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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/>

## 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?

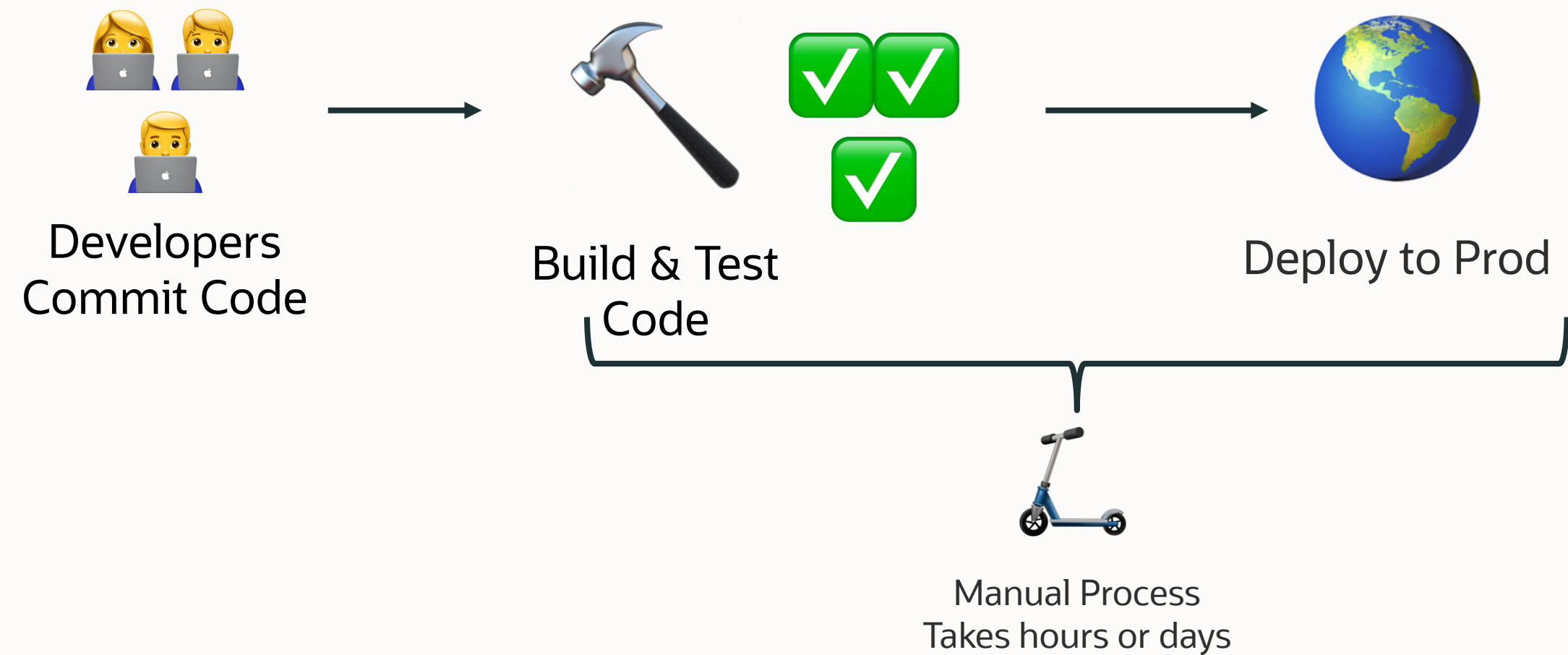
CI/CD Process =>



Automated Tests =>



# Deployment Process

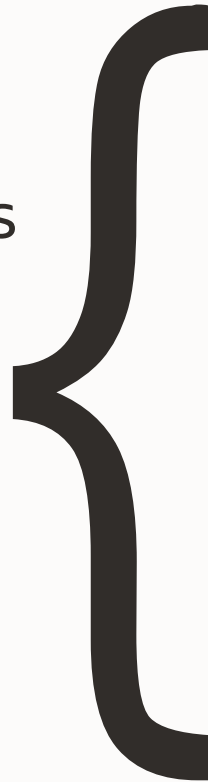


# The Dependency Iceberg

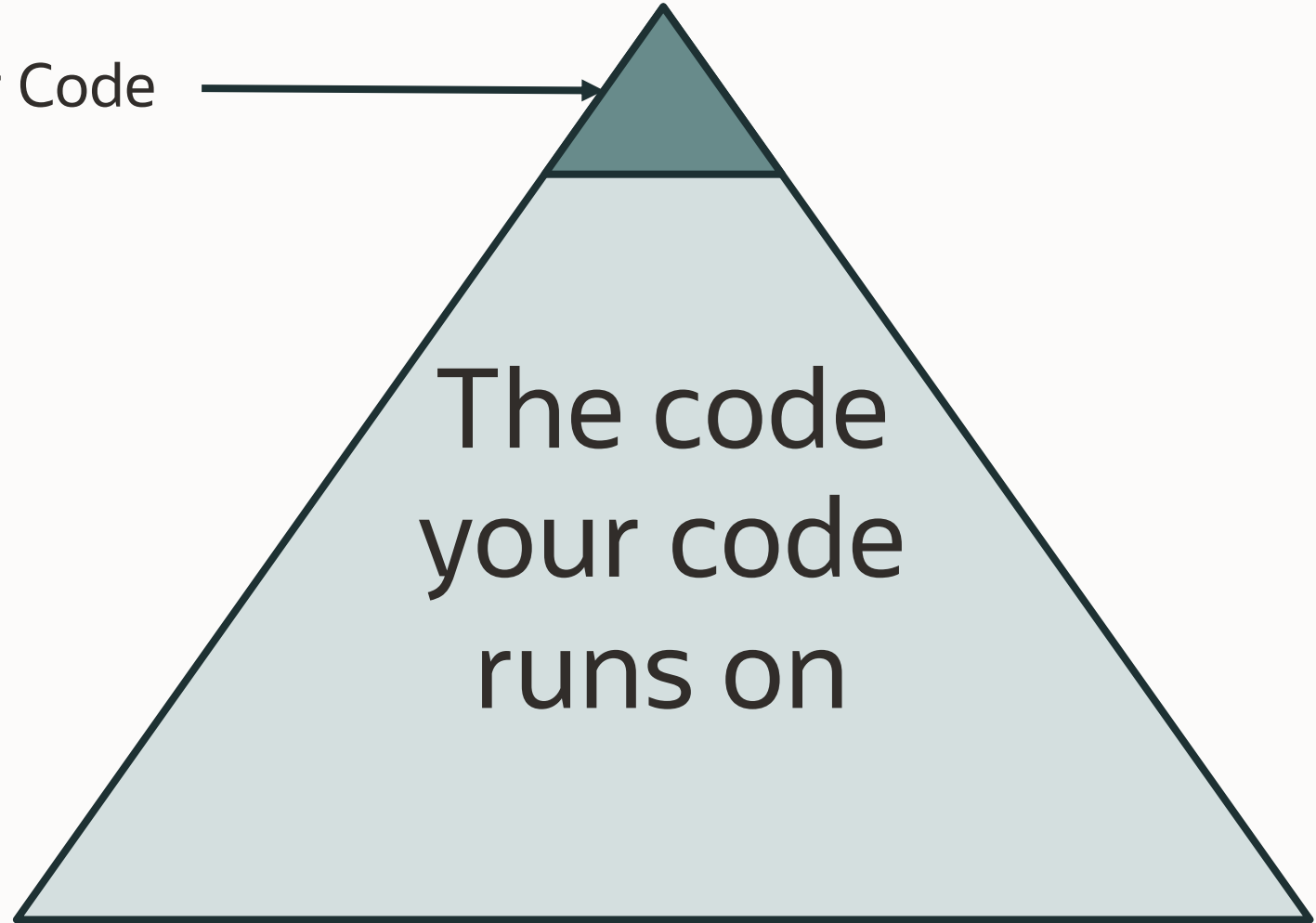
