Knowledge Management (Erasmus L7)

Resource Description Format (RDF)

- A description within the XML frame
- Types of resources
- Interoperability
- The structure of a triplet: resource identification – predicate – value
- Predicate: standard+label, e.g. dc:title
- Nested triplets
- Code parsing (compilation)

RDF

- URI (URL + URN)
- Resource description starting with <rdf:Description rdf:about="http://...">
- Resource description starting with <rdf:Description rdf:about="urn:isbn="...">
- Resource description starting with <rdf:Description >
- Triplet 2nd term: predicate
  - Such as dc:creator

  Triplet 3rd term: value or new nested resource

RDF

- Special case of url value (3rd term):
- <foaf:homepage rdf:resource= "http://..."/>
- Closure of every opening
  - <rdf:Description rdf:about=“urn:isbn:…”>
  - <dc:creator>Umberto Eco</dc:creator>
  - </rdf:Description>

RDF

- Consecutive descriptions with nested openings- closures
  - <rdf:Description rdf:about="urn:isbn:…">
    - <dc:title>The name of the rose</dc:title>
    - <dc:creator>
    - <rdf:Description>
      - <foaf:name>Umberto Eco</foaf:name>
      - <foaf:homepage rdf:resource="http://…"/>

      </rdf:Description>

      </dc:creator>
  - </rdf:Description>

RDF

- Use of a customized specific standard of metadata <ex> in case of labels not defined in the known standards dc, dcterms, foaf
- e.g. <ex:exhibited> used for paintings exhibited in museums

RDF

- Editing environment: notepad
- First instructions:
  - <?xml version="1.0"?>
  - <rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  - xmlns:dc="http://purl.org/dc/elements/1.1/"
  - xmlns:dcterms= "http://purl.org/dc/terms/"
  - xmlns:foaf= "http://xmlns.com/foaf/0.1/"
  - xmlns:ex="http://mdendr.com/example/1.0/">
    - …

    </rdf:RDF>
- Save as name1.rdf with all files and UTF-8 encoding
- Copy – paste the source code in the 'RDF-parser' web environment
- Press <PARSE> and see the results.

RDF - Exercise

- Write RDF code for the description of the book ‘Da Vinci Code’ of Dan Brown, starting with the identification of the book through its ISBN (rdf:about)
- You will also include the following data:
  - title, author, publisher.
- The author will be further described by:
  - name, official webpage, country.
- Use the following standards and labels: dc (title, creator, publisher), foaf (name, homepage), ex(country)