

# SUPERSONIC SUBATOMIC — MOCKING —



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# What is this session about?

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- A (subjective) introduction how to create isolated tests for a Quarkus app with
  - Kotlin
  - JUnit5
  - MockK
- Practical insights
- What you won't get:
  - Deep dive in one of the technologies

# Disclaimer 🤗

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# Excursus: Resource efficiency

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- Fast startup time
- Low memory consumption
- Where and why resource efficiency matters:
  - (Containerized) Microservices with dynamic load scenarios
  - Serverless Functions
  - Cloud Billing: Pay as you use

# Excursus: Resource efficiency



**Vlad Mihalcea**  
@vlad\_mihalcea



The less efficient your application,  
the more profit the cloud provider  
makes.

# Quarkus

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„Supersonic Subatomic Java“



- A Kubernetes Native Java stack tailored for OpenJDK HotSpot and GraalVM, crafted from the best of breed Java libraries and standards
- Container-first philosophy:  
Small size on disk, fast startup time, low memory consumption
- Quarkus' dependency injection is based on CDI

# JUnit 5

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„Shaping the future of testing on the JVM“

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- The 5th major version of the programmer-friendly testing framework for the JVM
- Focuses on Java 8 and above
- Almost all functionality works in Kotlin just like it does in Java

# MockK

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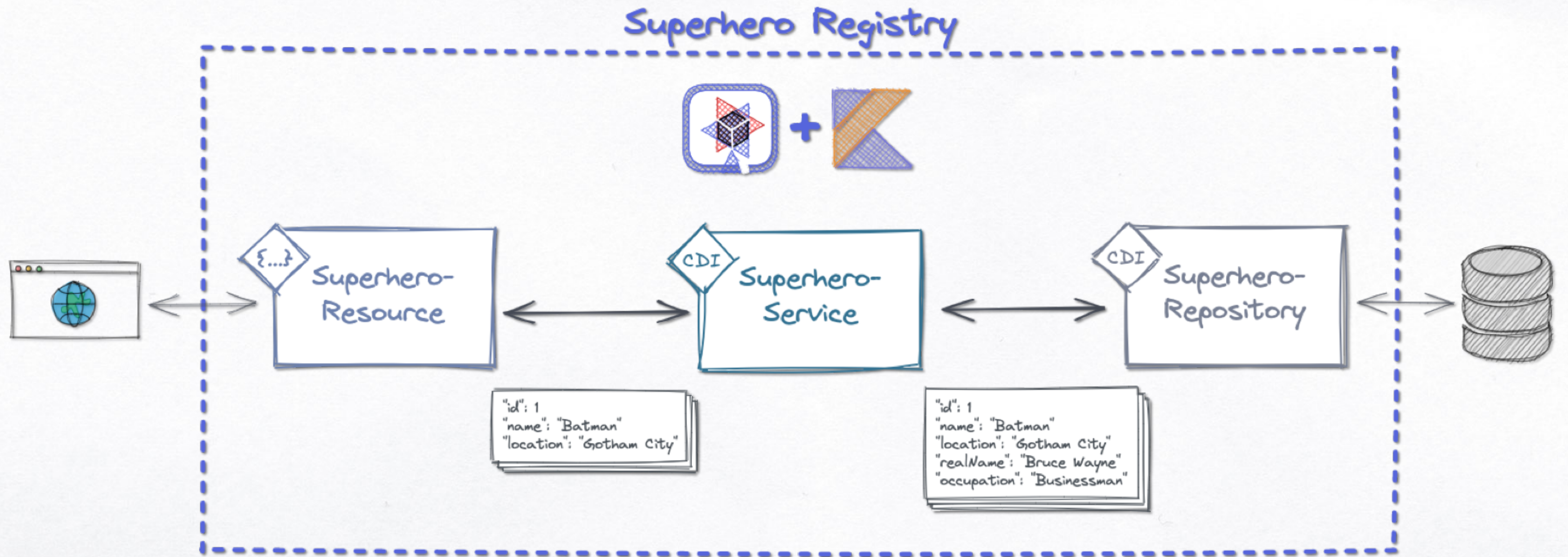
„Mocking library for Kotlin“

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- Mocking framework built and designed for Kotlin
- It's a better fit than the (primarily for Java designed) Mockito
  - Has a concise DSL to describe mocking behaviour
  - Works with Kotlin's final by default
  - Allows mocking of extension functions
  - Etc.

