FAKULTÄT FÜR !NFORMATIK
Faculty of Informatics

Comparison and Implementation of LOD Frameworks

Finding evaluation and application of implicit existing best practise frameworks

BACHELORARBEIT

zur Erlangung des akademischen Grades

Bachelor of Science

im Rahmen des Studiums

Software und Information Engineering

eingereicht von

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BACHELOR'S THESIS

submitted in partial fulfillment of the requirements for the degree of

Bachelor of Science

in

Software and Information Engineering

by

Lukas Baronyai
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to the Faculty of Informatics

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Vienna, 10th July, 2016

Lukas Baronyai | Forename Surname

Kurzfassung

TODO: Ihr Text hier.

Abstract

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Contents

CHAPTER 1

Introduction

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1.1 Research Question

RQ: *How do common LOD-frameworks look like and how can they be applied?*

1. **RQ1:** What are existing frameworks?
2. **RQ2:** How do they compare against each other? Are there an explicit/implicit existing best practise?
3. **RQ3:** How do Frameworks compare against All-In-One Solutions?
4. **RQ4:** How does an example application of such a best practise framework look like?

1.2 Objective

1.3 Methodology

1.4 Structure of this Paper

CHAPTER 2

State of the art (RQ1)

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2.1 Frameworks

2.1.1 Euclid Project

http://www.euclid-project.eu/modules/chapter5

2.1.2 LUCERO

https://code.google.com/archive/p/luceroproject/wikis/StepByStepDocumentation.wiki

2.1.3 LD-Patterns

http://patterns.dataincubator.org/book/linked-data-patterns.pdf

2.1.4 Linked Data: Evolving the Web into a Global Data Space (Heath, Bizer)

http://linkeddatabook.com/editions/1.0/#htoc61

2.2 All-In-One Solutions

2.2.1 D2R Server

http://d2rq.org/d2r-server

2.3 Excluded Tools

2.3.1 LOD2 Stack

(too general, only stack of technologies) `http://stack.linkeddata.org/lod2/`

2.3.2 LODUM

(no public available framework) `http://lodum.de/`

CHAPTER 3

Methodology (RQ2 & RQ3)

TODO: Enter your text here.

3.1 Criterias

3.1.1 General architecture pattern

3.1.2 Strategies

Data Preparation

Data Interlinking

Data Storage

Data Publication

3.2 Why All-In-One Solutions

CHAPTER 4

Comparison (RQ2 & RQ3)

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4.1 Comparison of the Frameworks

4.1.1 General architecture pattern

Multitier/-layer Architecture Typical:

1. Data Source/Input
2. Data Preparation
3. Data Storage (Triple Store)
4. Data Publication

4.1.2 Strategies

Data Preparation

Extractors, RDF-Tranformers, Cleansing, Vocabulary Mapping

Data Interlinking

Data Storage

Triple Store, Relational Database, RDF Storage

Data Publication

SPARQL, CMS

4.2 Comparison to All-In-One Solutions

CHAPTER 5

Implementation (RQ4)

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5.1 Domain (Publication Database)

5.2 Composed Architecture (Best practise)

5.2.1 Architecture Pattern

5.2.2 Strategies

5.3 Used Technologies

CHAPTER 6

Critical reflection

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6.1 Existing Best Practice

6.2 Analysis of the Implementation

6.3 Applicability and Adaptability

CHAPTER 7

Summary and future work

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