

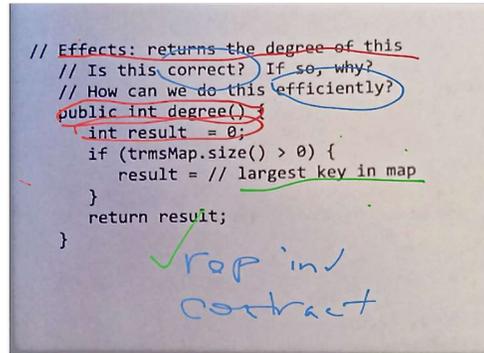
Using *ShowMe* Videos to Explain Class Concepts

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I have been using an online tool called ShowMe to create a series of videos that I can post for my students. These videos are generally structured as two folks—a student and myself—working through an exercise, annotating screen shots as we talk.

A typical video has several parts:

1. A screenshot introducing the topic and the presenters.
2. A screenshot showing the specific problem set-up and a discussion of the mathematical properties of any valid solution.
3. An intermediate stage in the development that satisfies some of the desirable objectives of the example JUnit theory.
4. A final stage showing a model finished JUnit theory.



```
// Effects: returns the degree of this
// Is this correct? If so, why?
// How can we do this efficiently?
public int degree() {
    int result = 0;
    if (trmsMap.size() > 0) {
        result = // largest key in map
    }
    return result;
}
```

✓ rop in contract

This very much mirrors what I do in class lecture: present a problem and start working towards a solution, ideally following (and rejecting!) common distractors along the way.

And that's the point: **I want the ShowMe videos to serve as online versions of class lecture that students can look at outside of the class meeting, thereby letting me “flip” the classroom time for focus on exercises.**

A note on the format: I find conversations more interesting than monologues, so I recruit students to help me assemble the ShowMe videos. I set the student the task of identifying a topic that they struggled with, along with a specific example that helps others understand where they went off track. This also makes the identification of distractors explicit: we focus on where that particular student went off track.

We then work that example in a conversational format. I give students informal participation credit for helping with a ShowMe, which in practice amounts to positive consideration for students whose final grades are right on the dividing line between grades. As an added bonus, students enjoy having their contribution out there for others to learn from. (Yes, I do obtain consent for this before posting.) You can see my ShowMe collection at <https://www.showme.com/Paul-Ammann>.



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