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Information technology — Database languages — SQL multimedia and application packages —

Part 1: **Framework**

Technologies de l'information — Langages de bases de données — Multimédia SQL et paquetages d'application —

Partie 1: Cadre général

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ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

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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. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/IEC JTC 1, *Information technology*, SC 32, *Data management and interchange*.

This fourth edition cancels and replaces the third edition (ISO/IEC 13249-1:2007), which has been technically revised.

ISO/IEC 13249 consists of the following parts, under the general title *Information Technology — Database languages — SQL multimedia and application packages*:

— *Part 1: Framework*

— *Part 2: Full-Text*

— *Part 3: Spatial*

— *Part 5: Still image*

— *Part 6: Data mining*

— *Part 7: History*

Parts other than this part specify requirements, and all are dependent on various parts of ISO/IEC 9075 and also on this part of ISO/IEC 13249.

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Introduction

The purpose of this part of ISO/IEC 13249 is to define multimedia and application specific types and their associated routines using the user-defined features in parts of ISO/IEC 9075.

This document is based on the content of parts of ISO/IEC 9075, *Information technology — Database languages — SQL*.

The organization of this part of ISO/IEC 13249 is as follows:

1) Clause 1 specifies the scope of this part of ISO/IEC 13249.

2) Clause 2 identifies additional International Standards that, through reference in ISO/IEC 13249, constitute provisions of this part of ISO/IEC 13249, and hence to all parts of ISO/IEC 13249.

3) Clause 3 specifies terms and definitions used in ISO/IEC 13249.

4) Clause 4 describes the concepts used in ISO/IEC 13249.

5) Clause 5 summarizes the content of each of the parts of ISO/IEC 13249.

6) Clause 6 defines the notation and conventions used in other parts of ISO/IEC 13249.

7) Clause 7 describes the requirements relating to the implementation of ISO/IEC 13249.

8) Clause 8 specifies the conformance requirements for all or some of the parts of ISO/IEC 13249.

9) Annex A (Informative) describes the formal procedures for maintenance and interpretation of ISO/IEC 13249.

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Information technology — Database languages — SQL multimedia and application packages —

Part 1: Framework

1 Scope

ISO/IEC 13249 defines a number of packages of generic data types and table structures common to various kinds of data used in multimedia and application areas, to enable that data to be stored and manipulated in an SQL database. The package in each subject area is defined as a part of ISO/IEC 13249.

This part of ISO/IEC 13249 defines those concepts, notations and conventions that are common to two or more other parts of ISO/IEC 13249. In particular, it describes the way parts of ISO/IEC 9075 are used to define the user-defined types and their behaviour and views as a representation of table structures appropriate to each subject area.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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)*

3 Terms and definitions

3.1 Terms defined in ISO/IEC 9075-1

For the purposes of this document, the following terms defined in ISO/IEC 9075-1 apply.

a) compilation unit

b) data type

c) descriptor

d) identifier

e) implementation-defined

f) implementation-dependent

g) instance (of a value)

h) null value

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i) row

j) sequence

k) SQL-environment

l) SQL-implementation

m) SQL-statement

n) table

3.2 Terms defined in ISO/IEC 9075-2

For the purposes of this document, the following terms defined in ISO/IEC 9075-2 apply.

a) assignment

b) attribute

c) cardinality

d) constructor function

e) declared type

f) external routine

g) mutator function

h) observer function

i) signature (of an SQL-invoked routine)

j) SQL routine

k) SQL-invoked routine

l) subtype

m) supertype

n) type-preserving function

o) user-defined type

p) white space

3.3 Terms defined in this part of ISO/IEC 13249

For the purposes of this document, the following terms and definitions apply.

3.3.1
generic data type
kind of data not already defined in any part of ISO/IEC 9075 that is used in a wider context than a single enterprise and for which there are advantages in standardizing the way it is represented

3.3.2
common table structure
set of a table name and a sequence of a column name and data type pairs of columns consisting of an SQL table that is used in a wider context than a single enterprise and for which there are advantages in standardizing the way it is represented

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3.3.3
meta-variable
variable which is used to define implementation-dependent or implementation-defined constants

3.3.4
method
specific implementation of an action or transformation that a user-defined type performs or a representation of values of that type is subject to

Note 1 to entry: With such user-defined methods for structured types, an SQL-implementation allows users to extend the function of the database system in object-oriented manner.

4 Concepts

4.1 Concepts taken from parts of ISO/IEC 9075

The following concepts defined in parts of ISO/IEC 9075 are used either in this part of ISO/IEC 13249 or in other parts of ISO/IEC 13249.

a) array

b) base table

c) catalog

d) character set

e) column

f) completion condition

g) definition schema

h) distinct type

i) exception condition

j) *False*

k) field

l) host language

m) information schema

n) maximal supertype

o) ordering function

p) predefined data type

q) privilege

r) source type

s) SQL-agent

t) SQL-data

u) SQL-invoked method

NOTE Throughout ISO/IEC 13249, the method is referred to SQL-invoked method.

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