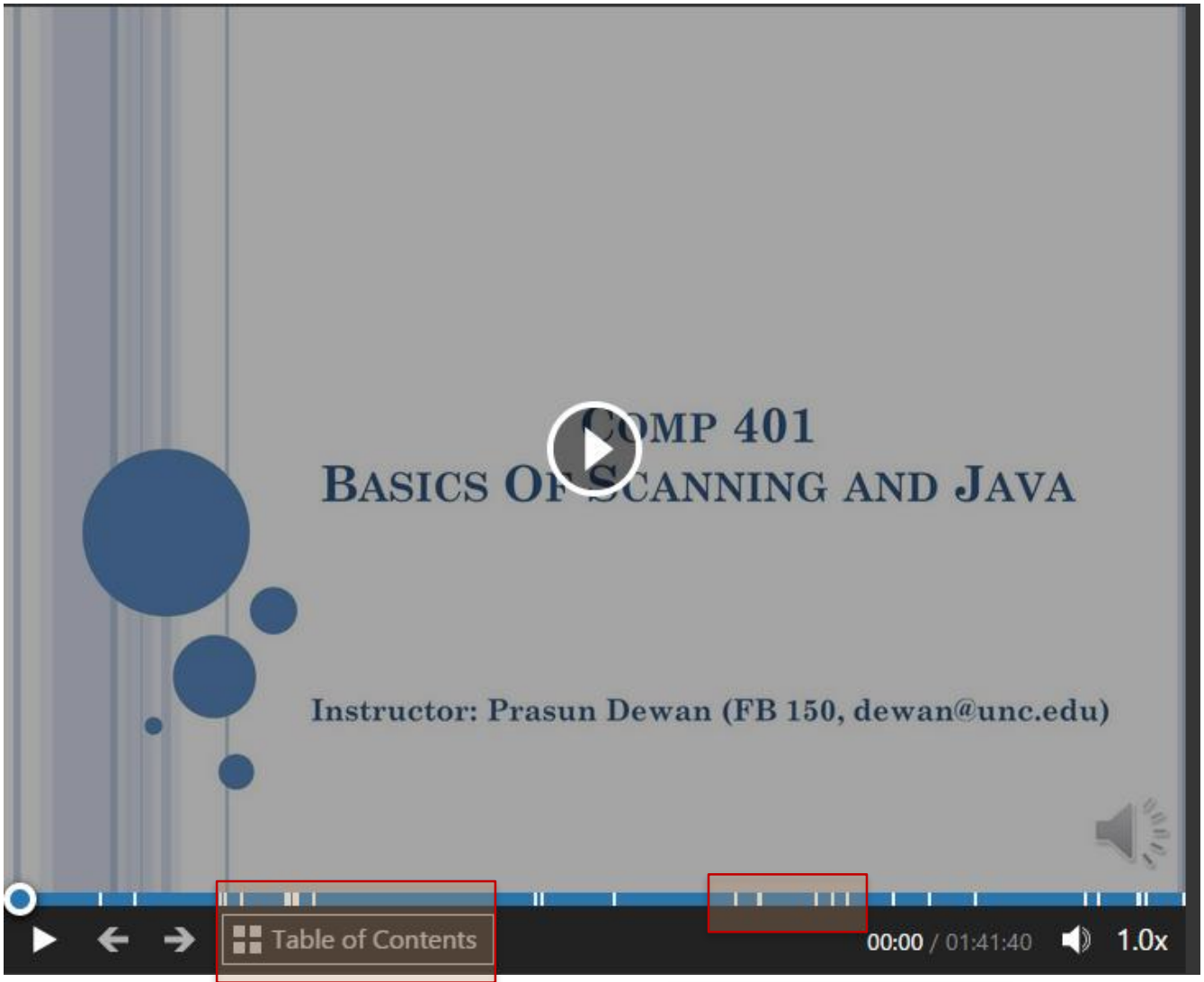
PowerPoint Slides With Unsynchronized Recordings and Media Control



