

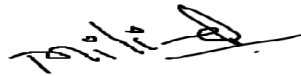
Subject:- Web Designing & Internet Applications

e-Content- L-19: World Wide Web Architecture

SIR CHHOTU RAM INSTITUTE OF ENGINEERING AND TECHNOLOGY
CH.CHARAN SINGH UNIVERSITY MEERUT
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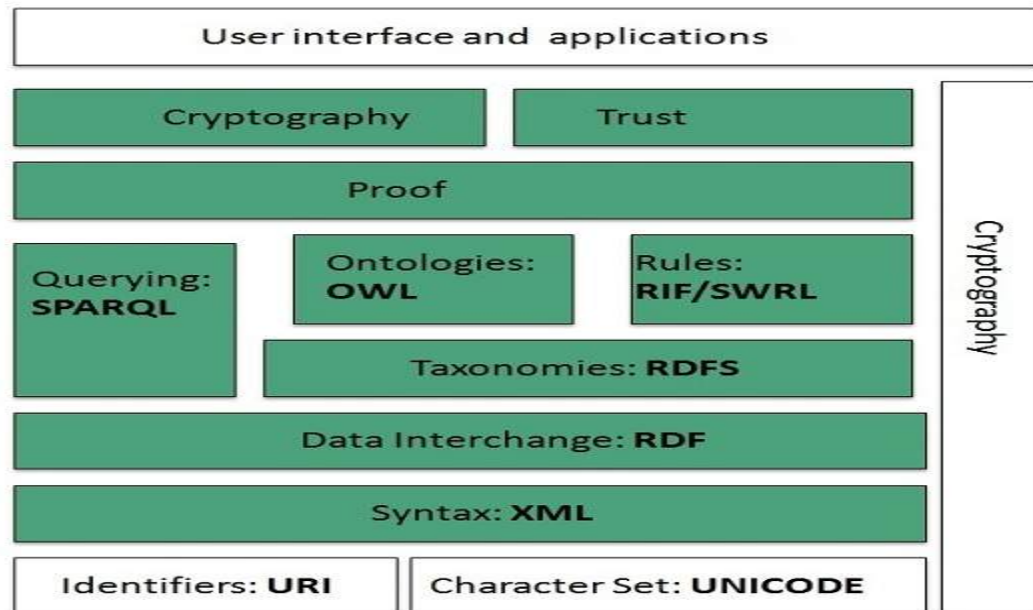


(Milind)

Dept. of Computer Sci. Engg
SCRIET,C.C.S University, Meerut
Mob:9410031124
Email-milindccsu@yahoo.com

WWW Architecture

WWW architecture is divided into several layers as shown in the following diagram:



- **Identifiers and Character Set**

Uniform Resource Identifier (URI) is used to uniquely identify resources on the web and **UNICODE** makes it possible to build web pages that can be read and write in human languages.

- **Syntax**

XML (Extensible Markup Language) helps to define common syntax in semantic web.

- **Data Interchange**

Resource Description Framework (RDF) framework helps in defining core representation of data for web. RDF represents data about resource in graph form.

- **Taxonomies**

RDF Schema (RDFS) allows more standardized description of **taxonomies** and other **ontological** constructs.

- **Ontologies**

Web Ontology Language (OWL) offers more constructs over RDFS. It comes in following three versions:

- OWL Lite for taxonomies and simple constraints.
- OWL DL for full description logic support.
- OWL for more syntactic freedom of RDF

Rules

RIF and **SWRL** offers rules beyond the constructs that are available from **RDFs** and **OWL**. Simple Protocol and **RDF Query Language (SPARQL)** is SQL like language used for querying RDF data and OWL Ontologies.

Proof

All semantic and rules that are executed at layers below Proof and their result will be used to prove deductions.

Cryptography

Cryptography means such as digital signature for verification of the origin of sources is used.

User Interface and Applications

On the top of layer **User interface and Applications** layer is built for user interaction.