Chapter 9

Possibilities of BLOB (Binary Large OBject) and CLOB (Character Large Object) Integration Into the Core of IoT and Using the SQL Platform for Distributing a Large Amount of Data to HTML, JAVA, and PHP Platforms

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ABSTRACT

This chapter identifies and describes the key concepts and techniques for BLOB and CLOB integration into the IoT core. Data system centralization has sped up the solution of problems with large amounts of data storage and processing, particularly if the data is large by its nature. In that sense, everyday stream of photos, audio
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and video content, large textual data files led to new concepts BLOB and CLOB. Adequate examples of stored procedures, views, C#, JAVA, HTML5 i PHP languages, follow the establishing communication methods. Finally, the chapter will illustrate two practical examples of IoT: the example for pagination on a large database with million BLOB and CLOB objects, and the example for dynamic mechatroninc system of a fire truck with feedback.

BLOB

Although historically speaking the term “Blobbing”, is usually related to the process of moving a large amount of data from one database to another, that is from one location to another, the existing definitions are overbuilt and in the direction of object-oriented paradigm. It should be noted that the transfer of a large amount of data from one database to another is still primarily associated with the definition of a “large” object but in terms of large quantities of objects. This practically means that, for example, transferring a large number of small files (size 10 kB, number of files 1,000,000) remains the field of “Blobbing”. This concept does not include any primary data error checking, or any form of a filter. Error checking and potential filters represent the task of the newly formed base, that is a new host, which ensures the possibility of fast data transfer. The justification for this approach is reflected in modern systems of client-server orientation. The term originated from the image of someone grabbing the material from a container and putting it into another without thinking how much material is “grabbed”, that is how big is the lump (blob) taken for transfer.

Modern understanding of the issue is related to BLOB as data type. Namely, one of BLOB definitions is that BLOB (engl. Binary large object) or large binary object is a type of data that represents a possible structure element for data storing. Blob are large variable sequences of bites that represent an image, a sound or a video recording (multimedia objects) (Figure 1).

The objects are “intelligent” data that can be found in certain states. These states can be changed using certain methods. Set of objects with the same properties makes one class. Classes are analogue to data types, such as integers or real numbers, but may represent arbitrarily complex abstract objects (e.g. geometric figures, images, audio recordings, etc.).

The above said represents a revolution in the field of data manipulation. Namely, by describing the binary large object with object-oriented paradigm postulates a complete analogy with a large number of programming languages of the same
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