

Lean on IDE to accelerate legacy code's refactoring

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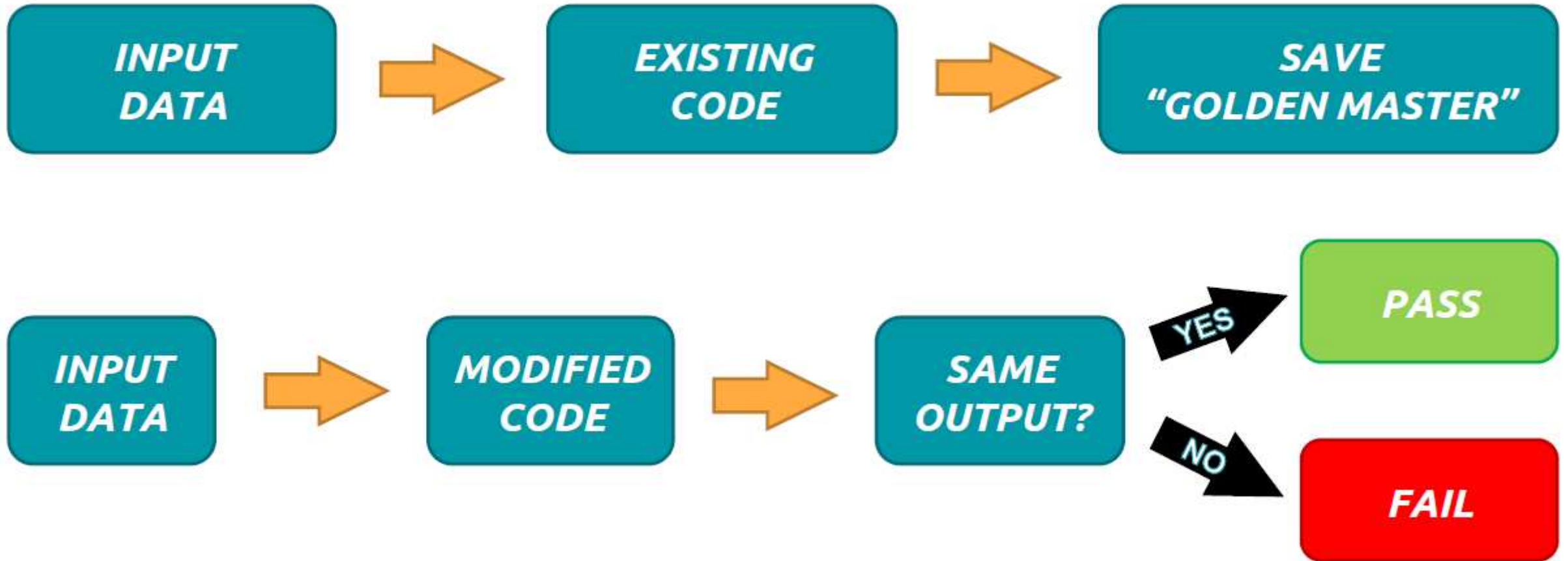
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The Golden Master Approach

Before making any change to the production code:

1. Create X number of random inputs
2. Bombard the class or the SUT with these random inputs
3. Capture and record the outputs
4. Start changing the code
5. Run the test and compare the actual output with the expected(recorded) one
6. If they match, keep refactoring, otherwise revert back



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→ Approval Tests as an easy way to do Golden Master testing.



