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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75% of the national bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

International Standard ISO/IEC 9075-10 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 32, *Data management and interchange*.

This third edition of ISO/IEC 9075-10 cancels and replaces the second edition (ISO/IEC 9075-10:2003), which has been technically revised. It also incorporates Technical Corrigendum ISO/IEC 9075-10:2003/Cor.2:2007.

ISO/IEC 9075 consists of the following parts, under the general title Information technology — Database languages — SQL:

— Part 1: Framework (SQL/Framework)

— Part 2: Foundation (SQL/Foundation)

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

— Part 4: Persistent Stored Modules (SQL/PSM)

— Part 9: Management of External Data (SQL/MED)

— Part 10: Object Language Bindings (SQL/OLB)

— Part 11: Information and Definition Schema (SQL/Schemata)

— Part 13: SQL Routines and Types Using the Java™ Programming Language (SQL/JRT)

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

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Introduction

The organization of this Part of this International Standard is as follows:

1) Clause 1, “Scope”, specifies the scope of this part of ISO/IEC 9075.

2) Clause 2, “Normative references”, identifies additional standards and publically-available specifications that, through reference in this part of ISO/IEC 9075, constitute provisions of this part of ISO/IEC 9075.

3) Clause 3, “Definitions, notations, and conventions”, defines the notations and conventions used in this part of ISO/IEC 9075.

4) Clause 4, “Concepts”, presents concepts used in the definition of the Object Language Bindings.

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, “Additional common elements”, defines additional language elements that are used in various parts of the language.

8) Clause 8, “Embedded SQL”, defines the host language embeddings.

9) Clause 9, “SQLJ reserved names”, defines the reserved names for SQLJ.

10) Clause 10, “Common subelements”, defines the commonly used subelements for SQLJ.

11) Clause 11, “<SQLJ specific clause> and contents”, defines the syntax and rules for SQLJ constructs.

12) Clause 12, “Package sqlj.runtime”, specifies the SQLJ runtime package.

13) Clause 13, “Package sqlj.runtime.profile”, specifies the SQLJ runtime profile package.

14) Clause 14, “sqlj.runtime.profile.util.ProfileCustomizer”, specifies the SQLJ profile customizer class.

15) Clause 15, “Status codes”, defines SQLSTATE values related to Object Language Bindings.

16) Clause 16, “Conformance”, defines the criteria for conformance to this part of ISO/IEC 9075.

17) Annex A, “SQL Conformance Summary”, is an informative Annex. It summarizes the conformance requirements of the SQL language.

18) Annex B, “Implementation-defined elements”, is an informative Annex. It lists those features for which the body of this part of ISO/IEC 9075 states that the syntax, the meaning, the returned results, the effect on SQL-data and/or schemas, or any other behavior is partly or wholly implementation-defined.

19) Annex C, “Implementation-dependent elements”, is an informative Annex. It lists those features for which the body of this part of ISO/IEC 9075 states that the syntax, the meaning, the returned results, the effect on SQL-data and/or schemas, or any other behavior is partly or wholly implementation-dependent.

20) Annex D, “Deprecated features”, is an informative Annex. It lists features that the responsible Technical Committee intend will not appear in a future revised version of this part of ISO/IEC 9075.

21) Annex E, “Incompatibilities with ISO/IEC 9075:2003”, is an informative Annex. It lists incompatibilities with the previous version of this part of ISO/IEC 9075.

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22) Annex F, “SQL feature taxonomy”, is an informative Annex. It identifies features of the SQL language specified in this part of ISO/IEC 9075 by an identifier and a short descriptive name. This taxonomy is used to specify conformance and may be used to develop other profiles involving the SQL language.

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

24) Annex H, “SQLJ tutorial”, is an informative Annex. It contains tutorial information about the features of the SQL language that are specified in this part of ISO/IEC 9075.

In the text of this part of ISO/IEC 9075, Clauses begin a new odd-numbered page. Any resulting blank space is not significant.

All Clauses of this part of ISO/IEC 9075 are normative.

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Information technology — Database languages — SQL —

Part 10:
Object Language Bindings (SQL/OLB)

1 Scope

ISO/IEC 9075-2 specifies embedded SQL for the programming languages: Ada, C, COBOL, Fortran, MUMPS, Pascal, and PL/I. This part of ISO/IEC 9075 defines similar features of Database language SQL that support embedding of SQL-statements into programs written in the Java™ programming language (Java is a registered trademark of Sun Microsystems, Inc.). The embedding of SQL into Java is commonly known as “SQLJ”. This part of ISO/IEC 9075 specifies the syntax and semantics of SQLJ, as well as mechanisms to ensure binary portability of resulting SQLJ applications. In addition, it specifies a number of Java packages and their contained classes (including methods).

Throughout this part of ISO/IEC 9075, the terms “SQLJ” and “SQL/OLB” are used synonymously.

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2 Normative references

The following referenced documents are indispensable for the application 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.

2.1 ISO and IEC standards

[ISO9075-1] ISO/IEC 9075-1:2008, *Information technology — Database languages — SQL — Part 1: Framework (SQL/Framework)*.

[ISO9075-2] ISO/IEC 9075-2:2008, *Information technology — Database languages — SQL — Part 2: Foundation (SQL/Foundation)*.

2.2 Other international standards

[Unicode] The Unicode Consortium, *The Unicode Standard*. (Information about the latest version of the Unicode standard can be found by using the "Latest Unicode Version" link on the "Enumerated Versions of The Unicode Standard" page.)
`http://www.unicode.org/versions/enumeratedversions.html`

[Java] *The Java™ Language Specification, Third Edition*, James Gosling, Bill Joy, Guy Steele, and Gilad Bracha, Prentice Hall, June 14, 2005, ISBN 0-321-24678-0.

[JDBC] *JDBC™ 4.0 Specification*, Final v1.0, Lance Andersen, Sun Microsystems, Inc., November 7, 2006.

[JNDI] *Java Naming and Directory Interface™*, Sun Microsystems, Inc.
`http://java.sun.com/j2se/1.5.0/docs/guide/jndi/index.html`.

[JavaBeans] *The JavaBeans™ 1.01 Specification*
`http://java.sun.com/products/javabeans/docs/spec.html`

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