# Scenario



# Quarkus - Drawbacks

- It's a rather young framework – which means it has not (yet!) the **feature completeness** and **the ecosystem** of long time established frameworks like e.g. Spring and Grails
- So far it is primarily **Supersonic Subatomic Java** – and not **Supersonic Subatomic Kotlin**

☐ Kotlin **PREVIEW**

Write your services in Kotlin

☐ **Hibernate ORM with Panache and Kotlin** **EXPERIMENTAL**

Define your persistent model in Hibernate ORM with Panache

☐ **MongoDB with Panache for Kotlin**

# Promising Extension

- Quarkus JUnit5 MockK Extension

The screenshot displays the GitHub repository page for `quarkiverse/quarkus-mockk`. The repository is generated from `quarkiverse/quarkiverse-template`. The main navigation bar includes links for Code, Issues (2), Pull requests, Actions, Projects (1), Wiki, Security, and Insights. The repository is currently on the `master` branch, with 1 branch and 2 tags. A pull request by `glefloch` is merged, adding 52 commits. The file list includes `.github` (Release version 0.2.0, 15 days ago), `docs` (Fix small typo, 10 days ago), `src` (Migrate annotation to kotlin, 18 days ago), `.gitignore` (Initial commit, last month), `LICENSE` (Initial commit, last month), `README.md` (Fix type and Gradle configuration in README.md, 11 days ago), and `pom.xml` (Bump quarkus-bom from 1.12.0.Final to 1.12.1.Final, yesterday). The README content is visible, showing the title `Quarkus JUnit5 MockK Extension`, a build status of `PASSING`, and a description: "This Quarkus JUnit5 MockK extension allows you to easily inject MockK mocks." The right sidebar shows the repository's about section, including the name `Mockk Quarkus Extension`, the license `Apache-2.0 License`, and a list of contributors (5).

quarkiverse / quarkus-mockk  
generated from quarkiverse/quarkiverse-template

<> Code Issues 2 Pull requests Actions Projects 1 Wiki Security Insights

master 1 branch 2 tags Go to file Add file Code

glefloch Merge pull request #27 from quarkiverse/dependabot/maven/io.quarkus... 05f2c3e yesterday 52 commits

File	Commit Message	Time
.github	Release version 0.2.0	15 days ago
docs	Fix small typo	10 days ago
src	Migrate annotation to kotlin	18 days ago
.gitignore	Initial commit	last month
LICENSE	Initial commit	last month
README.md	Fix type and Gradle configuration in README.md	11 days ago
pom.xml	Bump quarkus-bom from 1.12.0.Final to 1.12.1.Final	yesterday

README.md

## Quarkus JUnit5 MockK Extension

**BUILD** **PASSING** **MAVEN-CENTRAL** **V0.2.0** / **LICENSE** **APACHE-2.0**

### Description

This Quarkus JUnit5 MockK extension allows you to easily inject MockK mocks.

**About**  
Mockk Quarkus Extension  
quarkus-extension  
Readme  
Apache-2.0 License

**Releases**  
2 tags

**Packages**  
No packages published

**Contributors** 5

**Languages**  
Kotlin 100.0%

# Further information

-  @csh\_0711
- **Blog Post:**  
<https://www.novatec-gmbh.de/en/blog/testing-quarkus-with-kotlin-junit-and-mockk>
- **GitHub Repo:**  
<https://github.com/csh0711/quarkus-kotlin-mockk>

