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Part 14: XML-Related Specifications (SQL/XML)

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives or www.iec.ch/members_experts/refdocs).

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This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 32, *Data management and interchange*.

This sixth edition cancels and replaces the fifth edition (ISO/IEC 9075-14:2016), which has been technically revised. It also incorporates the Technical Corrigenda ISO/IEC 9075-14:2016/Cor.1:2019 and ISO/IEC 9075-14:2016/Cor.2:2022.

The main changes are as follows:

— improve the presentation and accuracy of the summaries of implementation-defined and implementation-dependent aspects of this document;

— introduction of several digital artifacts;

— alignment with updated ISO house style and other guidelines for creating standards.

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— ISO/IEC 9075-1, sixth edition;

— ISO/IEC 9075-2, sixth edition;

— ISO/IEC 9075-3, sixth edition;

— ISO/IEC 9075-4, seventh edition;

— ISO/IEC 9075-9, fifth edition;

— ISO/IEC 9075-10, fifth edition;

— ISO/IEC 9075-11, fifth edition;

— ISO/IEC 9075-13, fifth edition;

— ISO/IEC 9075-15, second edition;

— ISO/IEC 9075-16, first edition.

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Introduction

The organization of this document is as follows:

1) Clause 1, "Scope", specifies the scope of this document.

2) Clause 2, "Normative references", identifies additional standards that, through reference in this document, constitute provisions of this document.

3) Clause 3, "Terms and definitions", defines the terms and definitions used in this document.

4) Clause 4, "Concepts", presents concepts related to this document.

5) Clause 5, "Lexical elements", defines the lexical elements of the language.

6) Clause 6, "Scalar expressions", defines the elements of the language that produce scalar values.

7) Clause 7, "Query expressions", defines the elements of the language that produce rows and tables of data.

8) Clause 8, "Predicates", defines the predicates of the language.

9) Clause 9, "Mappings", defines the ways in which certain SQL information can be mapped into XML and certain XML information can be mapped into SQL.

10) Clause 10, "Additional common rules", specifies the rules for assignments that retrieve data from or store data into SQL-data, and formation rules for set operations.

11) Clause 11, "Additional common elements", defines additional language elements that are used in various parts of the language.

12) Clause 12, "Schema definition and manipulation", defines facilities for creating and managing a schema.

13) Clause 13, "SQL-client modules", defines SQL-client modules and externally-invoked procedures.

14) Clause 14, "Data manipulation", defines the data manipulation statements.

15) Clause 15, "Control statements", defines the SQL-control statements.

16) Clause 16, "Session management", defines the SQL-session management statements.

17) Clause 17, "Dynamic SQL", defines the SQL dynamic statements.

18) Clause 18, "Embedded SQL", defines the host language embeddings.

19) Clause 19, "Call-Level Interface specifications",

20) Clause 20, "Diagnostics management", defines the diagnostics management facilities.

21) Clause 21, "Information Schema", defines viewed tables that contain schema information.

22) Clause 22, "Definition Schema", defines base tables on which the viewed tables containing schema information depend.

23) Clause 23, "SQL/XML XML schema", defines the content of an XML namespace that is used when SQL and XML are utilized together.

24) Clause 24, "Status codes", defines values that identify the status of the execution of SQL-statements and the mechanisms by which those values are returned.

25) Clause 25, "Conformance", specifies the way in which conformance to this document may be claimed.

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26) Annex A, “SQL conformance summary”, is an informative Annex. It summarizes the conformance requirements of the SQL language.

27) Annex B, “Implementation-defined elements”, is an informative Annex. It lists those features for which the body of this document states that the syntax, the meaning, the returned results, the effect on SQL-data and/or schemas, or other aspect is partly or wholly implementation-defined.

28) Annex C, “Implementation-dependent elements”, is an informative Annex. It lists those features for which the body of this document states that the syntax, the meaning, the returned results, the effect on SQL-data and/or schemas, or other aspect is partly or wholly implementation-dependent.

29) Annex D, “SQL optional feature taxonomy”, is an informative Annex. It identifies the optional features of the SQL language specified in this document by an identifier and a short descriptive name. This taxonomy is used to specify conformance.

30) Annex E, “Deprecated features”, is an informative Annex. It lists features that the responsible Technical Committee intends not to include in a future edition of this document.

