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Testing with Catch

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Catch — C++ Automated Test Cases in Headers — is an [open-source, C++ testing framework](#) that is used in hundreds of C++ software libraries. We use it to help you test your C++ code in CS 225.

For every assignment, you can compile the test cases by running:

```
make test
```

This will usually generate a program called `test`, which can be run by running:

```
./test
```

If you pass all test cases, you will see a green bar and a report that shows you passed 100% of the test cases. If you fail some test cases, you may want to have Catch report and abort on the first failure. To do this, run:

```
./test -a
```

Catch will show you information about the test you failed:

```
$ ./test -a

~~~~~
test is a Catch v1.9.7 host application.
Run with -? for options

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createSpotlight
  Spotlight creates a completely dark pixel >200 pixels away
-----

tests/basic.cpp:46
.....

tests/basic.cpp:47: FAILED:
  REQUIRE( result.getPixel(320, 50)->l == 0 )
with expansion:
  0.5 == 0

=====
test cases: 1 | 1 failed
assertions: 5 | 4 passed | 1 failed
```

Below the first dashed line will be the name of the test (`createSpotlight`), a description of the purpose of the test (`Spotlight creates a completely dark pixel >200 pixels away`), the source of the test case (`tests/basic.cpp:46`), followed shortly by the test we ran inside of a `REQUIRE()` statement (`result.getPixel(320, 50)->l == 0`), and finally the value of the expression that failed (`0.5 == 0`).

In the context of the MP or Lab, this should provide you details about how to go about fixing your code.