TECHNICAL REPORT

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Information technology — Database languages — SQL Technical Reports —

Part 4: SQL with Routines and types using the Java™ programming language

Technologies de l'information — Langages de base de données — SQL rapports techniques —

Partie 4: SQL avec des Routines et Types Utilisant le Langage de Programmation de Java™

Reference number
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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.

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

The main task of the joint technical committee is to prepare International Standards. 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.

In exceptional circumstances, when the joint technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example), it may decide to publish a Technical Report. A Technical Report is entirely informative in nature and shall be subject to review every five years in the same manner as an International Standard.

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.

ISO/IEC TR 19075-4 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 32, *Data management and interchange*.

ISO/IEC TR 19075 consists of the following parts, under the general title *Information technology — Database languages — SQL Technical Reports*:

— Part 1: XQuery Regular Expression Support in SQL

— Part 2: SQL Support for Time-Related Information

— Part 3: SQL Embedded in Programs Using the Java™ Programming Language

— Part 4: SQL with Routines and Types Using the Java™ Programming Language

— Part 5: Row Pattern Recognition in SQL

NOTE 1 — The individual parts of multi-part technical reports are not necessarily published together. New editions of one or more parts may be published without publication of new editions of other parts.

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, "Routines tutorial", provides a tutorial on the use of routines written in the Java programming language within SQL expressions and statements.

4) Clause 4, "Types tutorial", provides a tutorial on the use of user-defined types written in the Java programming language within SQL expressions and statements.

Information technology — Database languages — SQL Technical Reports —

Part 4:
SQL with Routines and Types Using the Java™ Programming Language

1 Scope

This Technical Report provides a tutorial of SQL Routines and Types Using the Java™ Programming Language.

The Report discusses the following features of the SQL Language:

— The use of routines written in the Java programming language within SQL expressions and statements.

— the use of user-defined types written in the Java programming language within SQL expressions and statements.

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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 9075-1:2011, *Information technology — Database languages — SQL — Part 1: Framework (SQL/Framework)*.

[ISO9075-2] ISO/IEC 9075-2:2011, *Information technology — Database languages — SQL — Part 2: Foundation (SQL/Foundation)*.

[ISO9075-10] ISO/IEC 9075-10:2008, *Information technology — Database languages — SQL — Part 10: Object Language Bindings (SQL/OLB)*.

[ISO9075-11] ISO/IEC 9075-11:2011, *Information technology — Database languages — SQL — Part 11: Information and Definition Schemas (SQL/Schemata)*.

[ISO9075-13] ISO/IEC 9075-13:2008, *Information technology — Database languages — SQL — Part 13: SQL Routines and Types Using the Java™ Programming Language (SQL/JRT)*.

2.2 Other international standards

[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.

[JVM] *The Java™ Virtual Machine Specification, Second Edition*, Tim Lindholm and Frank Yellin, Addison-Wesley, 1999, ISBN 0-201-43294-3, as amended by *Clarifications and Amendments to the Java Virtual Machine Specification*, `http://java.sun.com/docs/books/jvms/second_edition/jvms-clarify.html`.

[J2SE] *Java™ Platform Standard Edition 6 API Specification*, `http://java.sun.com/javase/6/-docs/api/index.html`.

[Serialization] *Java™ Object Serialization Specification*, version 6.0 `http://java.sun.com/javase/-6/docs/platform/serialization/spec/serialTOC.html`.

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

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