Building Realtime Data Apps with Speedment

TCF IT Professional Conference
March 17, 2017

Michael P. Redlich

@mpredli

about.me/mpredli/

Who's Mike?

- BS in CS from RUTGERS
  THE STATE UNIVERSITY
  OF NEW JERSEY

- "Petrochemical Research Organization"

- Java Queue News Editor, InfoQ

- Ai-Logix, Inc. (now AudioCodes)

- Amateur Computer Group of New Jersey

Objectives

- What is Speedment?

- Why Speedment?

- Database Support

- Get Started Building an Application

  - Live Demo (yea!)

- Speedment Resources

What is Speedment (1)?

"Speedment accelerates your development speed and makes database programming so easy and fun. When you use Speedment Open Source for database querying, you do not have to learn a new API or use complex ORMs. Everything is standard Java 8 and works out of the box."

Speedment Web Site, http://www.speedment.org/

What is Speedment (2)?

- First introduced in June 2015

- A portmanteau of "speed" and "development"

- Abstracts the process of:

  - database connectivity

  - database operations

Speedment Integration
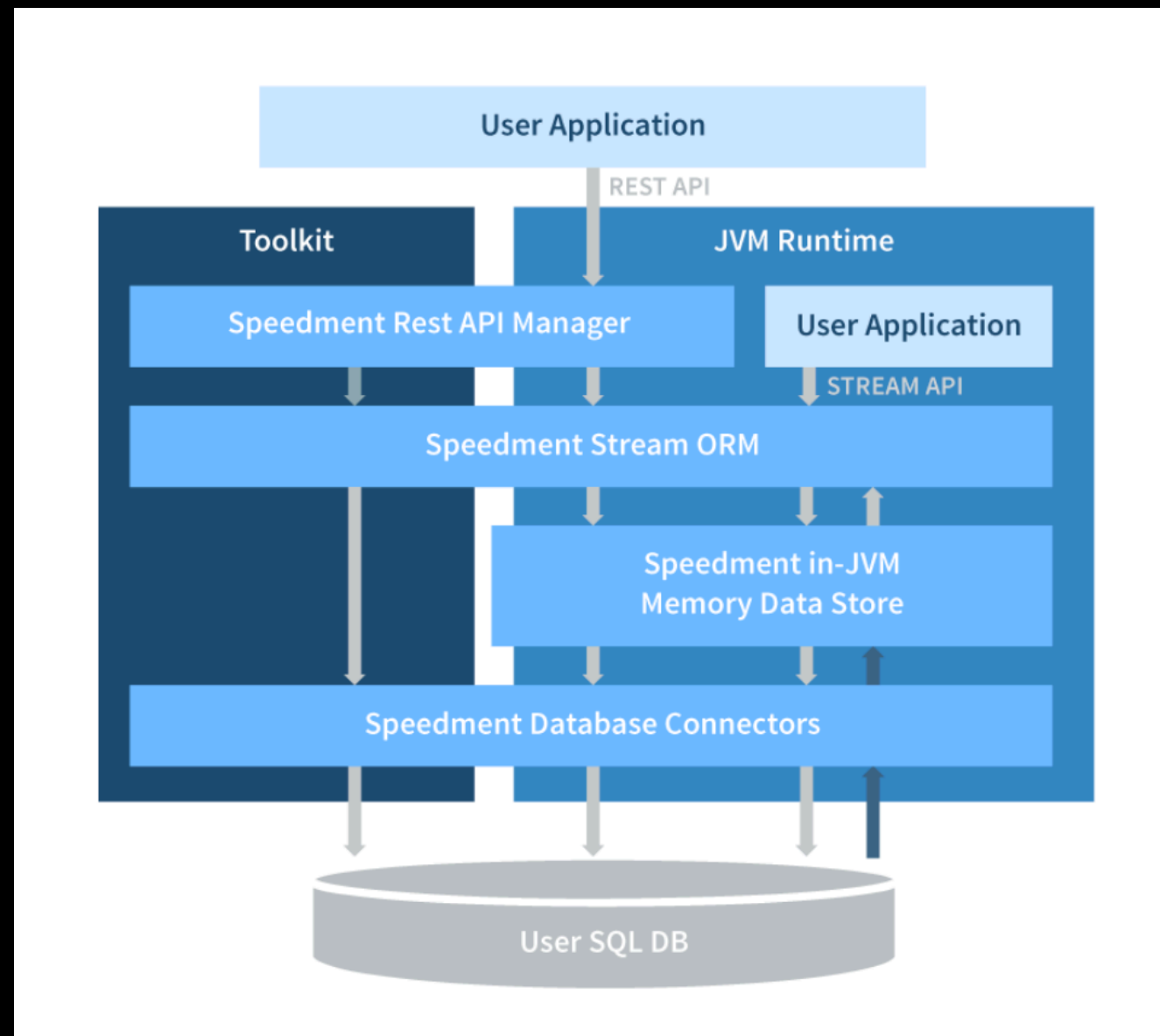
Speedment 3.0.5

- Codename: "Forest"

- Latest features include:

  - declarative Java 8 stream API for databases operations

  - improved user interface

Why Speedment?

