

Himalayan Peaks of Testing Data Pipelines

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Who we are

What is Big Data

Who are DEs?

What is pipeline?

Who needs pipelines

QA of pipeline

QA \neq QC

QA of pipeline

QA \neq QC

QA is about processes, and not only about software quality.

Pyramid of testing. Unit



Typical pipeline



Unit testing of pipeline

What may we test here?

A pipeline should transform data correctly!

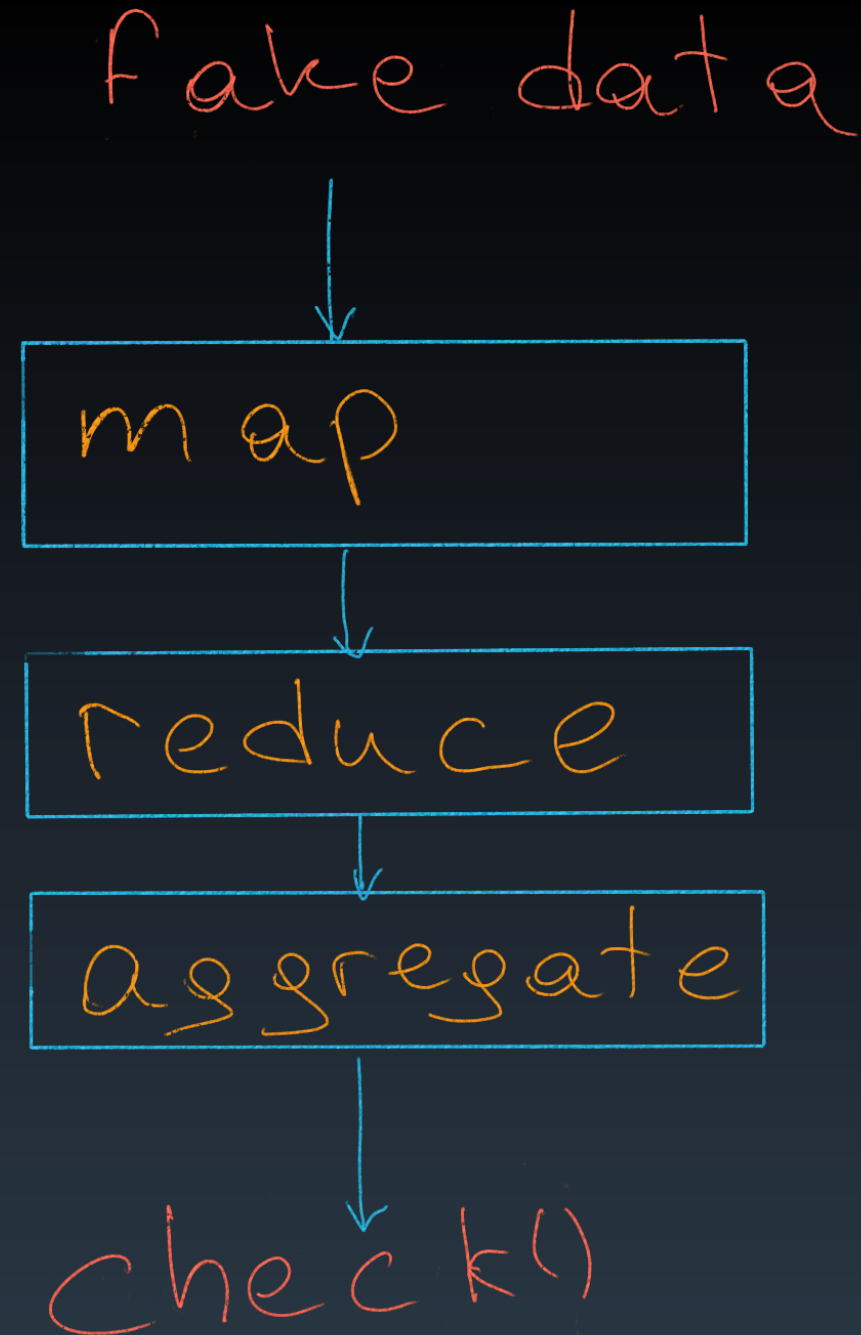
Correctness is a business term

Let's paste fakes!