Recorded YouTube Videos

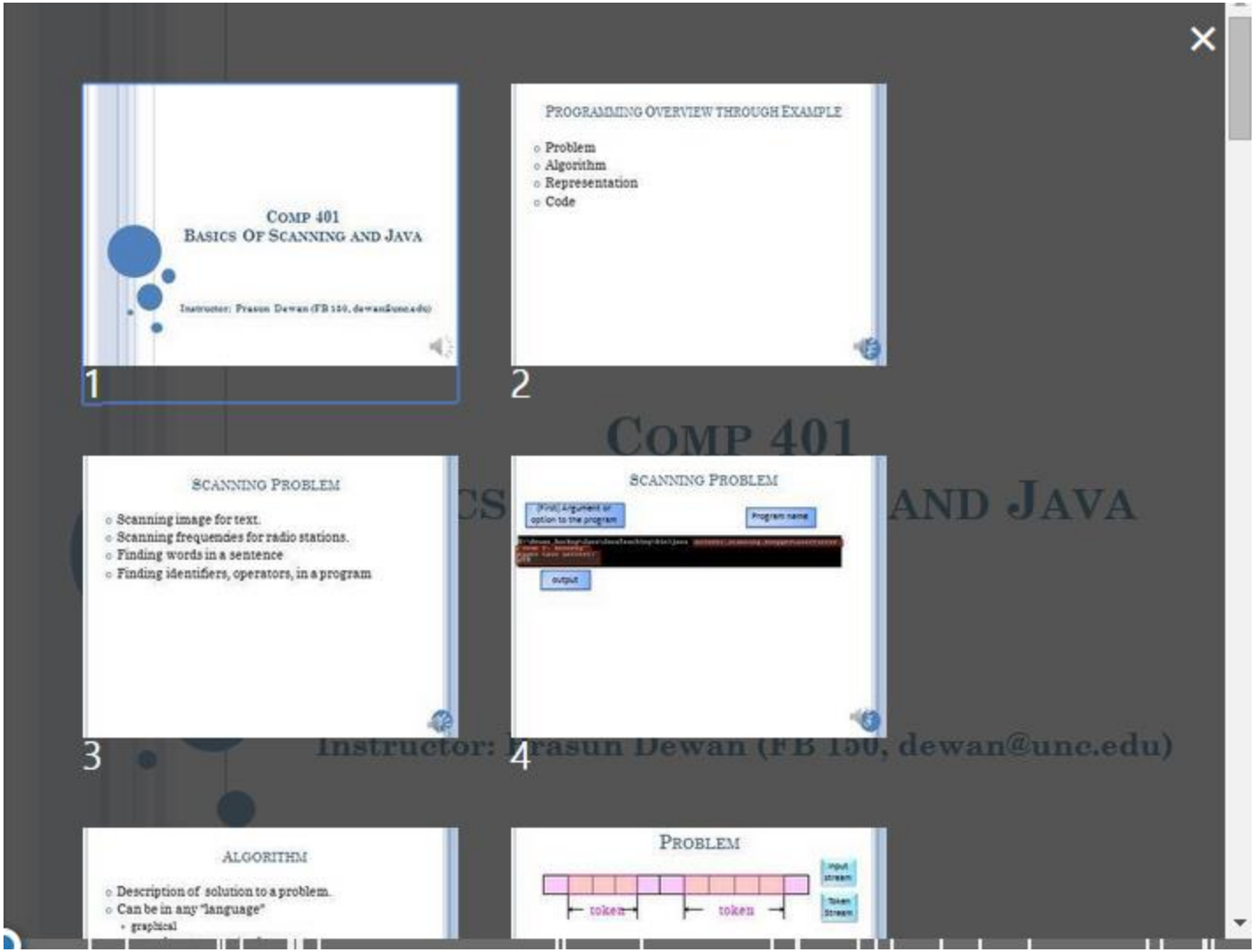


Office Mix



Slide markers

Slide-Based Browsing



Video Nature

Long pauses, you may know the answer

