# Miscellaneous Collection Improvements

## Overview

This lab will give you an opportunity to use some of the new collection techniques discussed during the chapter:

* Immutable collections
* Stream<T> enhancements
* Optional<T> enhancements

## Instructions

In IntelliJ, open the student.miscCollections project and define a simple class named Defect as follows:

* A defect has a severity (e.g., a number between 0 and 100) and a textual description.
* The data in a defect object should be immutable (i.e., after a defect has been created, its state cannot be updated).
* Defects must be comparable, based on severity.

Now define a Main class, and write a main() method to perform the following tasks. Use the techniques discussed during the chapter, where appropriate:

* Create a list of defects and insert some sample data.
* Using Java 8 stream techniques, sort the elements in order of increasing severity, and then collect into an immutable list.
* Open a stream on the immutable list, get the defects that have a severity < 50, and display them.
* Open another stream on the immutable list, get the defects that have a severity >= 50, and display them.
* Open another stream on the immutable list, find the defect with the lowest severity, and display its details. If the list of defects is empty, display details such as "-1, no defects” instead.