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How to Be a Java Automated Testing Superstar!

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Important Notes

- Ask questions
- Reach out:
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- Key link 🙋 <https://github.com/wkorando/java-testing-superstar>



<https://billykorando.com/>

Why Write Automated Tests?

- Substantial time and effort to write tests
- Substantial time and effort to maintain tests

My code is perfect!
Why should I waste time writing tests?

Why Write Automated Tests?

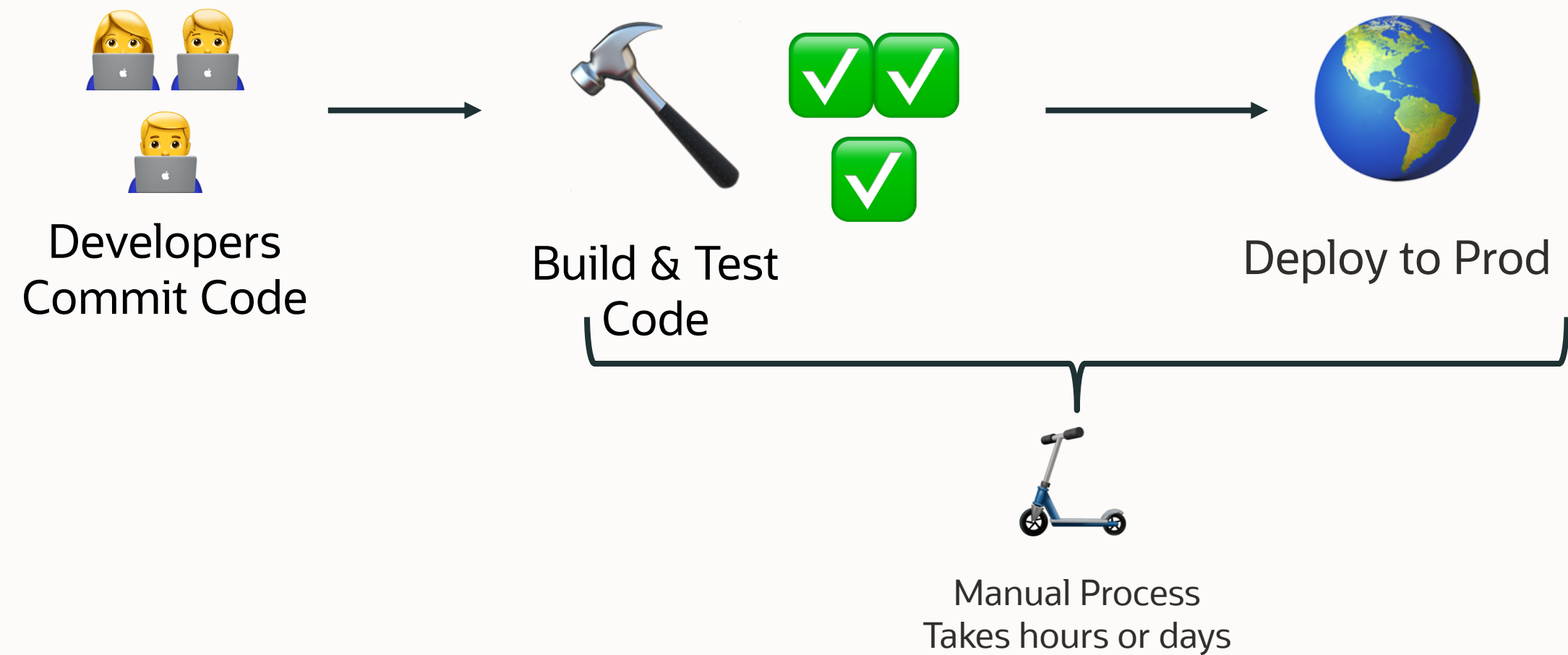
CI/CD Process =>



Automated Tests =>



Deployment Process

