Connecting to Neo4j

Using Spring Data Neo4j

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What to expect?

- A 'very' brief introduction of Neo4j

- A 'very' brief introduction of Spring Data

- Tutorial setup!

- Ready - Steady - Webapp

What is Neo4j?

- Open source graph database written in Java

- Nodes and their relationships

- They both have properties

- Very efficient searching (1000x faster compared to RDBMS)

What is Spring Data?

- Bringing Spring 'goodness' to databases

  - Consistent programming model

    Neo4jTemplate, MongoTemplate...

  - Increased productivity

- Generic `repository` support based on conventions

- Java `domain` objects mapped to data store

- Support for new and up coming dbs

Our focus for today

- Spring Data Neo4j

  - Object-Graph-Mapping of annotated POJOs

  - Convenient API of the Neo4jTemplate

  - Spring Data Repositories support

  - Neo4j Indexing support

Tutorial Setup

Configure your Maven, Tomcat and IDE

What do we need?

- JDK 1.6
  Running `java` in the shell runs the JVM

- Maven 2.2 or 3
  Running `mvn` in the shell runs Maven

- Tomcat 7
  Running `$CATALINA_HOME/bin/catalina.sh run` starts Tomcat on port `8080`

- IntelliJ IDEA 11.1 Ultimate Edition
  Get the evaluation version for your OS / architecture

Installation

- The sources are on USB sticks

  - Copy `progjava` to a convenient location (`~/` or `D:\`)

  - Copy everything from `dot.m2` to (`~/.m2` or `C:\Users\`*your-good-self*`\.m2`)

  - Install IntelliJ IDEA for your platform

  - Extract Tomcat to a convenient location (`~/` or `D:\`)

First Run

- To verify that everything works run `mvn package` in `~/progjava/lab`

- Load the maven project in Intellij IDEA

- Run Tomcat from Intellij IDEA

Configure your IDE

- Run the IntelliJ IDEA 11 Ultimate, confirm the evaluation.

- Create new project

  - From external model (Maven)

  - Import Maven projects automatically; download sources and javadocs automatically

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Ready - Steady - Webapp!

- 'UserManagementSystem' using Spring Data Neo4j

  - With `domain` with the Neo4j–annotated classes

  - With Spring Data `repository` support

  - With the `webapp` in Spring MVC

  - With the `views` based on Twitter Bootstrap

Code!

One little step at a time!

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Resources

- http://neo4j.org

- http://www.springsource.org/spring-data

- http://www.springsource.org/spring-data/neo4j

- http://docs.neo4j.org/spring/SpringDataNeo4j_DeveloperNotes.pdf

- http://www.infoq.com/minibooks/good-relationships-spring-data

- Follow Ian Robinson (@ianrobinson), Jim Webber (@jimwebber), Michael Hunger (@mesirii), Oliver Gierke (@olivergierke) on Twitter!

Thank you!