Listen

# TidBIT

JUnit is an industry standard for unit testing in Java. In order to develop quality JUnit tests, make sure you understand the requirements. Ask yourself: *what are they asking for and how do I prove they are getting what they want?* Pay close attention to metric requirements and develop tests to make sure they are being met.

## Required Resources

**Textbook:** *Mastering Software Testing with JUnit 5 (https://research.ebsco.com/c/ix3dnl/search/details/hps3egvjeb?db=nlebk)*, Chapter 3
In this chapter, you will learn about the testing life cycle, assertions, and conditional testing. This chapter will prepare you for starting to write your own JUnit test. Finally, this chapter will cover how you move from JUnit 3 to JUnit 4. Consider the following questions as you read:

- What is JUnit testing?
- How do I use an assertion to test code?
- What is the difference between JUnit 3 and JUnit 4?

**Textbook:** *Mastering Software Testing with JUnit 5 (https://research.ebsco.com/c/ix3dnl/search/details/hps3egvjeb?db=nlebk)*, Chapter 6
This chapter describes best practices for software developers to write meaningful and efficient test cases. In addition, this chapter covers how the requirements should drive software testing. Consider the following questions as you read:

- How do I write tests per requirements?
- What are common mistakes when testing requirements?

**Reading:** JUnit - Test Framework (https://www.tutorialspoint.com/junit/junit_test_framework.htm)
This tutorial provides examples of writing JUnit tests with the assertions, setups, and teardowns. These examples show basic operations of how to build JUnit tests. Consider the following questions as you go through the tutorial:

- What is an assertion?
- What is a setup, and how do I use it?

**Video:** JUnit Tutorial (https://www.youtube.com/watch?v=KbXhK9HUng4) (8:16)
This tutorial illustrates how to perform JUnit testing when given the following requirements:

A school class object that has a name that cannot be longer than 10 characters. The field shall not be null.
A school class object that has an ID that cannot be longer than 10 characters. The field shall not be null.

As you view the tutorial, consider the following questions:

- How did we test that the requirements were being met?
- What does it mean to run the tests with coverage?