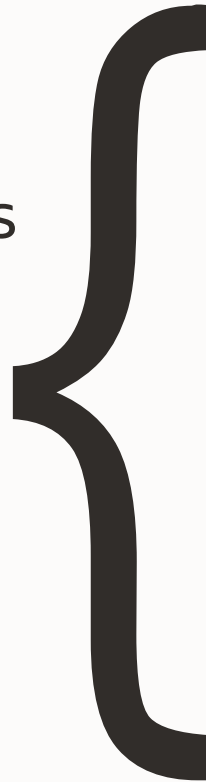


The Dependency Iceberg

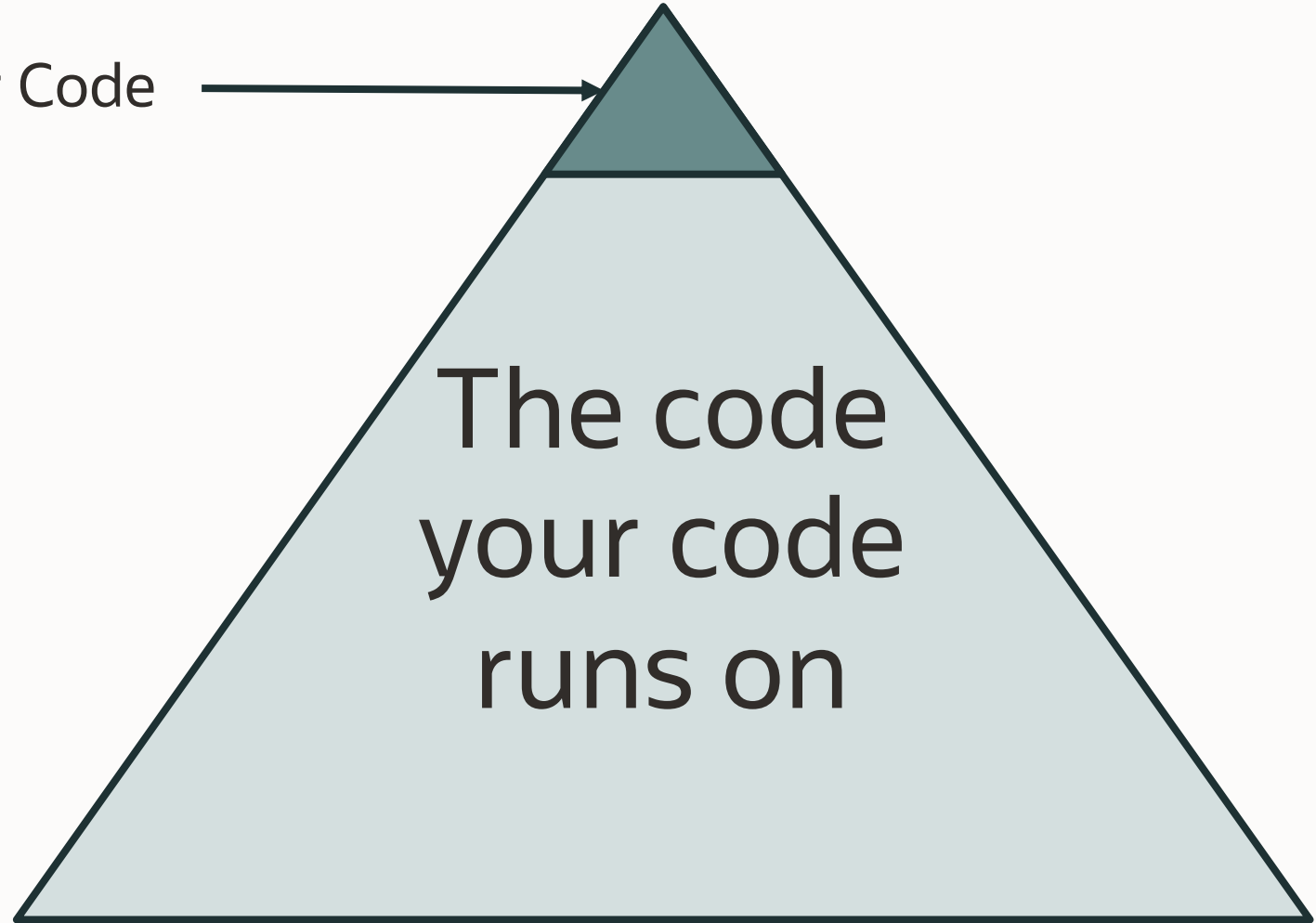
Your Code



- Security patches
- Performance enhancements
- Feature enhancements



The code
your code
runs on

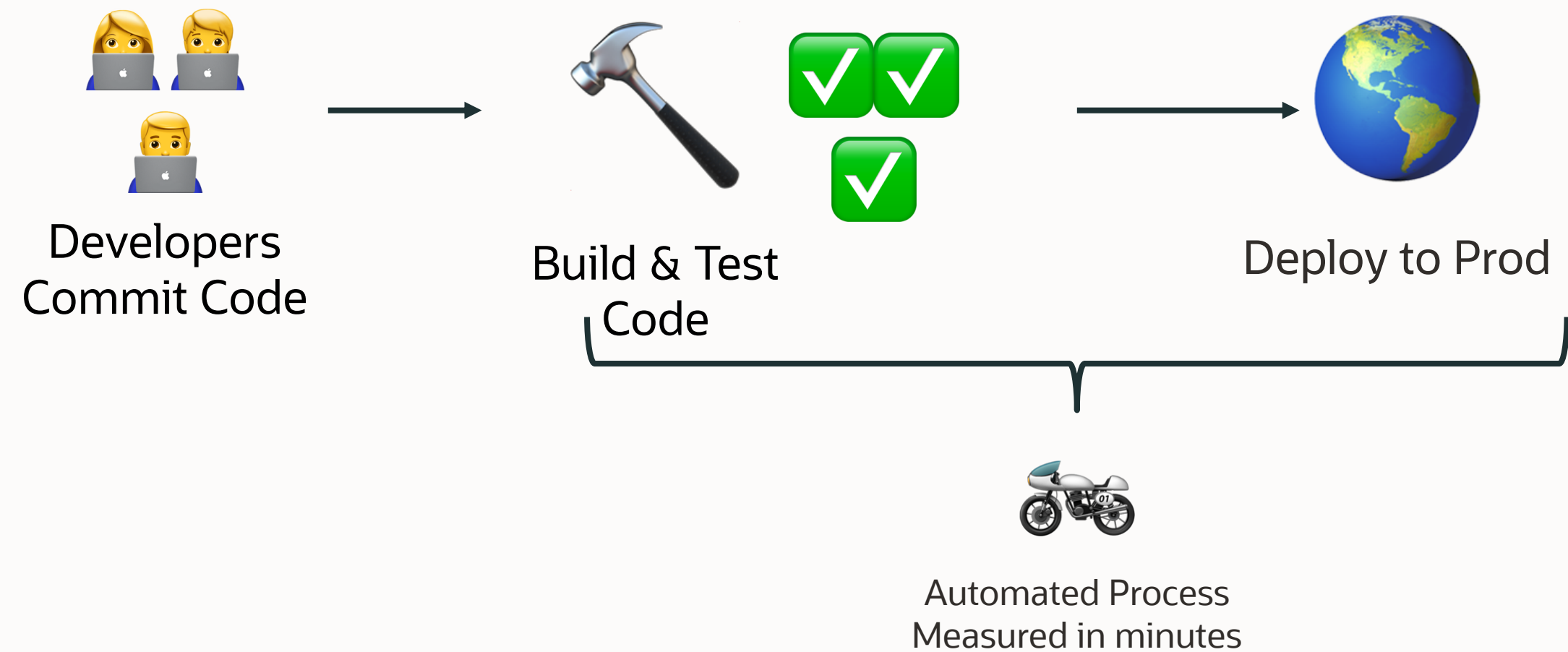


Manual Test Costs

The high effort of regression testing code disincentivizes keeping dependencies up to date



Deployment Process



Additional Benefits

Auditable

- Can review test code, reports, and logging

Repeatable

- Can re-run test suite to see if problems persists
- Can run test suite against other code base/version to see if problem exists

How Many Automated Test Should I Write?

Whatever gives you confidence to
deploy to PROD without manual
intervention



Manual Testing

Manual testing still needed.

But it's exploratory testing.



Modern Tools for Modern Problems

Unit Testing

- JUnit 5
- Mockito
- AssertJ

Integration Testing

- Test Containers
- Spring Cloud Contract (Packt is similar)

Performance Testing

- JFRUnit



Code Examples

JUnit 5, Mockito, AssertJ, and Test Containers:

<https://github.com/wkorando/welcome-to-junit5-v2>

Spring Cloud Contract Example:

<https://github.com/wkorando/collaborative-contract-driven-development-2-0>

JFRUnit:

<https://github.com/wkorando/testing-tuesday/tree/main/xxx-jfr-unit>



Thank you



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