

Graphical SPARQL Builder

Alpha-Version

Präsentierende: Lukas Eipert, Christoph Schultz

Gliederung

1. Motivation
2. Aktueller Entwicklungsstand
3. Benutzeroberfläche
4. Grundlegende Sprachlogik
5. Demonstration & Diskussion

1. Motivation

```
SELECT DISTINCT
?city ?city_popInTh
?city_airport ?city_airport_iata
WHERE {
    ?city a :PopulatedPlace .
    ?city :populationTotal ?city_popInTh_temp .
    BIND ((?city_popInTh_temp / 1000) as
           ?city_popInTh) .

    FILTER (?city_popInTh > 1000) .
    ?city ^:cityServed ?city_airport .
    ?city_airport a :Airport .
    ?city_airport :iataLocationIdentifier
                  ?city_airport_iata .

    OPTIONAL {
        ?city :leaderName ?city_major .
        ?city_major a :Person .
        ?city_major :birthDate ?city_major_birthday .
    }
}
```

1. Motivation

Ist:

SPARQL als mächtige, aber komplexe Anfragesprache für RDF-basierte Datenbanken mit hoher Lernkurve

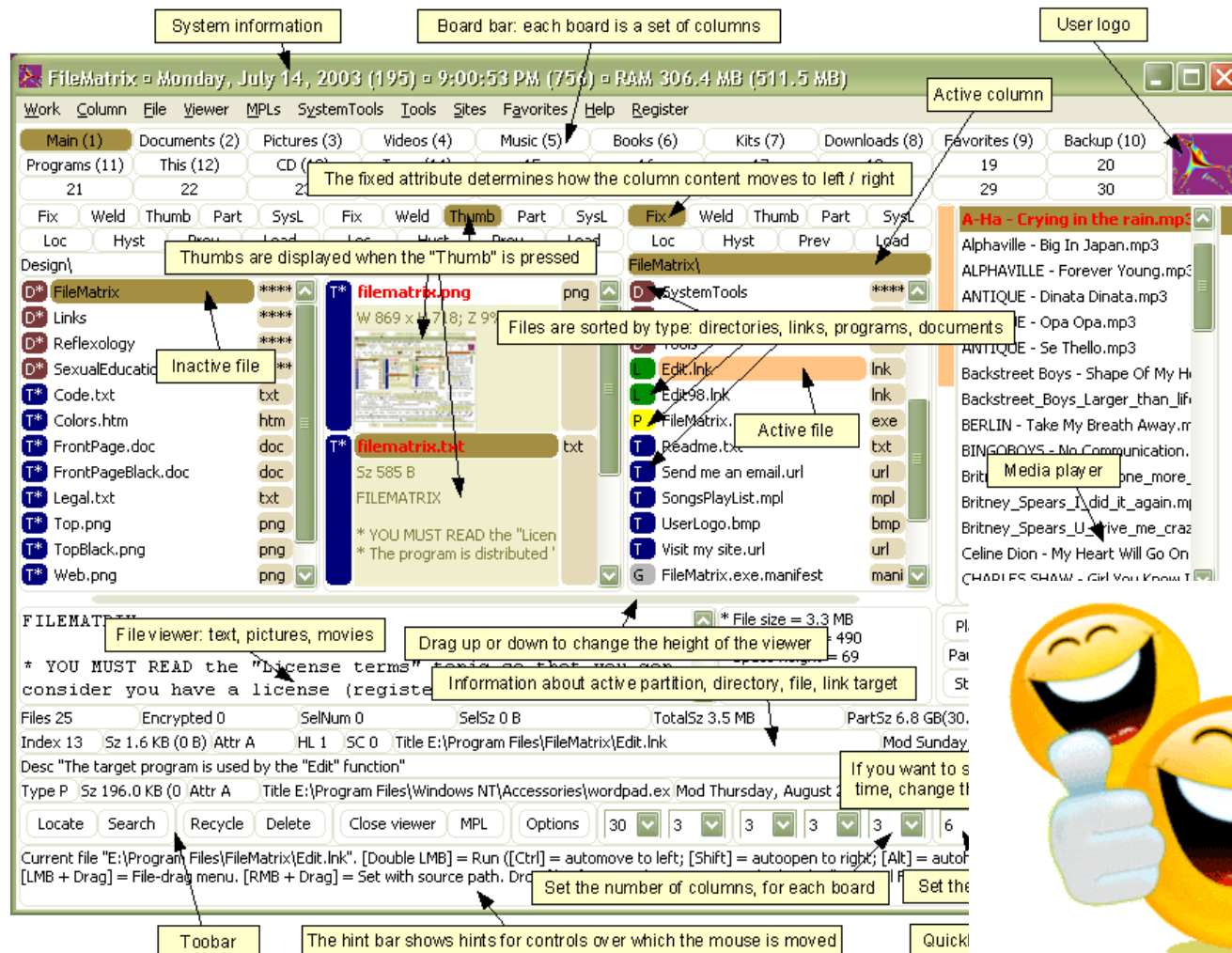
Soll:

Der GSB als graphische Anwendung zur einfachen Erstellung einer Vielzahl von Anfragen

