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Victoria University of Wellington
School of Engineering and Computer Science

SWEN221: Software Development

Lab 9 — More Testing (worth ≈1.3% of overall mark)

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For this lab, you must test your Assignment 5. You should write unit tests and use the Emma tool to gauge test coverage. You should aim for 75% or better test coverage (but see the note below on coverage for unit tests). You should test both the parts of code originally provided, as well as those written as part of your solution.

A good *unit test* (as opposed to a *system test* or *end-to-end test*) tests only a small and specific unit of code. To avoid testing many classes at once you may need to write *mock objects*. Mock objects are simulated objects that mimic the behavior of real objects in controlled ways. A programmer typically creates a mock object to test the behaviour of some other object. For example, method `CardTest.checkInvalidPlay` creates mock objects to perform the test. See the following page for more information:

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http://en.wikipedia.org/wiki/Mock_object

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In order to obtain the desired level of coverage, you should consider the following points:

1. Write tests to test that method `Trick.getWinner()` works correctly; you can do it in a similar way as done for `Trick.play()`.

2. Write tests to test the current implementation of `SingleHandWist` which implements the `CardGame` interface. In particular, you might want to start checking that the `isGameFinished()` method is true/false after a single hand is played (that is, write at least a test for the true case and one for the false case).

   `SingleHandWist` is simpler to test because it only requires a single hand to be played.

If for some reason you didn't do Assignment 5 (or don't have the source code handy), then you can download a baseline implementation from the lecture schedule page. Note that this is a *very poor* solution, and it is much better to use your own solution, if you have one.

Marking Guide

Each lab is worth just under 1% of your overall mark for SWEN221. The lab should be marked during the lab sessions, according to the following grade scale:

- **0**: Student didn't attend lab.

- **E**: Student did not really participate in the lab.

- **D**: Student's participation was *poor*. For example, he/she made some attempt to work on the lab, but did not complete any activities.

- **C**: Student's participation was *satisfactory*. That is, he/she achieved at least 50% coverage.

- **B**: Student's participation was *good*. That is, he/she achieved at least 65% coverage.

- **A**: Student's participation was *excellent*. That is, he/she achieved at least 75% coverage.