

Abstract

of the master qualification paper about:

"Servlets that perform logical conclusion with data mining" of

Ruzych Oleg Volodymyrovych

Relevance

The phenomenon of World Wide Web has become possible only through the practical use of a set of common standards at different levels, thus ensuring interoperability of data. The current trend of Internet development is the transition from the documents, "read a computer" to documents that are "being understood by the computer."

Web was designed as an information space, useful not only for communication between man and man, but as a space in which can effectively collaborate and computers. One of the main obstacles to this is that most of the information on the Web is designed for its understanding of man. Servlets extend the functionality of Web servers and are a powerful tool for programming. Servlets are to servers the same as applets for browsers, but unlike applets, servlets have no graphical user interface. Servlets can be embedded in different servers because the servlet API, which is used for writing, does not imply any knowledge about the environment or server or his record. Servlets are most commonly used with HTTP servers.

Aim

The aim of this work is to study advanced technologies in the field of Semantic web, taking into account the possible advantages and disadvantages, as well as review of a prototype expert system with a web-based technology-based servlets.

The problems, solved during the study

To achieve this goal we solve the following tasks:

- Research on technologies and their ability to develop web applications in the context of the Semantic web, taking into account the advantages and disadvantages;
- choice of tools to support the work of the expert system with a logical conclusion based on Servlet technology;
- the use of ontology as a formal system based on mathematically precise axioms;
- use the principles of logical inference;
- choice of tools to ensure correct operation of expert systems;

Achieved results

Solving the problem posed in the work, the author defends:

- the idea of technology Semantic web, the introduction of servlets;
- appropriateness of the use of ontologies;
- a review of expert system based on the servlet with a logical conclusion;

Scientific novelty

Scientific novelty of the work is to identify the concepts and tools needed for designing Web applications (expert systems), provides technical support. It was proposed ontology, to provide opportunities. It was proposed inference machine interface expert system that works with these concepts.

Practical value

Based on the technology and algorithms, an overview of the implementation of expert system based design technology Servlet based ontologies and logical inference.

Conclusions

In this paper, an analysis of the technology Semantic web, disclosed the basic concepts, show their advantages and disadvantages.

In a review of existing technologies to make use of all capacities for rational distribution of Web rated for a computer user. Emphasis is placed on the use of servlets.

It can be concluded that Semantic Web - next generation Internet, which enables web applications to automatically collect web documents from different sources into account and to process information and interact with other applications to perform complex tasks.

A review of the expert system, whose task is technical support. With incomplete information about the system that uniquely identify her condition and provide the user with recommendations for the introduction of the target state. And the intelligence in the system depends on how quickly the system "diagnose".

Revealed concepts necessary for the implementation of technical support. It was proposed ontology, providing an appropriate time. Implemented web application that uses the technology of Semantic Web, - the inference machine interface expert system, working with these concepts.

When creating a knowledge base of expert technical support system was proposed to divide the concept, which operates an expert system for decision: the state-supported system, and factors affecting it, etc., and dates a particular domain, which can be attributed to these concepts.

The work contains 118 pages, 15 fig., 1 tab., 33 sources.

Keywords: SEMANTIC WEB, SERVLETS, ONTOLOGY, THE LOGICAL CONCLUSION, EXPERT SYSTEMS, DATA MINING.