Guide to the Slides on RDF Schema (RDFS)

These slides cover the RDF schema language, RDF Schema (RDFS), which is an extension of RDF that allows us to describe an RDF vocabulary, that is, to define application-specific classes and properties. This set of slides contains four parts. The first two parts present the RDFS resources for describing classes and properties, respectively. The third part discusses how RDFS triples are to be interpreted. And the fourth part presents RDFS resources used to provide supplementary information.

A <u>class</u> corresponds to the generic concept of a Type or Category. A resource can be described as a class and as a subclass of another class. A resource can also be described as having a class as its type.

A new <u>property</u> is described by assigning it a URI and identifying its type as property. Describing the domain and range of a property indicates how it is to be used with classes. A domain description indicates a class to which the property applies, and a range description indicates a class or datatype of the property's values. A property may be a subproperty of another in the sense that, whenever two resources are related by the first, they are also related by the second property.

Regarding the <u>interpretation</u> of RDFS, note that RDFS differs from most programming language type systems in several ways. For one thing, the scope of an attribute description in an object-oriented programming language is restricted to the class or type in which it is defined, while, in RDF, property descriptions are, by default, independent of class definitions. Again, RDFS descriptions are not necessarily prescriptive like programming-language type declarations (which give groups of constraints). Rather, RDFS provides schema information as additional descriptions of resources and does not prescribe how these descriptions should be used by an application.

RDFS resources used to provide <u>supplementary information</u> allow one to provide a human-readable version of a resource's name and to add comments. One can also indicate a resource providing additional information about or defining a given resource. And there are also RDFS resources that are classes or super-classes for the RDFS container resources.