International Journal of Advance Engineering and Research Development

Execution of SPARQL Query using Apache Jena Fuseki Server in AISHE domain

Prof. Ronak Panchal[1] AND Dr.Priya R.Swaminarayan[2]

[1]*Vidyabharti Trust College of BCA, Bardoli, VNSGU, Surat*
[2]*Director of Parul Institute of Computer Applications,Parul University, Vadodara*

Abstract:- *To portray the status of higher education in the country, Ministry of Human Resource Development has endeavoured to conduct an annual web-based All India Survey on Higher Education (AISHE) since 2010-11. NIC – National Informatics Centre has developed AISHE portal with few limitations like no online system exists, it's neither a Mobile Application nor a Web Application, and retrieval of data doesn't support Semantic retrieval, so we proposed Semantic Web based AISHE system (AISHE Ontology) through which we can take advantages of Semantic Web Technology in AISHE system. The development of AISHE Ontology can be done by various Ontology Development Tools like Protégé, etc. but we designed AISHE Ontology using Protégé as it is the most popular Ontology Development tool as per survey conducted by JornKardoso. The major drawback of Protégé is we cannot enter triple using SPARQL in Protégé or we cannot manipulate triple directly using protégé tool and it can be overcome by using Apache Jena Fuseki Server.*

Apache Jena is a free and open source Java framework for building Semantic Web and Linked Data applications. Fuseki is one of the components of Apache Jena which expose your triples as a SPARQL end-point accessible over HTTP. Fuseki provides REST-style interaction with your RDF data.In this paper, we have covered about Apache Jena Fuseki Server which includes benefits of Jena Fuseki Server, installation of Apache Jena Fuseki, how to upload dataset in a Server, how to write and implement SPARQL query including insertion and deletion. We used AISHE data as a domain for executing SPARQL query.

Keywords: Semantic Web, SPARQL, Apache Jena Fuseki, AISHE,

For Full Article Click here