SWE 637 Software Testing Activities, Week 1

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(Dr. B for short)

https://go.gmu.edu/SWE637

Adapted from slides by Jeff Offutt and Bob Kurtz

Class Activities

In-class exercises not graded, but excellent prep for quizzes

Work with those sitting around you for today

Next week starts randomly assigned groups

Class participation is expected!

Class Activity #1 – Discussion

Much of this course is structured around the notion of "test coverage".
Let's talk about what coverage does, and doesn't, do.

What purpose does a test serve?

How would you define "test coverage"?

What is your experience with test coverage?

What is the rationale for test coverage? That is, what do we really care about during testing, and how does coverage relate to that?

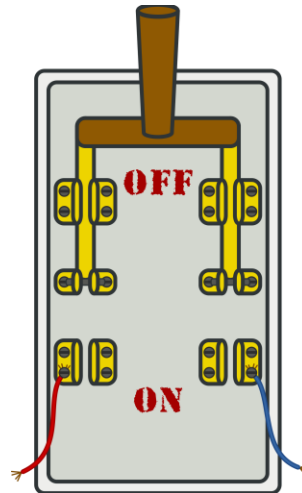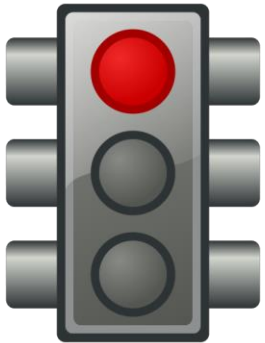Is 100% coverage (of any sort) a rational goal? Why or why not?

Does 100% coverage ensure that there are no defects? Why or why not?

Class Activity #2

Consider testing a system which implements the following constraints:

If the light is red and the valve is open, then release the monster.

If the valve is open and the switch is on, release the monster.

Class Activity #2

What exactly do these constraints mean? Is the problem completely defined?

How many different test cases are possible, and what is the desired outcome in each case?

How many different cases do you want to test? Justify your choice.

From a practical perspective, what *don't* you want to have happen while you are testing this system? What is a standard way to avoid this problem?