Glide

New Test Cases

Introduction

Overview

Since Glide's existing test suite was very exhaustive and includes a test case for almost all known components and functionalities, it was a challenge for us to find a loophole in the test suite as a whole. However, we noticed that there were some gaps within a few of the test cases that did not cover all possible partitions of test input space. As such, we included 3 new tests, each of which tests a different functionality within the system.

New Test Cases

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1. StreamEncoderTest - testFileNullException()

The StreamEncoderTest is a test case that we explored earlier in examining the existing test suite. We noticed in our examination that the test case does not account for the instance in which the file object is null. In our new test method, testFileNullException() covers the instance in which the file object is not created properly and returns a null object.

2. StreamEncoderTest - testImportanceOfOptionsArgument()

In this test case, we test an instance of a null option enduring the encoding process. Options is one of the three parameters passed in stream encoding; however, the relevance of options has not been tested for in the existing test class. Therefore, we have included a test method called testImportanceOfOptionsArgument() and pass null as the options argument.

3. FixedSizeDrawableTest - testPositive/NegativeConfiguration()

We utilized IntelliJ's code coverage plugin to expose some opportunities for test cases within Glide's system. By doing this, we were able to find 0% coverage for the FixedSizeDrawable class. We decided to focus on the method pertaining to the class's configuration field. The configuration is an integer value with both a setter and a getter method to manipulate and retrieve it. We did a simple test to see if these methods

would pass given a particular value (setter) and correctly return it (getter). We tested both positive and negative integer values, both of which passed.

Our pull request for all new test cases can be viewed here.

Build Test - Result

The format error that failed our Travis CI build test from the first part of the assignment persisted after adding our new test cases. All tests passed successfully; however, we still had a format error with the same source of issue. As mentioned in the first part of the assignment, we decided to submit the pull request anyway and get the help of Glide developers to debug format issues in our code.