Diffblue as an alternative way to the Golden Master Approach

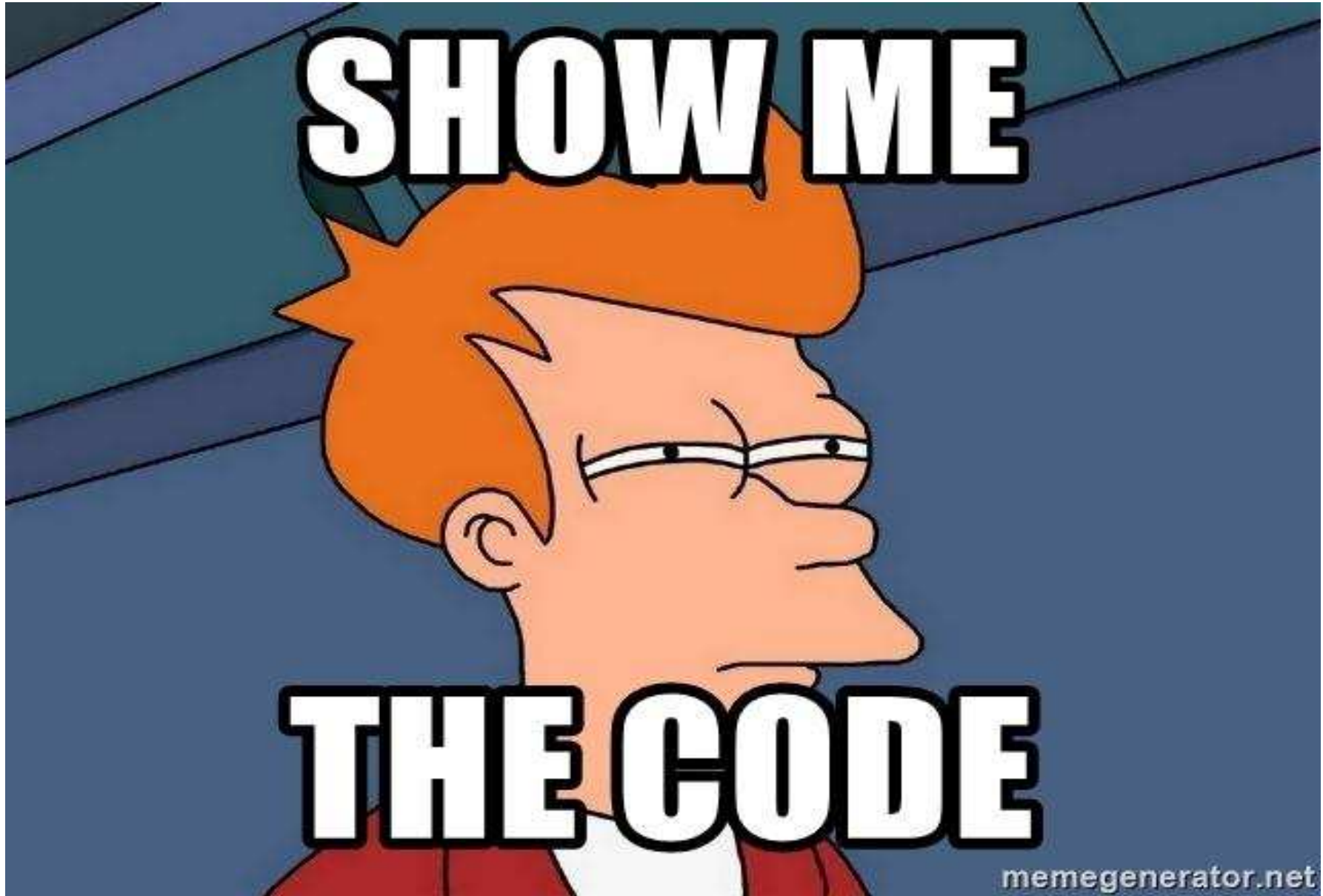
- Diffblue Cover Plugin for IntelliJ IDEA
- Interactively writes unit tests for java applications
- Increasing test coverage
- Helps find regressions in future code changes



Setup

In order to get Diffblue Cover working:

- Java 8 or Java 11 compatible source code
- The code must build
- Required dependencies on classpath: Junit & Mockito



Conclusion

- Pros
 - Easy setup and use
 - Understandable and runnable tests generated
 - Reach high code coverage fast
- Cons
 - Quality of the generated input data
 - We do not have control on the generated inputs (but still we can adjust them)



THANK YOU FOR YOUR ATTENTION!

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Literature & References

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- <https://alcor.academy/>
- <https://www.diffblue.com/blog/legacy%20code/software%20development/testing/tutorials/safely-refactoring-legacy-code-with-automatically-generated-unit-tests/>
- <https://plugins.jetbrains.com/plugin/14946-diffblue-cover-community-edition>