**Abstract**

Since the growth and development of technology, there have been many changes to visualize the current Web. After decades of Web's using , there were demands raised to restructure the web in order to allow machines do the work of the man on the web. So, the aim of this main generation idea is to enable machines .These machines could understand what they display by adding meaning to the traditional Web content, this is called the Semantic Web.

The form of this meaning seems in a huge global database that has information connected to each other and understand by the machines. Therefore, the machines can be realized the relations between information, analysis and indexing of knowledge categories. All these which make the machines are responsible on main part of information research process, while the human's part is just to receive the results that are almost ready to benefit from them. Ontology notion seems to express a set of concepts within a particular field as well as the relationships between these concepts.

In spite of the appearance of the Semantic Web, ontologies spread widely in various languages, but there was a shortage in Arabic language ontology within different areas. Even when it found, it was small attempts and unavailable on the linked data form in the web.

This work aims to design an ontology that cares about the Arabic language and its components. So that this project focuses on these things:

1. Create a model for an Arabic Language Ontology, as follows:

a. Identify the main concepts for the Arabic language like (noun, verb, letter, adjective and adverb) and their properties to form the structure of the ontology.

b. Modeling the resulting ontology in one of modeling language .It has been used Object Role Modeling (ORM) because of its high strength to express and transform this model to the language The Web Ontology Language (OWL).

c. Verifying the ontology's components are logically connected and provide the right answers to the questions that are designed to by asking queries to it in SPARQL language.

2 .Populate ontology with individuals by:-

a. Collect several instances from different sources and clarify their types by linking them to the main concepts of the Arabic language.

b. Extract every meaning of the instances and linking them to the same meaning in the English language for the clarification .This is to indicate the possibility of using this ontology as dictionary bi-languages.That is one of its applications by linking it to other ontologies to reuse their information and exchange them.

3 .Sharing this ontology on WWW using Linked Data technology with free licenses.

4. Creating a web page that contains Arabic-Arabic language dictionary in HTML and

JavaScript languages .These were achieved by using the same words that included

in the proposed ontology .All these give their meanings and types and be available

to the average user.

5. The conclusion of this ontology is specifying many meanings to one word,

however the ontology give us one type for specific meaning. That is considered

negatives of the proposed work.

Keywords:

Semantic Web, Ontology, Ontology Population , Linked Data, ORM, OWL, SPARQL