Cannot hear student answer

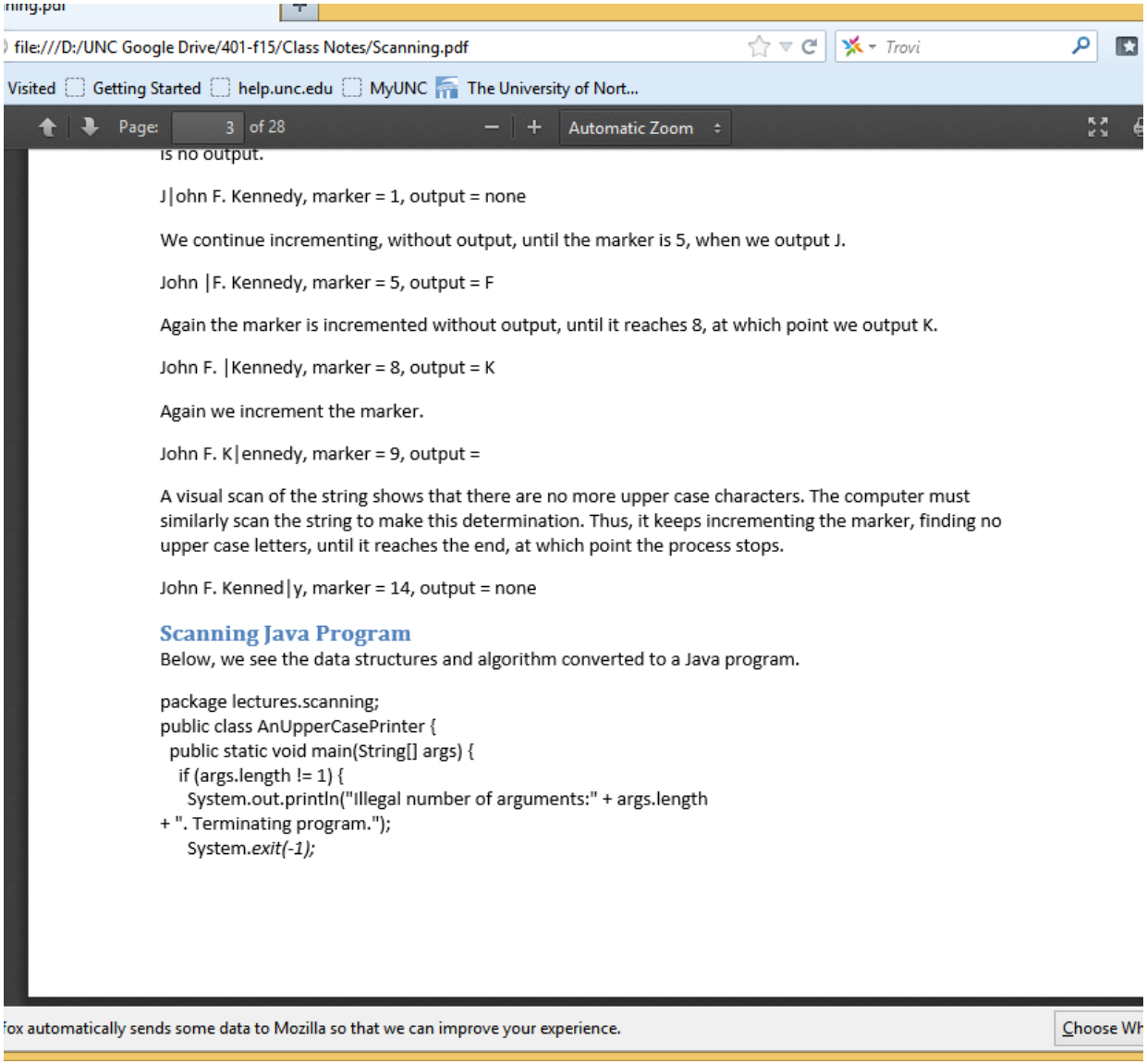
Audio is not the fastest way to get information, specially when studying for an exam