- Full Java 8 support

  - lamdas and streams

- Easy query with Smart Streams

  - no need for coding SQL

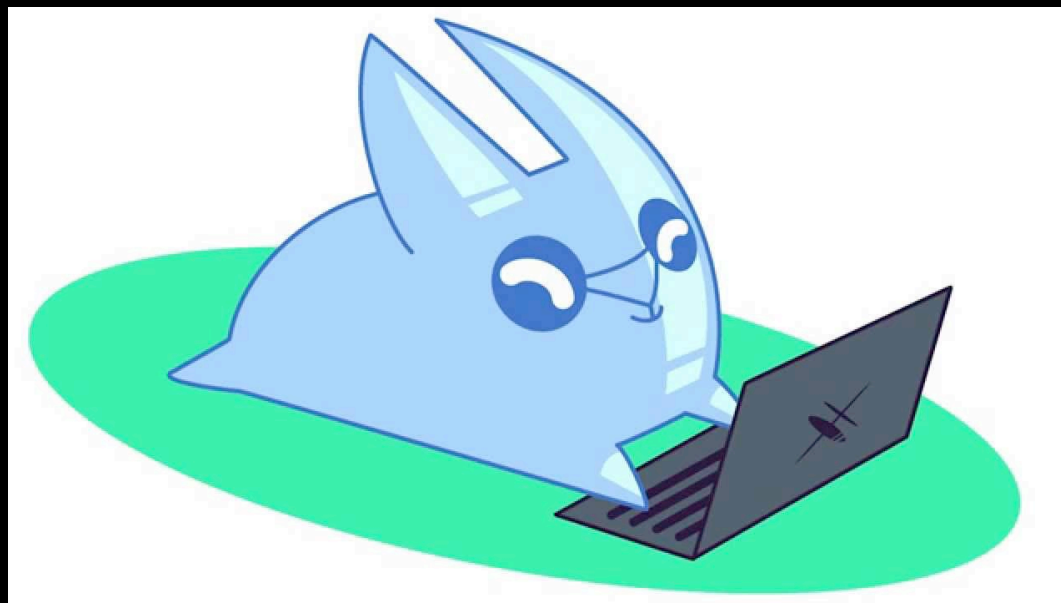- No NULL pointer exceptions

Elis Minborg

Speedment Open Source

- Speedment Open Source Database Support:
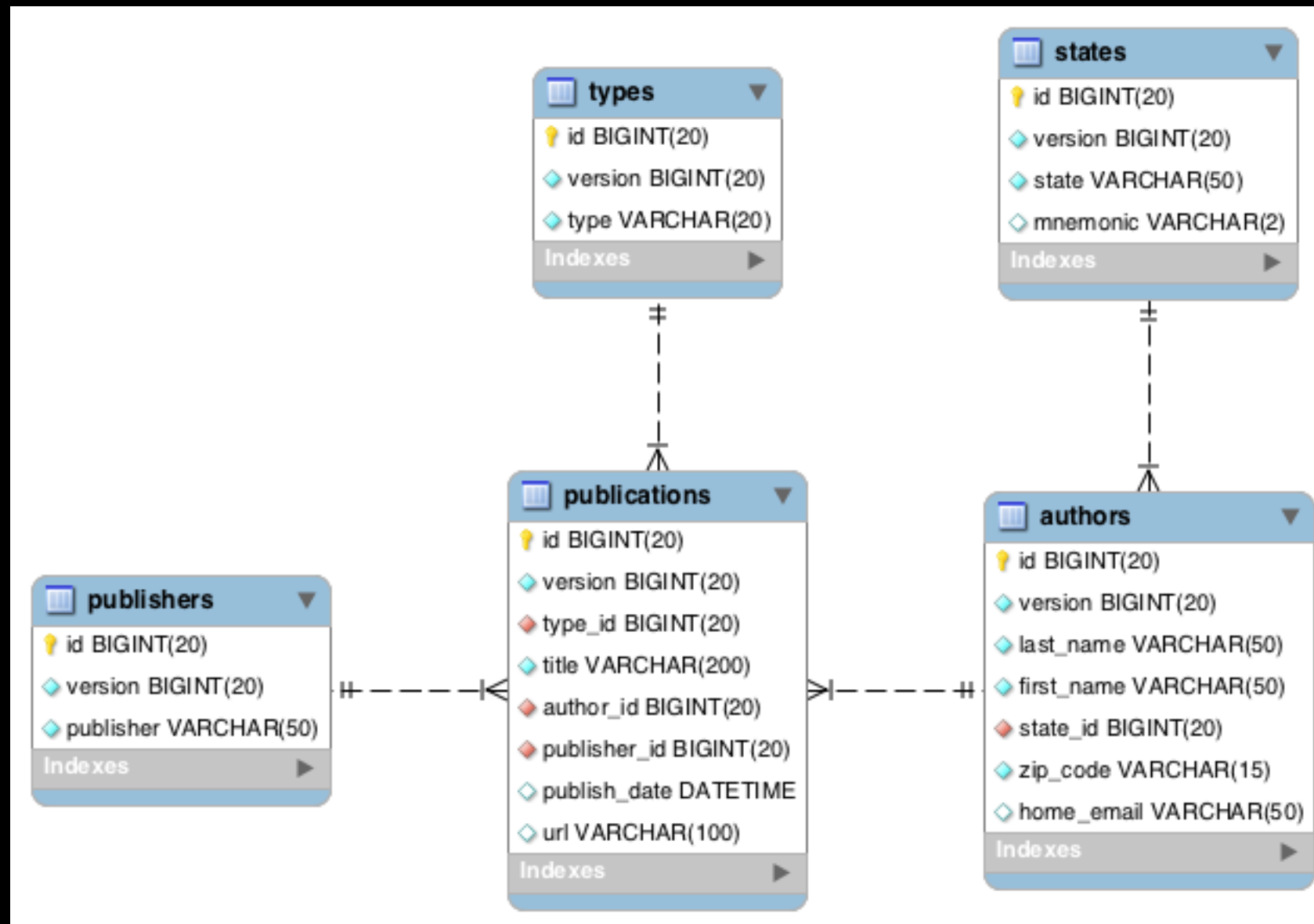
  - MySQL

  - PostgreSQL

  - MariaDB

Speedment Enterprise

- Speedment Enterprise Database Support includes Open Source plus:

  - Oracle

  - DB2

  - AS400

  - SQL Server

Let's Get Started…

Example Database

Getting Started

```
$  mvn archetype:generate            ← generates a new project

-DgroupId=org.redlich.publications   ← project package

-DartifactId=publications            ← project root

-DarchetypeArtifactId=speedment-archtype-mysql

-DarchetypeGroupId=com.speedment.archetypes

-DinteractiveMode=false

-DarchetypeVersion=3.0.5             ← the latest version of Speedment

&& cd publications && mvn speedment:tool
```

specify desired database

invoke the Speedment tool

Speedment Tool (1)

