TRANSFORMATION METHOD OF OPERATIONS OF ALGEBRAIC SYSTEM "DATA SPACE" IN THE OPERATION OF THE SOURCE DATA MODELS

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Globalization aspects of modern society development make the need for building complex systems for the functioning of particular subject areas and information technology for them. So, for example, in university it is the formation of teachers and departments ratings, the definition of indicators of success and quality of education, and others; for example, in the regional administration it is a calculation of critical indicators of regional development on the basis of data received from organizations of different ownership forms. However, it is difficult to do due to mismatch between the requirements to information systems, and the need of organization (search for objects, their systematization, harmonization, data integration) of different types of information objects in a complex information system that is manifested through the following:

- weak structuring of relationships between objects
- the need to incorporate new objects into the system
- failure to comply with the general standards of the organization and reference document,
- the impossibility of systematization through a large number of objects and their different nature.

Proposed by Kalinichenko method of comutative display requires processing of structured sources (databases) that for the concepts of the data space is a partial case.

Therefore, the purpose of this paper is to develop a method of receiving a response to the user request. Scientific novelty: to develop a method of transformation of elements of data space metalanguage in operation on the data source level. Practical value: the development of a class access to a data source.

Before starting an interactive session of work the majority of operating systems require to type the name and password of the user. The entered name is the user ID and the password is the authenticator. The operating system typically doesn't store the password but its hash sum, thus ensuring the practical impossibility of restoration of the password.

Algorithmically the authorization procedure is represented as a sequential transmission of one or multiple data flows between the subject and the information system and their intermediate study by both parties. As a result of these actions, both parties of the exchange must be sure that they are those who they say they are.

The visualization task is the identification and representation of structures and relationships in data sets relating to a particular subject area and are opened to the user according to profile.

In the case of data spaces, with the presence of structured, semi-structured and unstructured sources, the purpose of visualization is to define how data is displayed. for visualization of a user request for the purpose of its further implementation. For the visualization of user request with the aim of its further operation the tree is used. The tree construction is carried out by known methods of recording format of the expression (polish notation). For the visualization is chosen the selected polish inverted notation (firstly the notation of the operands, and then operations).

The procedure of semantic analysis of the query is to verify the correctness of the tasks of the operands. Under the correctness of the operands task is understood the presence of the operand in one of the sets:

- the data directory
- the data dictionary,
- formed set of keywords of a given subject area.

In the case of entry in none of sets, the query fails.

The algorithms of the search for data according to the user request and validation of the obtained results with the aim of unifying work with heterogeneous data sources, that helps to improve the quality of consolidated data are developed. The metalanguage of requests to the data space, that helps to unify the types of requests for all information products included in thedata space is developed. The transformation formalism of metalanguage in a query in structured, semi-structured and unstructured data sources is developed.

In this article the method for transforming the data space user request in the request to the data source is developed.

Keywords - data space, the algebraic system, database, data warehouse.