Recordings of live lectures with q/a rather than 15 minute lessons

Can fast forward

You can get a clue from my answer

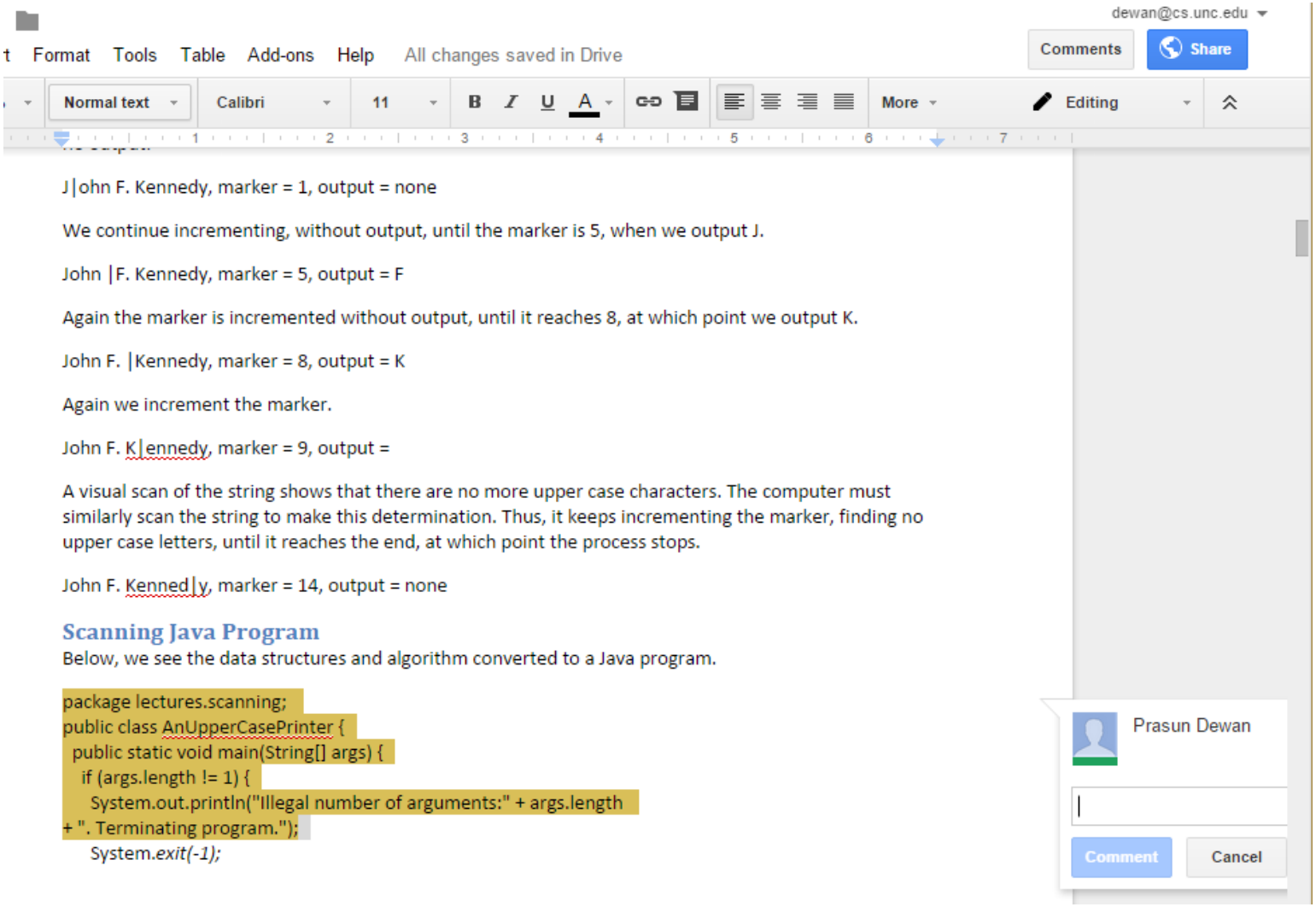
PDF of Word Documents



Little graphics, designed for mobile reading on mobile computers

Lots of (obvious) mistakes

Publicly Commentable Google Docs



Web-Based Browsable Code

Source Code of Class Examples

Zipped Directory
JavaToHTML

Java Source
All Classes
Packages
lectures.animation.loops
lectures.animation.mvc
lectures.animation.threads.synchronized_method
lectures.animation.threads.ui
lectures.animation.threads.wait_notify
lectures.animation.threads_commands
lectures.arrays