specify desired database →

Select Database

MySQL ▼

127.0.0.1 | 3306

root

Password
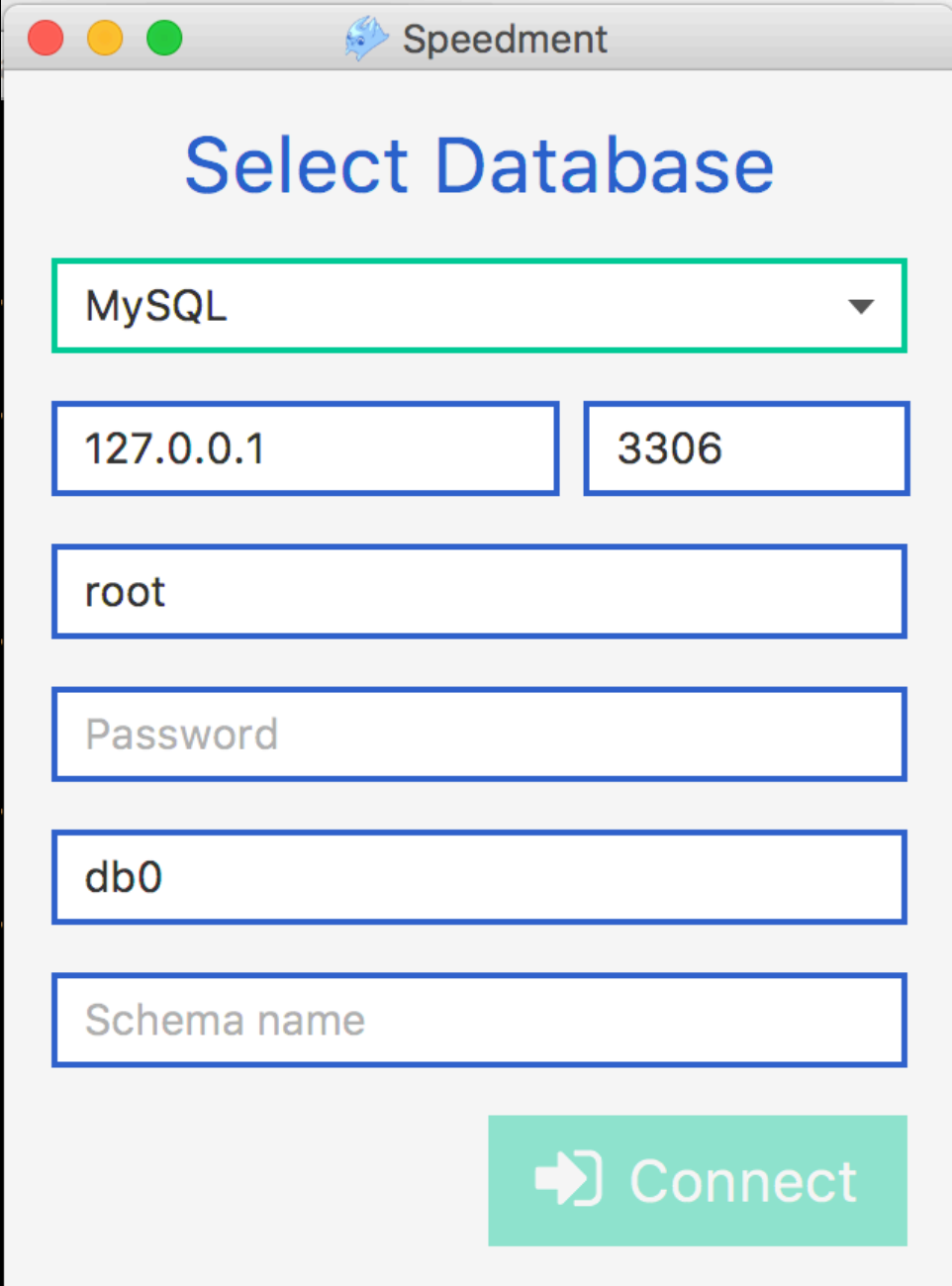
