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Part 3: Call-Level Interface (SQL/CLI)

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

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 9075-3:2016), which has been technically revised. It also incorporates the Technical Corrigendum ISO/IEC 9075-3:2016/Cor.1:2022.

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.

This sixth edition of ISO/IEC 9075-3 is designed to be used in conjunction with the following editions of other parts of the ISO/IEC 9075 series, all published 2023:

— ISO/IEC 9075-1, sixth edition;

— ISO/IEC 9075-2, sixth edition;

— ISO/IEC 9075-4, seventh edition;

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— 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 9075-14, sixth edition;

— ISO/IEC 9075-15, second edition;

— ISO/IEC 9075-16, first edition.

A list of all parts in the ISO/IEC 9075 series can be found on the ISO and IEC websites.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html and www.iec.ch/national-committees.

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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 used in the definition of the Call-Level Interface.

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

6) Clause 6, "Call-Level Interface specifications", defines facilities for using SQL through a Call-Level Interface.

7) Clause 7, "SQL/CLI routines", defines each of the routines that comprise the Call-Level Interface.

8) Clause 8, "Additional data manipulation rules", defines additional rules for data manipulation.

9) Clause 9, "Dynamic SQL", defines the SQL dynamic statements.

10) Clause 10, "Status codes", defines values that identify the status of the execution of SQL-statements and the mechanisms by which those values are returned.

11) Clause 11, "Conformance", defines the criteria for conformance to this document.

12) Annex A, "SQL conformance summary", is an informative Annex. It summarizes the conformance requirements of the SQL language.

13) 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.

14) 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.

15) 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.

16) 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.

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

18) Annex G, "Defect Reports not addressed in this edition of 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 document. No new problems have been created in the drafting of this edition of this document.

19) Annex H, "Example header files", is an informative Annex. It provides examples of typical definition files for application programs using the SQL Call-Level Interface.

20) Annex I, "Example C programs", is an informative Annex. It provides examples of using the SQL Call-Level Interface in the C programming language.

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In the text of this document, Clauses and Annexes begin new odd-numbered pages, and in Clause 6, "Call-Level Interface specifications", through Clause 11, "Conformance", Subclauses begin new pages. Any resulting blank space is not significant.

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Information technology — Database language SQL —

Part 3:
Call-Level Interface (SQL/CLI)

1 Scope

This document defines the structures and procedures that can be used to execute statements of the database language SQL from within an application written in a programming language in such a way that procedures used are independent of the SQL statements to be executed.

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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.

ISO/IEC 1539-1:2018, *Information technology — Programming languages — Fortran — Part 1: Base language*

ISO/IEC 1539-2:2000, *Information technology — Programming languages — Fortran — Part 2: Varying length character strings*

ISO 1989:2014, *Information technology — Programming languages — COBOL*

ISO 6160:1979, *Programming languages — PL/I (Endorsement of ANSI X3.53-1976)*

ISO 7185:1990, *Information technology — Programming languages — Pascal*

ISO/IEC 8652:2012, *Information technology — Programming languages — Ada*

ISO/IEC 8652:2012/Cor.1:2016, *Information technology — Programming languages — Ada — Technical Corrigendum 1*

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

ISO/IEC 9899:2018, *Information technology — Programming languages — C*

ISO/IEC 10206:1991, *Information technology — Programming languages — Extended Pascal*

ISO/IEC 11756:1999, *Information technology — Programming languages — M*

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