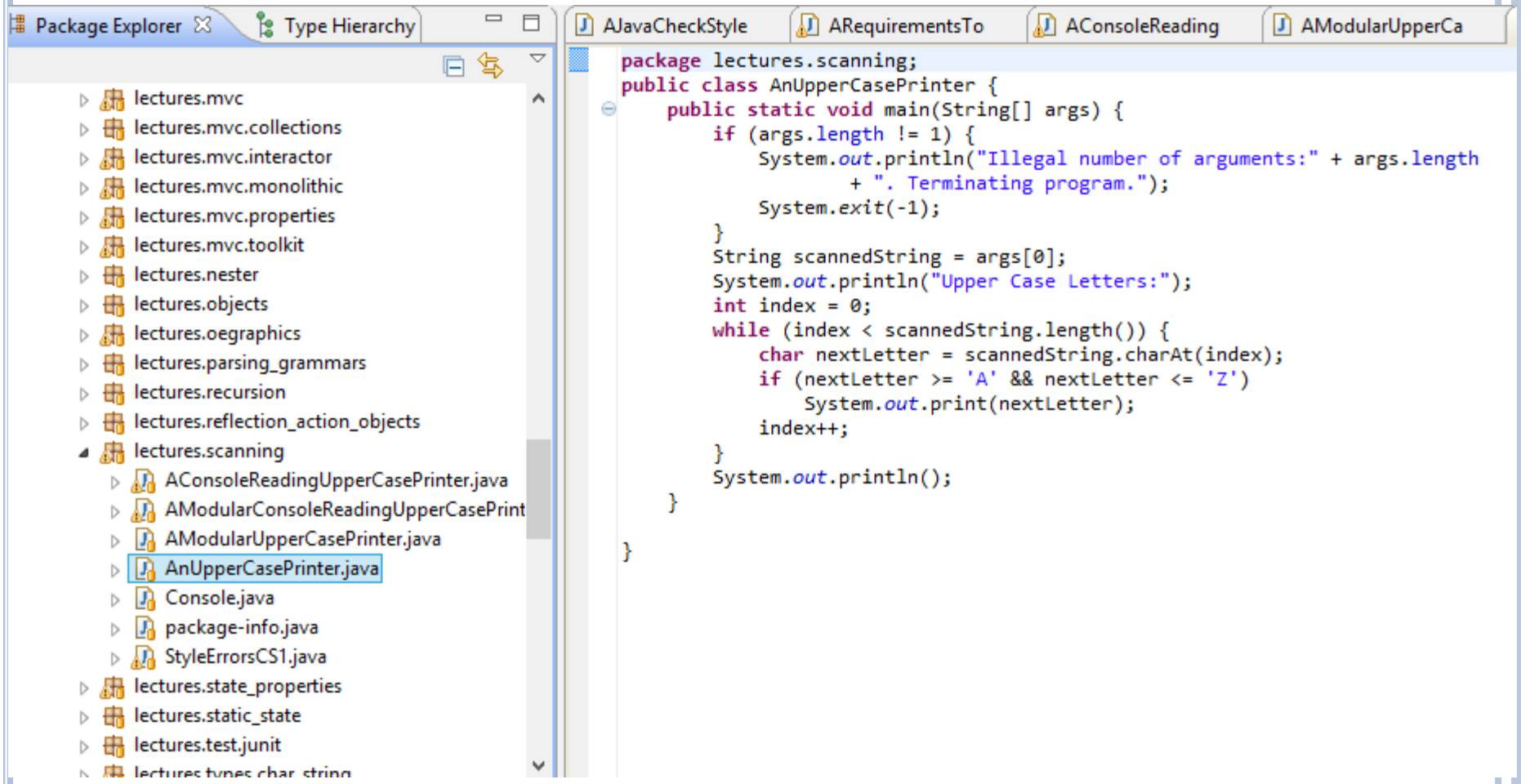
AnOperatorPrecedenceDemoer
AnOverWeightSpreadsheet
AnUndoableBMISpreadsheet
AnUndoableCounter
AnUnmodularUndoableBMISpreadsheet
AnUpperCaseIndexBasedScanner
AnUpperCaseIndexBasedScanner
AnUpperCaseIterator
AnUpperCaseIterator
AnUpperCaseIterator.1
AnUpperCasePrinter
AnUpperCasePrinter