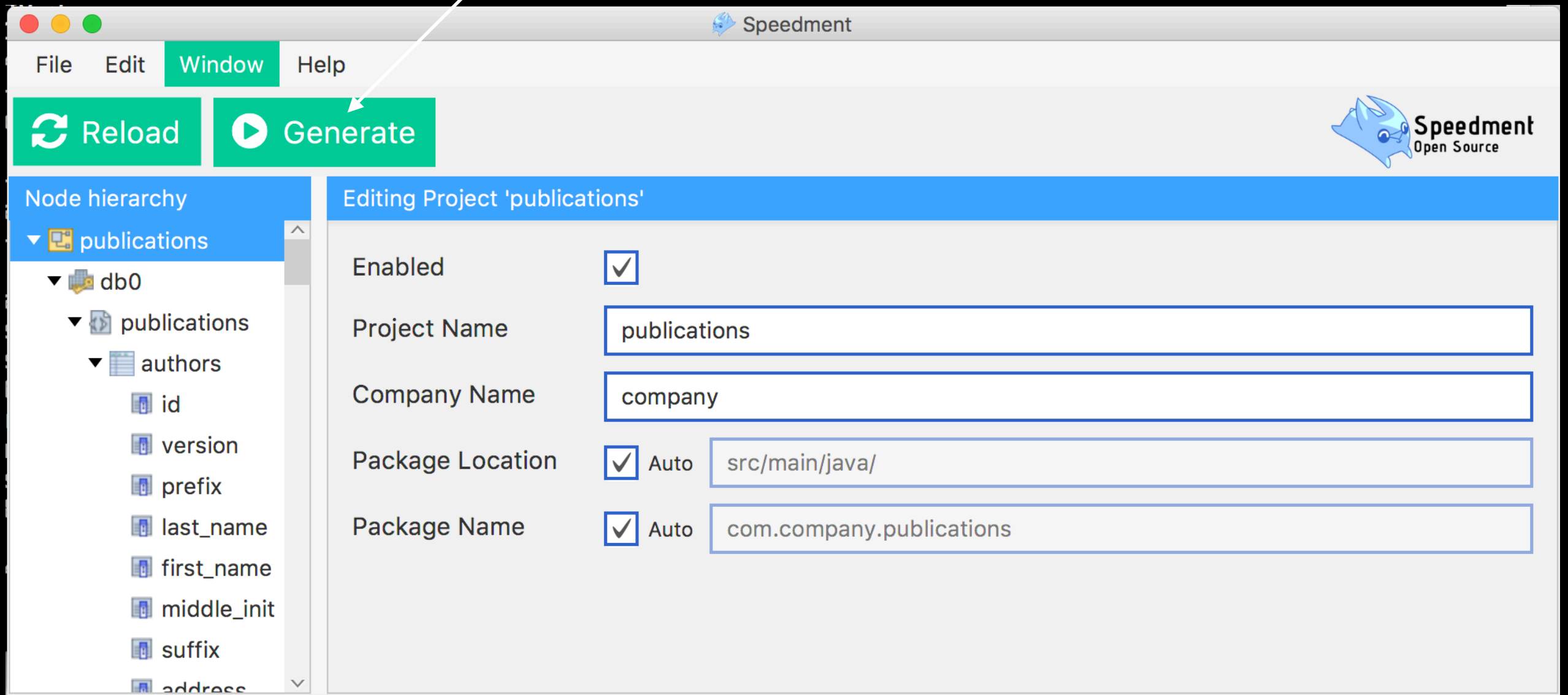subpackage (user defined) → db0
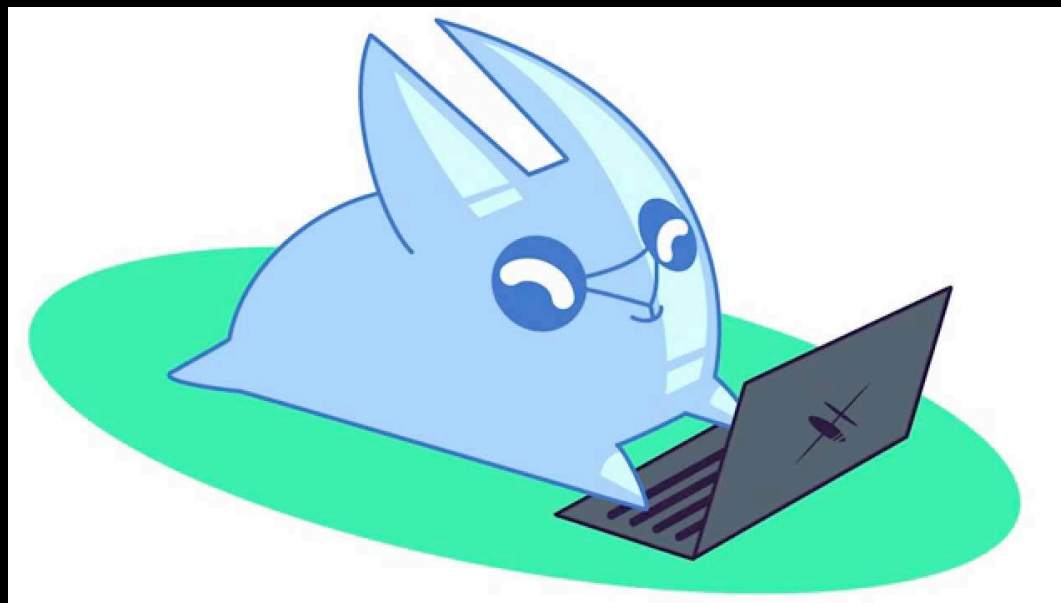
database name → Schema name

