A Brief Introduction to Linked Data:

Metadata for Humans

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Machines

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First, some definitions:

Linked Data & RDF



Semantic Web

"highly structured metadata that allow computers to understand the relationships between objects"

Byrne and Goddard, "The Strongest Link: Libraries and Linked Data." *D-Lib Magazine* 16 no. 11/12 (2010), doi:10.1045/november2010-byrne

Four Rules of Linked Data

- 1. Use URIs as names for things
- Use HTTP URIs so that people can look up those names.
- 3. When someone looks up a URI, provide useful information, using the standards (RDF, SPARQL)
- 4. Include links to other URIs so that they can discover more things.

Tim Berners-Lee, 2006-07-27, "Linked Data," http://www.w3.org/DesignIssues/LinkedData.html (See this link for an explanation of "5-star linked data")

Uniform Resource Locator (URL)

Uniform Resource Identifier (URI)

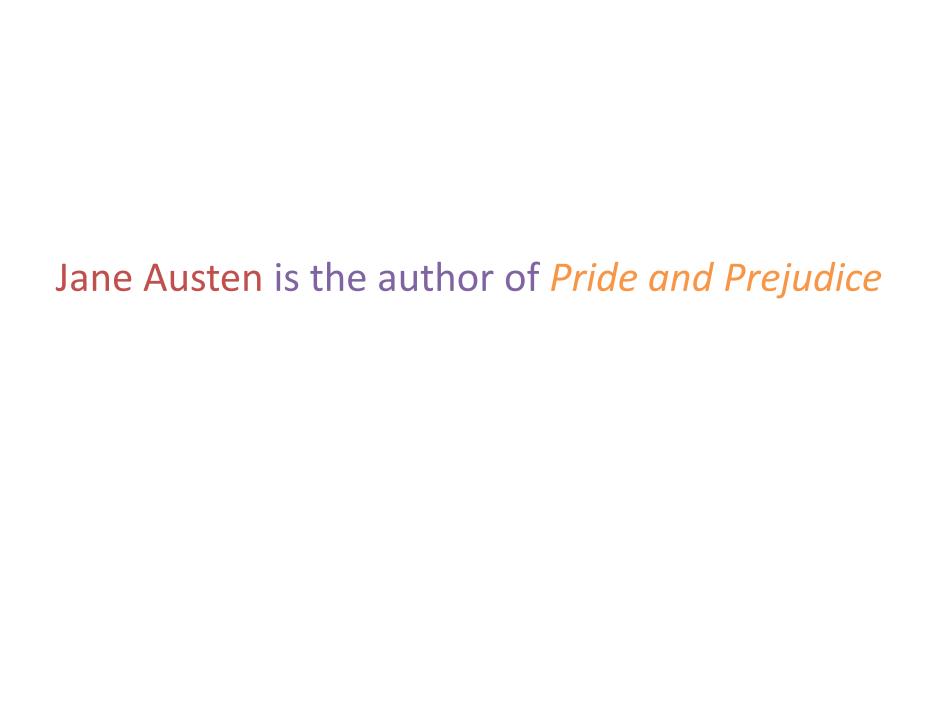


RDF uses URIs

RDF represents information and relationships in a machine-readable fashion using URIs

URIs can represent:

- 1. Objects (people, places, things)
- 2. Categories (name, location)
- 3. Properties/Relationships
- 4. Values (content of fields)



Resource Description Framework

Subject: Jane Austen

Predicate: is the author of

Object: Pride and Prejudice



URIs

http://id.loc.gov/authorities/names/n79032879

http://purl.org/dc/elements/1.1/creator

http://www.gutenberg.org/ebooks/1342

Four Rules of Linked Data (Paraphrased)

- 1. Use standards-based, machine-readable names (URIs).
- 2. The machine readable names should be links that go somewhere online (URLs).
- 3. The links should go to information that is useful to humans and machines (ontologies).
- 4. Link your data to other linked data.

Linked Open Data

"Linked *Open* Data (LOD) is Linked Data which is released under an open licence, which does not impede its reuse for free."

Tim Berners-Lee, 2006-07-27, "Linked Data," http://www.w3.org/DesignIssues/LinkedData.html

Linked Data at LOC

Library of Congress Linked Data Service

http://id.loc.gov/about/