

THE LAZY PROGRAMMER'S GUIDE TO

# APPLICATION DEVELOPMENT

WITH JAVA

 @OLIVERGIERKE  
 OGIERKE@PIVOTAL.IO

Pivotal

olivergierke (Oliver Gierke)

GitHub, Inc. [US] | https://github.com/olivergierke

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**spring-projects/spring-data-examples**  
Spring Data Example Projects  
Java ★ 1.2k ⚡ 1.2k

**spring-projects/spring-data-jpa**  
Simplifies the development of creating a JPA-based data access layer.  
Java ★ 885 ⚡ 566

**spring-restbucks**  
Implementation of the sample from REST in Practice based on Spring projects  
Java ★ 562 ⚡ 224

**spring-projects/spring-data-rest**  
Simplifies building hypermedia-driven REST web services on top of Spring Data repositories  
Java ★ 482 ⚡ 354

**rest-microservices**  
Sample for Spring Boot based REST microservices  
Java ★ 134 ⚡ 75

**lectures**  
Lecture scripts and slides  
Java ★ 21 ⚡ 6

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Organizations

# Pivotal?

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Example Org

Example Org

ORG QUOTA Increase Quota

22% 2.2 GB of 10GB Limit

BILLING

Current Balance \$745.44

Next Statement Date 03/01/14

Details

4 Spaces 6 Domains 26 Members

Delete Org

A screenshot of a web browser window displaying the official Spring website at <https://spring.io>. The page features a large, blurred background image of a landscape with green fields and trees. In the center, the Spring logo (a stylized leaf icon) is displayed prominently. Below the logo, a dark callout box contains the text "Let's build a better Enterprise." in white. Underneath this, another dark callout box contains the text "Spring helps development teams everywhere build simple, portable, fast and flexible JVM-based systems and applications." in white. The browser's header bar shows the title "Spring", the address bar with "Sicher | https://spring.io", and various browser extension icons.

Spring by Pivotal.

DOCS GUIDES PROJECTS BLOG QUESTIONS

Let's build a better Enterprise.

Spring helps development teams everywhere build simple, portable, fast and flexible JVM-based systems and applications.



Spring Framework



Spring Boot

We ❤ Java!

No, it's not Stockholm syndrome.

Maybe... a little bit.

```
@RestController
public class WelcomeController {

    @RequestMapping(path = "/", method = RequestMethod.GET)
    public Map<String, Object> welcome(@RequestParam Optional<String> name) {
        return Collections.singletonMap("greeting", name.orElse("World").concat("!"));
    }
}
```

GET http://localhost:8080/ -> { "greeting" : "Hello World!" }

GET http://localhost:8080/?name=Ollie -> { "greeting" : "Hello Ollie!" }

The screenshot shows a web browser window with the title bar "Spring Data". The address bar displays a secure connection to "https://projects.spring.io/spring-data/" with the text "Sicher" next to it. The page content is the "Spring Data" project page on the Spring website. The header features the Spring logo and navigation links for DOCS, GUIDES, PROJECTS (which is highlighted in green), BLOG, and QUESTIONS. A search icon is also present. On the left, there's a sidebar with a "PROJECTS" tab. The main content area has a large heading "Spring Data" and a paragraph describing its mission: "Spring Data's mission is to provide a familiar and consistent, Spring-based programming model for data access while still retaining the special traits of the underlying data store." Below this, another paragraph explains its purpose: "It makes it easy to use data access technologies, relational and non-relational databases, map-reduce frameworks, and cloud-based data services. This is an umbrella project which contains many subprojects that are specific to a given database. The projects are developed by working together with many of the companies and developers that are behind these exciting technologies." At the bottom left, there's a "QUICK START" button.

Spring Data

DOCS GUIDES PROJECTS BLOG QUESTIONS

PROJECTS

# Spring Data

Spring Data's mission is to provide a familiar and consistent, Spring-based programming model for data access while still retaining the special traits of the underlying data store.

It makes it easy to use data access technologies, relational and non-relational databases, map-reduce frameworks, and cloud-based data services. This is an umbrella project which contains many subprojects that are specific to a given database. The projects are developed by working together with many of the companies and developers that are behind these exciting technologies.

QUICK START

Lehrveranstaltungen — Professur für Softwaretechnologie

Sicher | https://tu-dresden.de/ing/informatik/smt/st/studium/lehrveranstaltungen?...