AnUpperCasePrinter.java

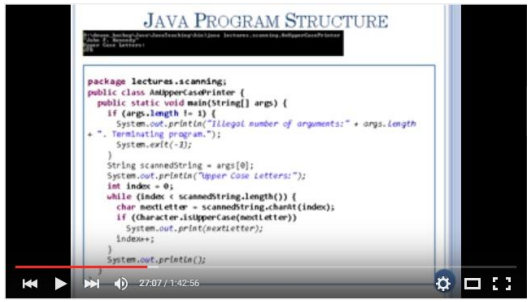
```
package lectures.scanning;
import util.annotations.WebDocuments;
@WebDocuments({"Lectures/Scanning.pptx", "Lectures/Scanning.pdf", "Vid
public class AnUpperCasePrinter {
    public static void main(String[] args) {
        if (args.length != 1) {
            System.out.println("Illegal number of arguments:" + args.l
                    + ". Terminating program.");
            System.exit(-1);
        }
        String scannedString = args[0];
        System.out.println("Upper Case Letters:");
        int index = 0;
        while (index < scannedString.length()) {
            char nextLetter = scannedString.charAt(index);
            if (nextLetter >= 'A' && nextLetter <= 'Z')
                System.out.print(nextLetter);
            index++;
        }
        System.out.println();
    }

}
```

May not be up-to date

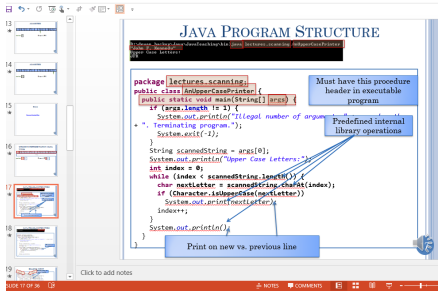
Eclipse Java Project of Lecture Code on GIT



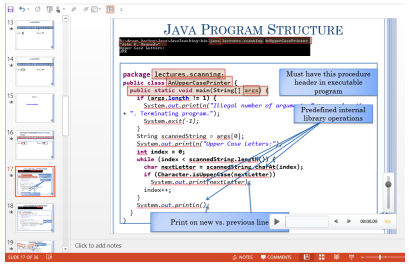
Design Space of Study Modes!