Fake/mock input data

Reference data at the end of pipeline

Separate
Function

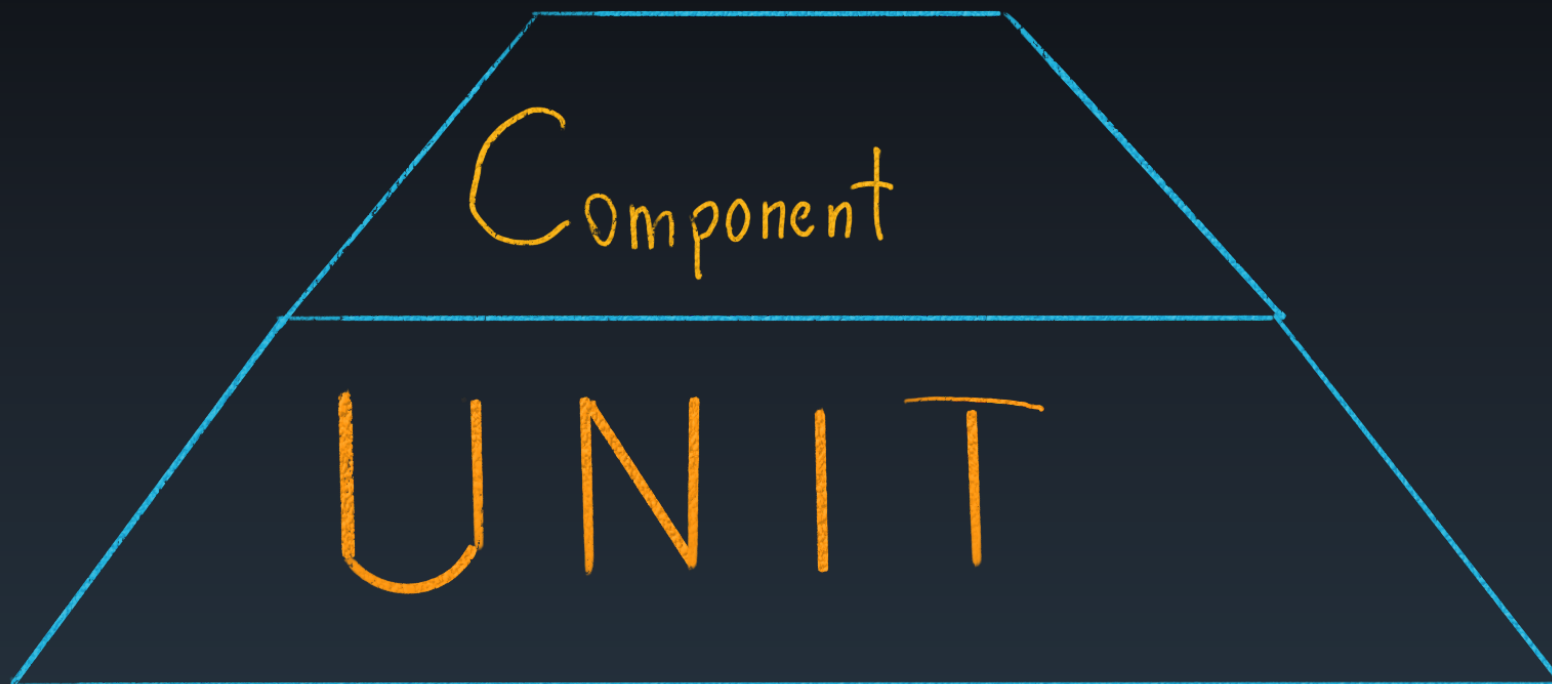


Tools

[holdenk/spark-testing-base](#) ← Tools to run tests

[MrPowers/spark-daria](#) ← tools to easily create test data

Component testing

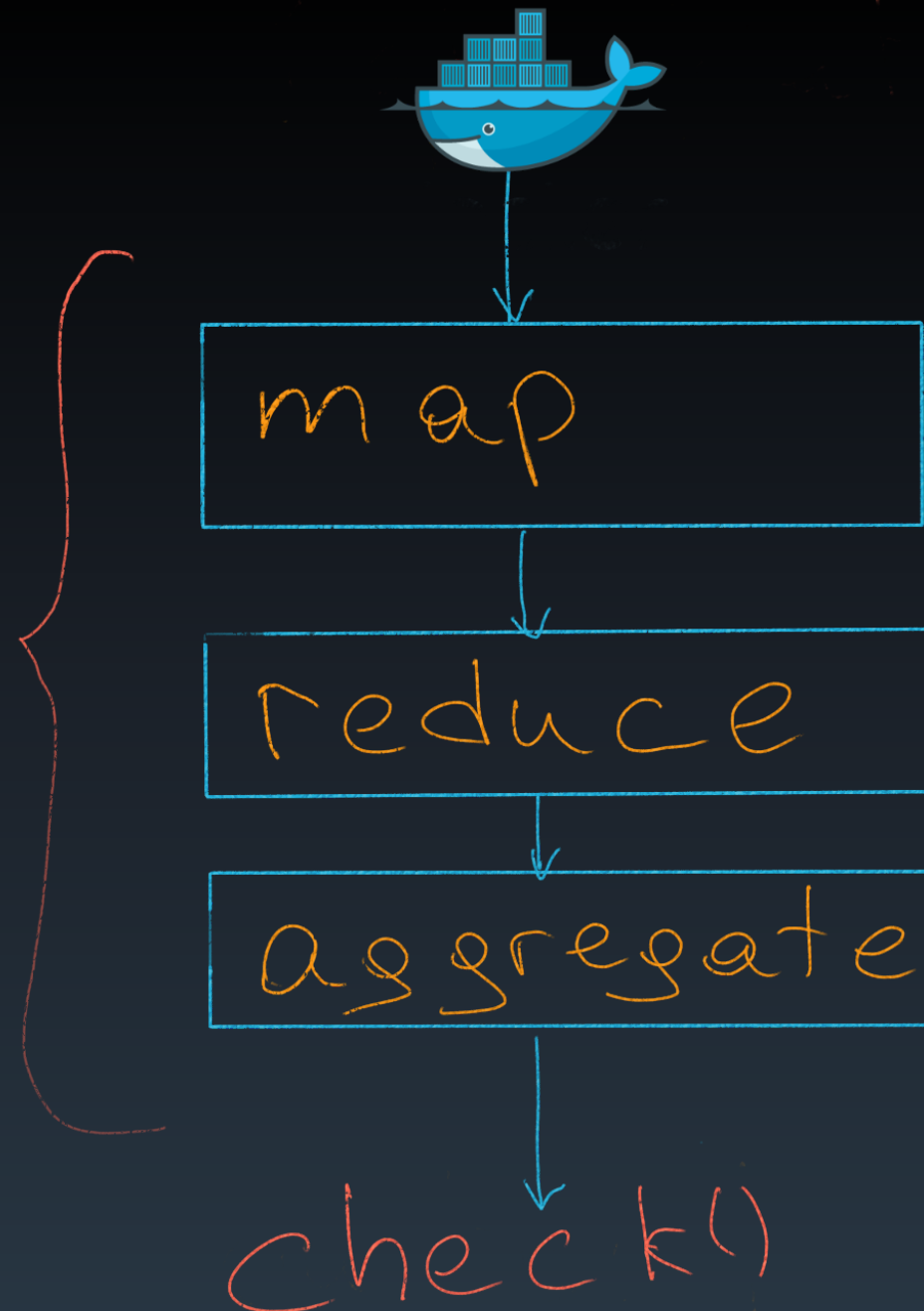




TESTCONTAINERS

TestContainers

Separate
Function



TestContainers

Supported languages:

- Java (and compatibles: Scala, Kotlin, etc.)
- Python
- Go
- Node.js
- Rust
- .NET

Test Containers

```
import sqlalchemy
from testcontainers.mysql import MySQLContainer

with MySQLContainer('mysql:5.7.17') as mysql:
    engine = sqlalchemy.create_engine(mysql.get_connection_url())
    version, = engine.execute("select version()").fetchone()
    print(version)    # 5.7.17
```