Technische Universität Dresden Institut für Software- und Multimediaotechnik Sprache Suche Interner Bereich

PROFESSUR FÜR SOFTWARETECHNOLOGIE DIE PROFESSUR STUDIUM FORSCHUNG

STUDIUM LEHRVERANSTALTUNGEN

## Lehrveranstaltungen

- > Organisation > Durchführung > Timetable > Gruppen > Ressourcen > Auswertung

### Softwaretechnologie-Projekt

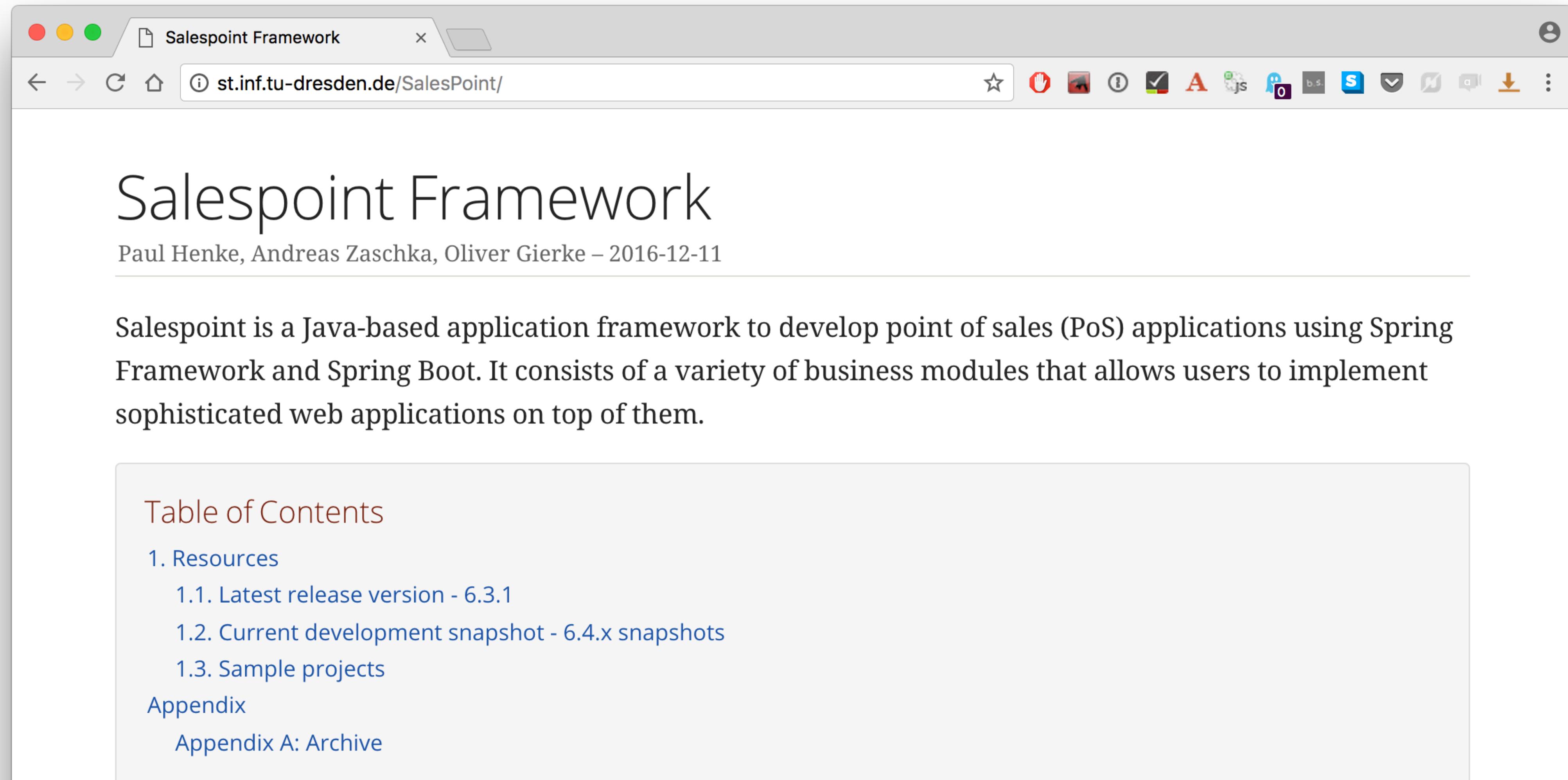
Softwarereapraktikum (WS 16) - Organisation

### News

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- **10.01.2017** Achtung, alle Teilnehmer an den Praktikumsabslusspräsentationen müssen sich für das entsprechende Modul für die Prüfung in jExam bzw. HISQIS einschreiben.
- **Klausureinsicht SWT I** Am Donnerstag, den **27.10.**, findet von 14:50-16:20 die Klausureinsicht für Softwaretechnologie I (SS2016) in APB/2101 statt.

# SALESPONT

A screenshot of a web browser window titled "Salespoint Framework". The address bar shows the URL "st.inf.tu-dresden.de/SalesPoint/". The page content is as follows:

# Salespoint Framework

Paul Henke, Andreas Zaschka, Oliver Gierke – 2016-12-11

Salespoint is a Java-based application framework to develop point of sales (PoS) applications using Spring Framework and Spring Boot. It consists of a variety of business modules that allows users to implement sophisticated web applications on top of them.