→] Connect ← click…

Speedment Tool (2)

click…

Let's Build That App…

```
/*
 * initial setup
 */
```

main app

```
protected final PublicationsApplication app;
protected final AuthorsManager authorsManager;
protected final PublicationsManager
publicationsManager;

app = new PublicationsApplicationBuilder();
authorsManager =
   app.getOrThrow(AuthorsManager.class);
publicationsManager =
   app.getOrThrow(PublicationsManager.class);
```
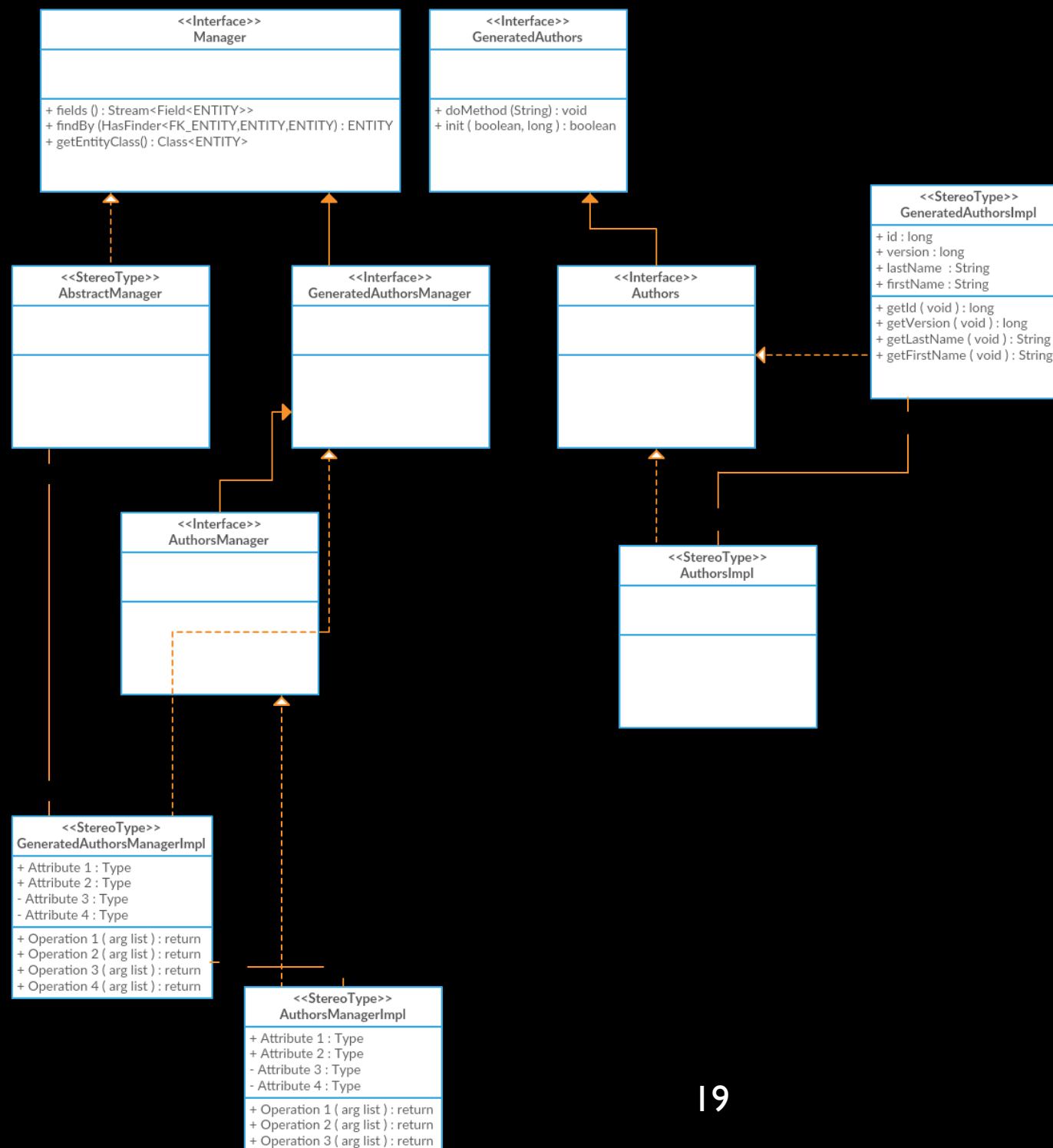
manager representing each database table

