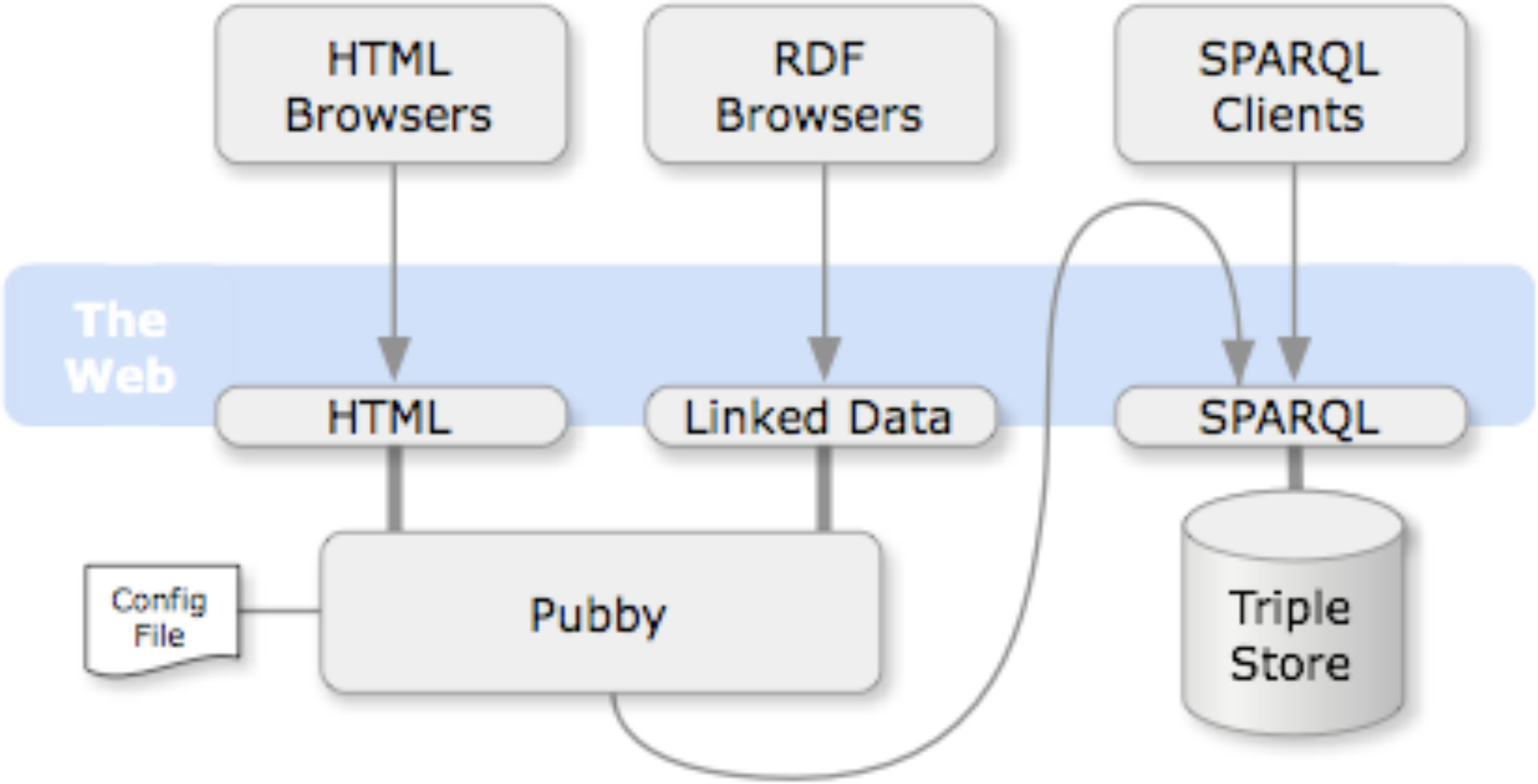
Linked Data browsers

Linked Data Browser

- One reason DBpedia is successful is its data browser for humans
- Given a URL to a Dbpedia resourse, it shows all the triples with that URL as a subject or object
- A generic version of the browser software is available as Pubby
- Elda is a similar and more sophisticated system

Pubby

Pubby adds a Linked Data interface to a SPARQL endpoint



How Pubby Works

Pubby is relatively simple and does the following

- Maps published URLs an appropriate URL on the SPARQLserver
  - http://localhost:8080/page/book1 to ??
- Sends a SPARQL describe query to get triples where the URL is either subject or object
  - Problem: Fuseki's describe returns only those where URI is subject, by default
- Converts the URLs to a prefixed form
  - http://localhost:8080/page/book1 to ex:book1
- Displays the results as hypertext