## Table of Contents

- [1. Resources](#)
  - [1.1. Latest release version - 6.3.1](#)
  - [1.2. Current development snapshot - 6.4.x snapshots](#)
  - [1.3. Sample projects](#)
- [Appendix](#)
  - [Appendix A: Archive](#)

The framework generally consists of:

- 6 business modules - accountancy, inventory, catalog, orders, business time and user accounts.
- Domain types (entities and value objects) as well as Spring based repository and service implementations to provide Java APIs to be extended by (web) application developers.

st-tu-dresden/salespoint: SalesPoint

GitHub, Inc. [US] | https://github.com/st-tu-dresden/salespoint

This repository Search Pull requests Issues Marketplace Gist

Unwatch 13 Star 1 Fork 2

Code Issues 14 Pull requests 2 Projects 0 Wiki Settings Insights

SalesPoint Edit

Add topics

1,258 commits 9 branches 11 releases 6 contributors

Branch: master New pull request Create new file Upload files Find file Clone or download

olivergierke #162 - Added Interval.toDuration(). Latest commit 0d16951 on 11 Dec 2016

doc	#5 - Added Buildsystem Maven to documentation.	3 years ago
etc	#25 - Overhauled domain code.	3 years ago
src	#162 - Added Interval.toDuration().	6 months ago
.gitignore	#32 - Added changelog to website.	3 years ago
Salespoint.sonargraph	#150 - Updated Sonargraph architecture description.	7 months ago
lombok.config	#9 - Introduced simplified Quantity abstraction.	2 years ago
pom.xml	[maven-release-plugin] prepare for next development iteration	8 months ago
readme.adoc	#17 - Added artifact and site deployment	3 years ago

# Software Engineering

""

*In theory there is no  
difference between theory  
and practice.*

*In practice — there is.*

— Yogi Berra



```
graph TD; A((JAVA TOOLING)) --- B((TEAM & TOOLING)); A --- C((LIBRARIES & FRAMEWORKS)); A --- D((DDD & JPA)); B --- C; B --- D
```

JAVA  
TOOLING

TEAM &  
TOOLING

LIBRARIES &  
FRAMEWORKS

DDD & JPA

## JAVA TOOLING

TODAY

- IDEs
- Dependencies
- Build

## LIBRARIES & FRAMEWORKS

JUNE, 30TH

- JUnit
- Spring
- Web apps

## TEAM & TOOLING

JUNE, 23RD

- Issue tracker
- Version control
- CI

## DDD & JPA

JULY, 7TH

- Entities, Value Object
- Repositories
- Persistence

# Scripts

- <http://static.olivergierke.de/lectures>
- <https://github.com/olivergierke/lectures>

A screenshot of a web browser window titled "TU Dresden lectures". The address bar shows the URL "static.olivergierke.de/lectures/". The page content includes the title "TU Dresden lectures" and a timestamp "Oliver Gierke – 2016-10-18 13:29:55 UTC". Below this is a section titled "Software Engineering - Summer semester" with a list of five topics: "Overview / Intro", "Fundamentals of Java Tooling", "Collaborative Software Development", "Frameworks and Libraries", and "Domain-Driven Design and Spring". Further down is a section titled "Software Engineering Lab - Winter semester" with two topics: "Web applications with Java and Spring" and "Web applications with Java and Spring (until WS 2015)". The browser interface includes standard navigation buttons (back, forward, search, etc.) and a toolbar with various icons.

# TU Dresden lectures

Oliver Gierke – 2016-10-18 13:29:55 UTC

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## Software Engineering - Summer semester

- [Overview / Intro](#)
- [Fundamentals of Java Tooling](#)
- [Collaborative Software Development](#)
- [Frameworks and Libraries](#)
- [Domain-Driven Design and Spring](#)

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## Software Engineering Lab - Winter semester

- [Web applications with Java and Spring](#)
- [Web applications with Java and Spring \(until WS 2015\)](#)

The screenshot shows a web browser window with the following details:

- Title Bar:** Fundamentals of Java Develop
- Address Bar:** static.olivergierke.de/lectures/java-tooling/
- Toolbar:** Includes standard browser icons for back, forward, search, and refresh, along with a set of 20 small, semi-transparent tool icons.

The main content area displays the following information:

# Fundamentals of Java Development Tooling

Oliver Gierke – 2016-10-18 13:29:55 UTC  
| This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License.

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  - 4.1. Maven
    - 4.1.1. Build configuration
    - 4.1.2. Project structure
    - 4.1.3. Dependency management
- Appendix A: Keyboard shortcuts
  - A.1. Code base navigation
  - A.2. Code editing / refactoring
  - A.3. Executing code