2. Aktueller Entwicklungsstand


- Vorprojekt als Alpha-Version
- GSB-Language
- Beispielhafte Implementierung mit Dummy-Daten
 - noch keine Datenbank-Anbindung
- Graphische Umsetzung

3. Benutzeroberfläche






3. Benutzeroberfläche

Graphical SPARQL Builder

Build Query Reset Workspace 

LIST ALL Student Please choose a subject. +




Class: Mensch   

as

lebt in




Alter

studiert an

Class: Stadt   

as

Einwohnerzahl

Class: Uni   

as

SPARQL Query

Controls for SPARQL Result
JSON:

```
{
  "START": {
    "type": "LIST_ALL",
    "link": {
      "direction": "IO",
      "linkPartner": "Student"
    }
  }
}
```

SPARQL: [Starte dbpedia-query!](#)

```
SELECT DISTINCT ?Student ?Student_Wohnort ?Student_Wohnort_Einwohne
rzahl ?Student_Alter ?Student_Uni
where {
  ?Student a <http://dbpedia.org/ontology/Person> .
  ?Student <http://dbpedia.org/ontology/residence> ?Student_Wohnort .
  ?Student_Wohnort a <http://dbpedia.org/ontology/Settlement> .
  ?Student_Wohnort <http://dbpedia.org/ontology/Settlement> ?Student_Wohnort_Einwohne .
  ?Student <http://dbpedia.org/ontology/Person> ?Student_Alter .
```

4. Grundlegende Sprachlogik

Wort-Elemente:

Startpunkt{1} Subjekt+ Eigenschaften*

The screenshot shows a web interface with two main sections. The top section is for the 'Mensch' class, and the bottom section is for the 'Stadt' class. Both sections have a yellow background and a red border. The 'Mensch' section has a 'LIST ALL' button and a 'Student' dropdown menu, both of which are circled in red. Below these are three green boxes: 'lebt in' with a 'Wohnort' dropdown, 'Alter', and 'studiert an' with a 'Uni' dropdown. The 'Stadt' section has a 'Wohnort' dropdown and a 'Einwohnerzahl' box. The interface is designed to allow users to filter and view data for different classes.

4. Grundlegende Sprachlogik

Wort-Elemente:

Startpunkt{1} **Subjekt+** Eigenschaften*

The screenshot shows a web interface with two class cards. The top card is titled 'Class: Mensch' and is highlighted with a red box. It contains a dropdown menu with 'Student' selected, and three green buttons labeled 'lebt in', 'Alter', and 'studiert an'. The bottom card is titled 'Class: Stadt' and contains a dropdown menu with 'Wohnort' selected and a green button labeled 'Einwohnerzahl'. The interface also includes a 'LIST ALL' button and a dropdown menu at the top.

4. Grundlegende Sprachlogik

Wort-Elemente:

Startpunkt{1} Subjekt+ **Eigenschaften***

The screenshot shows a web interface with two class instances. At the top, there is a red bar with 'LIST ALL' and a dropdown menu set to 'Student'. Below this, the first instance is for the class 'Mensch' (yellow background). It has a text input field with 'as Student'. Below this, there are three green property boxes: 'lebt in' with a dropdown menu set to 'Wohnort' (this row is highlighted with a red rectangle), 'Alter', and 'studiert an' with a dropdown menu set to 'Uni'. The second instance is for the class 'Stadt' (yellow background). It has a text input field with 'as Wohnort' and a green property box labeled 'Einwohnerzahl'. Icons for information, visibility, and deletion are present next to each class header.

5. Demonstration & Diskussion

Graphical SPARQL Builder

Build Query Reset Workspace

LIST ALL Student

Please choose a subject. +

Class: Mensch

as Student

lebt in Wohnort

Alter

studiert an Uni

Class: Stadt

as Wohnort

Einwohnerzahl

Class: Uni

as Uni

SPARQL Query

Controls for SPARQL Result
JSON:

```
{
  "START": {
    "type": "LIST_ALL",
    "link": {
      "direction": "TO",
      "linkPartner": "Student"
    }
  }
}
```

SPARQL: [Starte dbpedia-query!](#)

```
SELECT DISTINCT ?Student ?Student_Wohnort ?Student_Wohnort_Einwohne
rzahl ?Student_Alter ?Student_Uni
where {
  ?Student a <http://dbpedia.org/ontology/Person> .
  ?Student <http://dbpedia.org/ontology/residence> ?Student_Wohnort .
  ?Student_Wohnort a <http://dbpedia.org/ontology/Settlement> .
  ?Student_Wohnort <http://dbpedia.org/ontology/Settlement> ?Student_Wohnort_Einwohne .
  ?Student <http://dbpedia.org/ontology/Person> ?Student_Alter .
}
```

Links

- Projektseite: <http://pcai042.informatik.uni-leipzig.de/~swp14-gsb/>
- Testumgebung: <http://pcai042.informatik.uni-leipzig.de/~swp14-gsb/gsb-vorprojekt/app/index.html>
- Github-Projekt: <https://github.com/swp14-gsb>

Danke für Ihre Aufmerksamkeit!