

# Lab : Unit Testing

October 31, 2020

## Introduction

In this lab you will get to make a test suite for a linked list class. You may refer to and adapt the example files within `examples_catch_gcov/` and `examples_catch2_official/`.

## Problem 1: Makefile

Create a makefile with at least the following targets:

1. `main` which compiles `main.cpp`
2. `test` which compiles and runs a test suite
3. `coverage` which compiles and runs the test suite, then runs `gcov`
4. `clean` which cleans up all the output files

Feel free to adapt `examples_catch/Makefile`.

## Problem 2: Tests

Your completion of Problem 2 will progress like so (this is not real code...):

```
do
{
    write_some_tests();
} while(code_coverage() < 90 || tests_not_passing());
```

Your tests should use test cases and sections to reduce code duplication and logically organize your tests. You should have unit tests for everything in `List` except the destructor and `iterator()`. Don't worry about testing `Cell`; it'll get tested when you test `List`. For an example of how to iterate over a list, look in `main.cpp`.

## Epilogue

Commit and push your makefile, test files, and any other changes you've made.