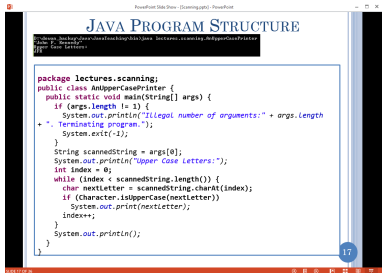
You Tube video



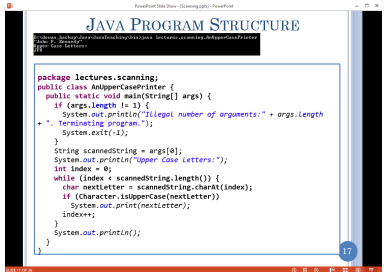
Slides without audio



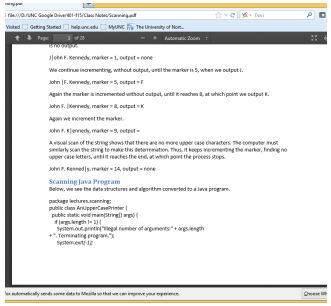
Slides with unsynchronized audio



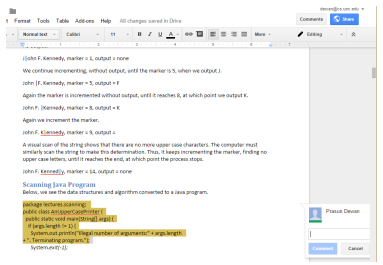
Slideshow with synchronized recording



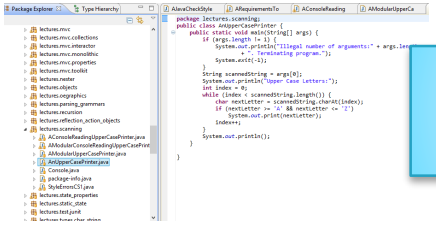
Office Mix



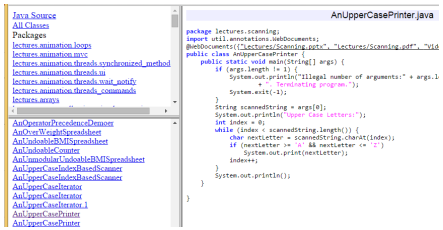
Word PDFs



Shared Google Docs



Eclipse Project



Browsable Project

Web Site Links

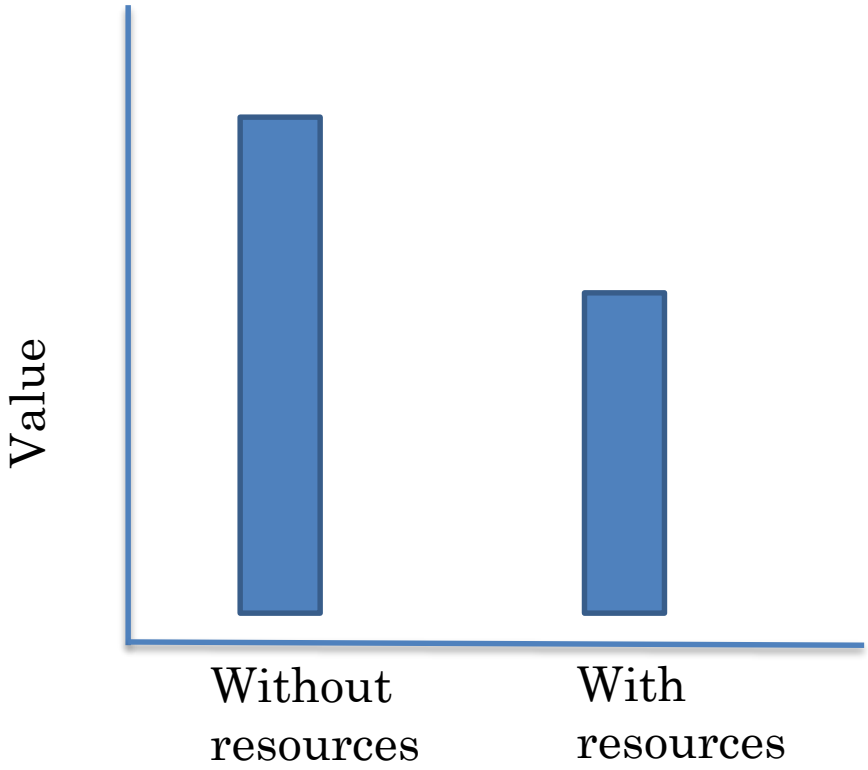
Scanning	PowerPoint PDF YouTube Mix	Docx PDF Drive	Scanning Visualization	Number Scanner	lectures.scanning Package

Regular and Flipped Class

- In regular class
  - concepts are formally taught by instructor during lecture time.
  - external learning resources are used to solidify/clarify concepts.
- In flipped class:
  - concepts are learnt by students through external learining (books and online) resources.
  - lecture time is used for hands-on activities.

A variety of learning resources available!

Usefulness of Live Lecture



What do we do in flipped class?

Problems related to homework?

Works when complexity of work is high

Recitations aim to provide templates for assignment

What do we do in flipped class?

Homework?

