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Part 7: Polymorphic table functions in SQL

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Partie 7: Fonctions de table polymorphes dans SQL

Reference number
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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
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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).

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

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

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Introduction

The organization of this part of ISO/IEC 19075 is as follows:

1) Clause 1, “Scope”, specifies the scope of this part of ISO/IEC 19075.

2) Clause 2, “Normative references”, identifies additional standards that, through reference in this part of ISO/IEC 19075, constitute provisions of this part of ISO/IEC 19075.

3) Clause 3, “Introduction to Polymorphic Table Functions”, provides an introduction to polymorphic table functions, the requirements leading to their incorporation into SQL, and illustrations of their use.

4) Clause 4, “PTF processing model”, describes the abstract processing model for polymorphic table functions in the context of an SQL-implementation.

5) Clause 5, “Specification”, describes the manner in which polymorphic table functions are specified in the SQL standard.

6) Clause 6, “Data definition language”, provides the syntax and semantics of the SQL statements that create, modify, and drop polymorphic table functions.

7) Clause 7, “Implementation”, guides authors of polymorphic table functions through the steps required to create all of the functions necessary to accomplish particular purposes.

8) Clause 8, “Invocation”, supplies the information necessary for application writers, especially SQL query authors, to take advantage of the polymorphic table functions that are available to them.

9) Clause 9, “Compilation”, is directed at the authors of polymorphic table functions and of SQL database systems to guide them in the steps required to compile polymorphic table functions in the context of a particular SQL-implementation.

10) Clause 10, “Optimization”, describes the various aspects of polymorphic functions of which the authors of such functions and the authors of SQL-implementations must be aware to adequately optimize the execution of such functions.

11) Clause 11, “Execution”, discusses the details of executing polymorphic table functions in the context of the processing model.

12) Clause 12, “Examples”, supplies numerous examples in detail with commentaries to explain the various use cases, the requirements that relate to polymorphic table functions, and the specifics of the solutions for each use case.

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Information technology — Database languages — SQL Technical Reports —

Part 7:
Polymorphic table functions in SQL

1 Scope

This Technical Report describes the definition and use of polymorphic table functions in SQL.

The Report discusses the following features of the SQL Language:

— The processing model of polymorphic table functions in the context of SQL.

— The creation and maintenance of polymorphic table functions.

— Issues related to methods of implementing polymorphic table functions.

— How polymorphic table functions are invoked by application programs.

— Issues concerning compilation, optimization, and execution of polymorphic table functions.

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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

[ISO9075-2] ISO/IEC 9075-2:2016, *Information technology — Database languages — SQL — Part 2: Foundation (SQL/Foundation)*.

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