31) Annex F, “Incompatibilities with ISO/IEC 9075:2016”, is an informative Annex. It lists incompatibilities with the previous edition of this document.

32) Annex G, “Defect Reports not addressed in this document”, is an informative Annex. It describes the Defect Reports that were known at the time of publication of this document. Each of these problems is a problem carried forward from the previous edition of the ISO/IEC 9075 series. No new problems have been created in the drafting of this edition of this document.

In the text of this document, in Clause 5, “Lexical elements”, through Clause 25, “Conformance”, Subclauses begin new pages. Any resulting blank space is not significant.

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Information technology — Database language SQL —

Part 14:
XML-Related Specifications (SQL/XML)

1 Scope

This document defines ways in which Database Language SQL can be used in conjunction with XML.

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2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies. [1] [2]

ISO/IEC 9075-1, *Information technology — Database languages — SQL — Part 1: Framework (SQL/Framework)*

ISO/IEC 9075-2, *Information technology — Database languages — SQL — Part 2: Foundation (SQL/Foundation)*

ISO/IEC 9075-3, *Information technology — Database languages — SQL — Part 3: Call-Level Interface (SQL/CLI)*

ISO/IEC 9075-4, *Information technology — Database languages — SQL — Part 4: Persistent Stored Modules (SQL/PSM)*

ISO/IEC 9075-11, *Information technology — Database languages — SQL — Part 11: Information and Definition Schemas (SQL/Schemata)*

W3C Canonical XML 1.1 *Canonical XML, W3C Recommendation*. Edited by: Boyer, John; Marcy, Glenn 2 May 2008
Available at: `https://www.w3.org/TR/xml-c14n`

W3C XML Information Set *XML Information Set, W3C Recommendation.*. Edited by: Cowan, John; Tobin, Richard 4 February 2004
Available at: `https://www.w3.org/TR/xml-infoset`

W3C XML Namespaces *XML Namespaces is used to reference either Namespaces in XML 1.0 or Namespaces in XML 1.1 when there is no significant difference between the two for the purposes of a given citation*

W3C Namespaces in XML 1.0 *Namespaces in XML 1.0, W3C Recommendation*. Edited by: Bray, Tim, et al. 8 December 2009
Available at: `https://www.w3.org/TR/xml-names`

W3C Namespaces in XML 1.1 *Namespaces in XML 1.1, W3C Recommendation*. Edited by: Bray, Tim, et al. 16 August 2006
Available at: `https://www.w3.org/TR/xml-names11`

Internet Engineering Task Force (IETF) RFC 3986, *Uniform Resource Identifier (URI): Generic Syntax*. Edited by: Berners-Lee, T., Fielding, R., Masinter, L. January 2005
Available at: `https://www.ietf.org/rfc/rfc3986.txt`

W3C XML Schema Part 1: Structures *XML Schema Part 1: Structures, W3C Recommendation*. Edited by: Thompson, Henry S et al. 28 October 2004
Available at: `https://www.w3.org/TR/xmlschema-1/`

W3C XML Schema Part 2: Datatypes *XML Schema Part 2: Datatypes, W3C Recommendation*. Edited by: Biron, Paul V.; Malhotra, Ashok 28 October 2004
Available at: `https://www.w3.org/TR/xmlschema-2/`

1 XML Namespaces is used to reference either Namespaces in XML 1.0 or Namespaces in XML 1.1 when there is no significant difference between the two for the purposes of a given citation.

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W3C XSLT and XQuery Serialization 3.1 *XSLT and XQuery Serialization 3.1, W3C Recommendation*. Edited by: Coleman Andrew; Sperberg-McQueen, C M. 21 March 2017
Available at: https://www.w3.org/TR/xslt-xquery-serialization-31/

The Unicode Consortium. *The Unicode Standard (Information about the latest version of the Unicode standard can be found by using the "Latest Version" link on the "Enumerated Versions of The Unicode Standard" page.)* [online]. Mountain View, California, USA: The Unicode Consortium, Available at https://www.unicode.org/versions/enumeratedversions.html

W3C Unicode in XML and Other Markup Languages *Unicode in XML and Other Markup Languages, W3C Working Group Note*. Edited by: Phillips, Addison 13 July 2017
Available at: https://www.w3.org/TR/unicode-xml/

XML is used to reference either XML 1.0 or XML 1.1 when there is no significant difference between the two for the purposes of a given citation . [Place of publication unknown]:

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