Your Code



- Security patches
- Performance enhancements
- Feature enhancements



The code  
your code  
runs on



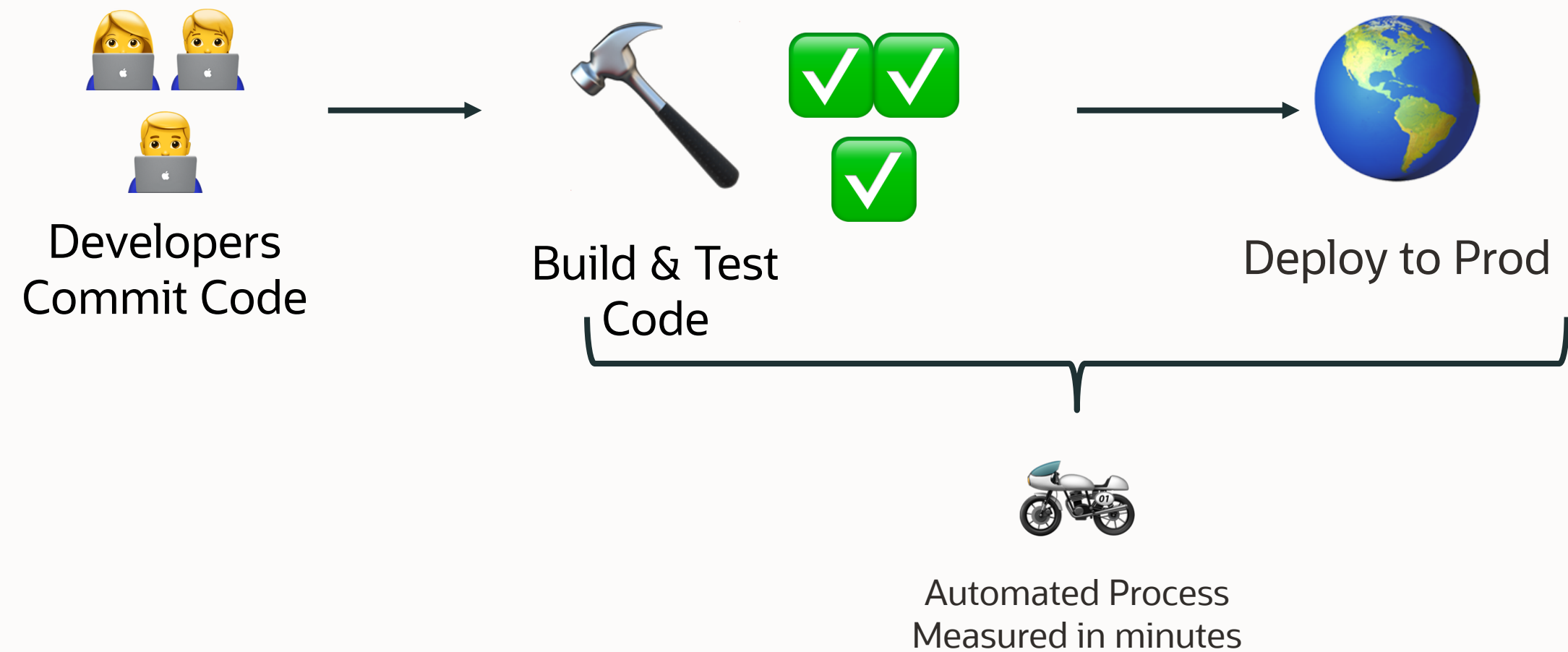
## Manual Test Costs

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)



# 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>



# Thank you



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