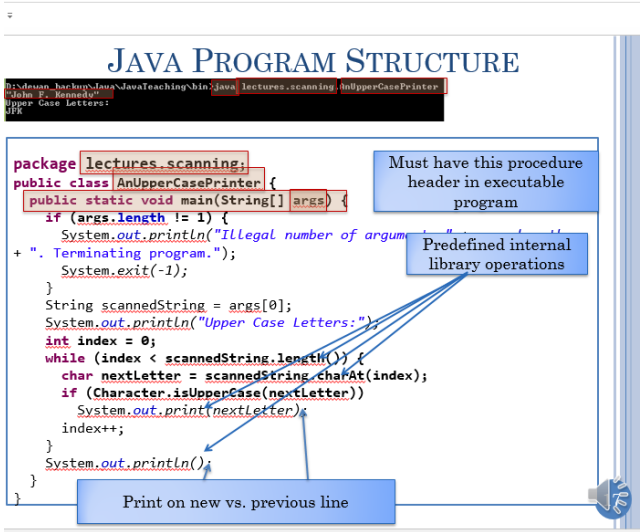
Deep thinking done solo?

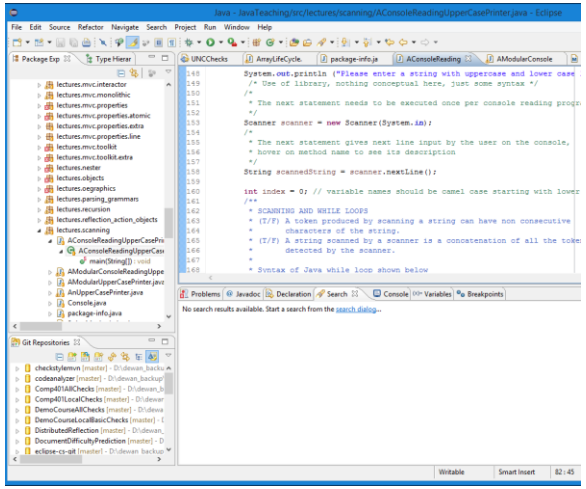
Limited discussion with classmates?

Tradeoffs in Regular Class Styles

Distill concepts in PPT or whiteboard.

Do live programming





Faster paced, concept intensive, use animation and graphics, advanced classes

Slower pace, more laborious, learn programming environment commands, intro classes

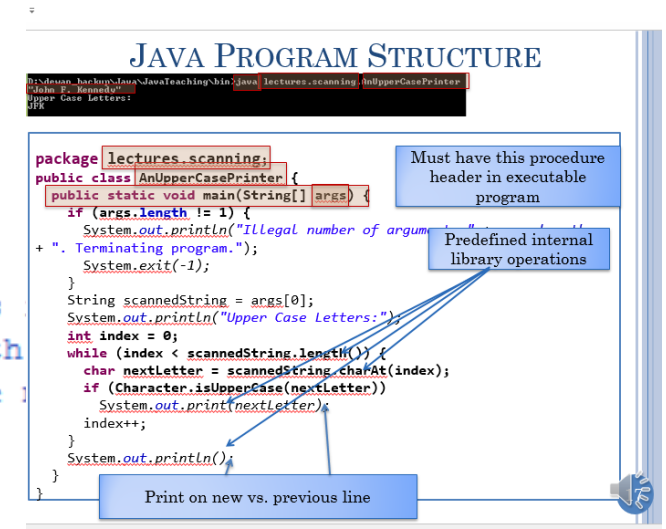
Changing Live Programming

I code in class, you watch.

You learn more as a driver than passenger

Praxis: Flip Code and Concept Presentation

```
public class AConsoleReadingUpperCasePrinter {

    /**
     * MAIN METHOD HEADER
     * Syntax of main method shown below.
     * Methods correspond to procedures and functions
     * Method names should be camel case starting with
     * Everything before the first curly brace is the
     */
    public static void main(String[] args)
    /*
     * What happens if you use the following header instead, can you execute the program?
     * Comment out the header above and uncomment the following to see what happens?
     * What is the difference between the two headers?
     */
//  public static void main(String args) {
    /**
    * METHOD BODY
    * The code between the outermost curly braces is the method body.
```



The script followed by instructor (including questions) whole doing live programming is embedded in the program template

Concept presentation in code rather than code in concept presentation

Sakai quiz to record answers derived in open-book discussion with peers and instructors