17

```java
/*
 * smart streaming
 */
publicationsManager.stream()
  .forEach(System.out::println);

publicationsManager.stream()
  .filter(Publications.TITLE.startsWith(""));

long count = publicationsManager.stream()
  .count()

Optional<Authors> redlich = authorsManager
  .stream()
  .filter(Authors.LAST_NAME.equal("Redlich"))
  .findAny();
```

Partial UML Diagram

Demo Time…
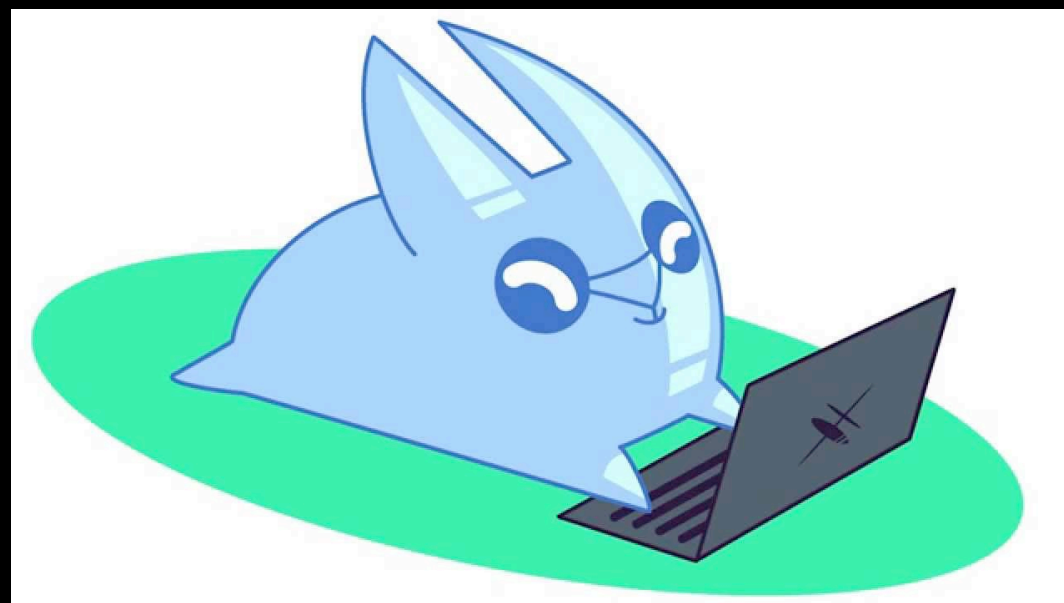
Speedment Resources

- **speedment.org**

- **javadoc.io/doc/com.speedment/
  runtime-deploy/3.0.5**

- **minborgsjavapot.blogspot.com**

- **https://www.infoq.com/news/
  2016/12/speedment-releases-
  version-3**

Per-Åke Minborg, CTO at Speedment

Upcoming Events (1)

T C F ™
Trenton Computer Festival

- March 17-18, 2017

- **tcf-nj.org**

EMERGING TECHNOLOGIES
FOR THE ENTERPRISE

SOLD OUT

- April 18-19, 2017

- **phillyemergingtech.com**

Acknowledgements

- Speedment, Inc.

- Per-Åke Minborg, CTO at Speedment

Thanks!

mike@redlich.net

@mpredli

redlich.net

slideshare.net/mpredli01

github.com/mpredli01