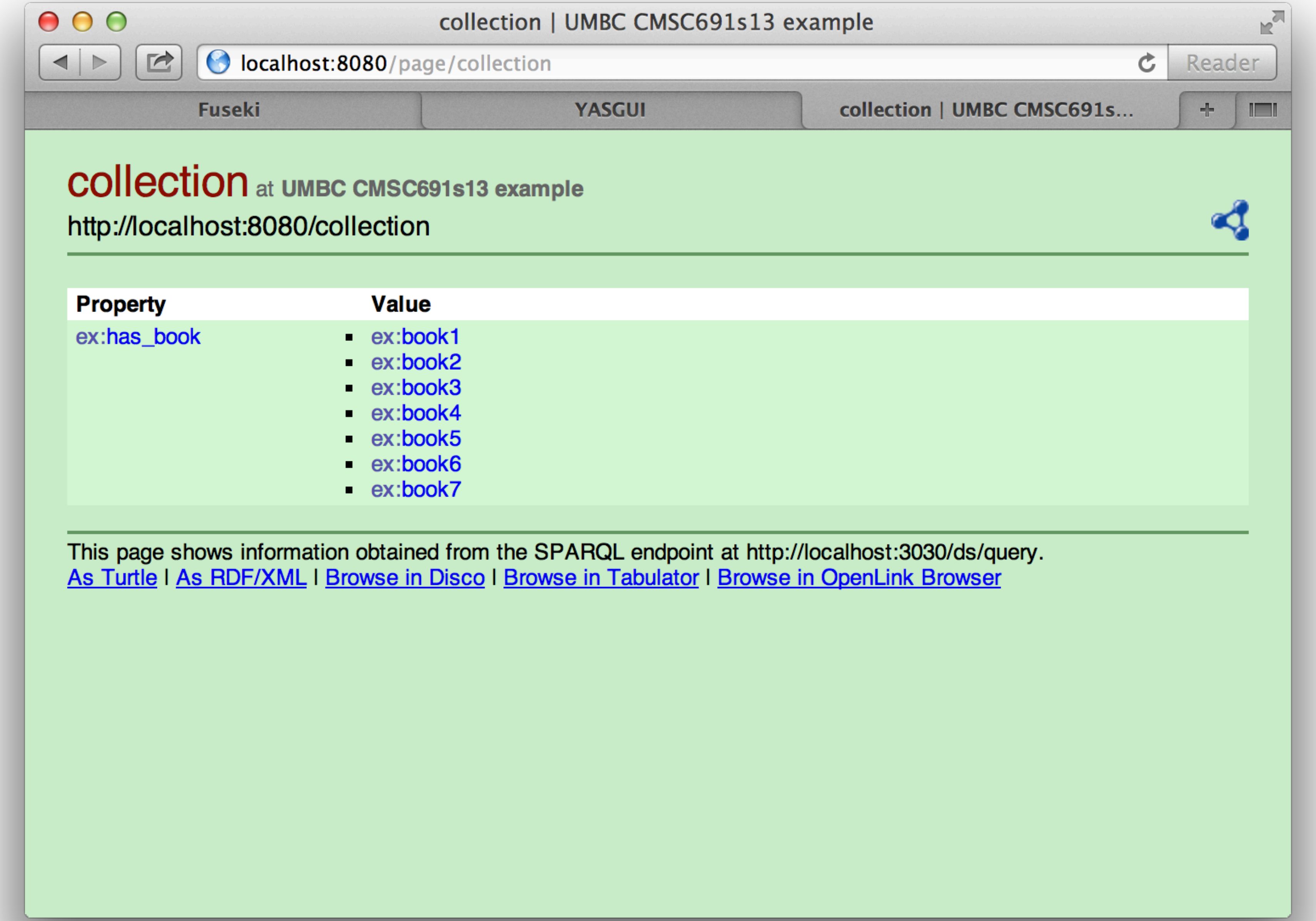
How to set up

- Download jetty http://download.eclipse.org/jetty/
  - Launch by invoking java -jar start.jar
  - Check it it’s running at http://localhost:8080/
- Download pubby from http://bit.ly/PubbY
  - ln -s jetty-distribution-8.1.10.v20130312 jetty
  - ln -s pubby-0.3.3/ pubby
- Copy pubby's webapp directory into Jetty's webapps folder and rename to root
  - cp -R pubby/webapp jetty/webapps/root
- Modify the configuration file to use Fuseki, etc.
- Visit http://localhost:8080/

Config File

```
<> a conf:Configuration;
 # Project name for display in page titles
 conf:projectName "UMBC CMSC691s13 example";
 # Homepage for the link in the page header
 conf:projectHomepage <http://bit.ly/691S13>;
 # Pubby root where the webapp is running
 conf:webBase <http://localhost:8080/>;
 # URL of an RDF file with prefix mapping
 conf:usePrefixesFrom <http://umbc.edu/~finin/prefixes.n3>;
 # Prefered language for labels
 conf:defaultLanguage "en";
 # When server homepage is accessed, use this
 conf:indexResource <http://example.org/book/collection>;
 conf:dataset [
    # URL of SPARQL endpoint for dataset
    conf:sparqlEndpoint <http://localhost:3030/ds/query>;
    # Common URI prefix of resource URIs in SPARQL dataset
    conf:datasetBase <http://example.org/book/>; ] .
```

An example



collection | UMBC CMSC691s13 example
localhost:8080/page/collection
Reader
Fuseki
YASGUI
collection | UMBC CMSC691s...

collection at UMBC CMSC691s13 example

http://localhost:8080/collection

Property	Value
ex:has_book	ex:book1 ex:book2 ex:book3 ex:book4 ex:book5 ex:book6 ex:book7

This page shows information obtained from the SPARQL endpoint at http://localhost:3030/ds/query.
As Turtle | As RDF/XML | Browse in Disco | Browse in Tabulator | Browse in OpenLink Browser

Two issues

- I had to create an external web-accessible file with prefix declarations due to a minor Pubby bug
  - may be fixed in the newest version
- Fuseki's response to a describe doesn't include triples where the URI is the object
  - You can recompile Fuseki, including an option for this
  - Or use another triple store, e.g., Sesame