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**Information technology — Database  
languages — SQL Technical Reports —  
Part 7:  
Polymorphic table functions in SQL**

*Technologies de l'information — Langages de base de données — SQL  
rapport techniques —*

*Partie 7: Fonctions de table polymorphes dans SQL*

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## Contents

Page

|                                                           |           |
|-----------------------------------------------------------|-----------|
| Foreword.....                                             | xi        |
| Introduction.....                                         | xii       |
| <b>1 Scope.....</b>                                       | <b>1</b>  |
| <b>2 Normative references.....</b>                        | <b>3</b>  |
| 2.1 ISO and IEC standards.....                            | 3         |
| <b>3 Introduction to Polymorphic Table Functions.....</b> | <b>5</b>  |
| 3.1 Audiences.....                                        | 5         |
| 3.2 Motivating examples.....                              | 6         |
| 3.2.1 CSVreader.....                                      | 6         |
| 3.2.2 Pivot.....                                          | 7         |
| 3.2.3 Score.....                                          | 9         |
| 3.2.4 TopNplus.....                                       | 12        |
| 3.2.5 ExecR.....                                          | 15        |
| 3.2.6 Similarity.....                                     | 16        |
| 3.2.7 UDjoin.....                                         | 18        |
| 3.2.8 MapReduce.....                                      | 19        |
| 3.3 The life cycle of a PTF.....                          | 20        |
| <b>4 PTF processing model.....</b>                        | <b>23</b> |
| 4.1 Processing phases.....                                | 23        |
| 4.2 Virtual processors.....                               | 23        |
| 4.3 PTF component procedures.....                         | 23        |
| 4.4 Input table characteristics.....                      | 24        |
| 4.5 Partitioning and ordering.....                        | 25        |
| 4.6 Flow of control.....                                  | 26        |
| 4.7 Flow of information.....                              | 27        |
| 4.8 Flow of row types.....                                | 28        |
| 4.9 Pass-through columns.....                             | 30        |
| 4.10 Security model.....                                  | 30        |
| 4.11 Conformance features.....                            | 31        |
| <b>5 Specification.....</b>                               | <b>35</b> |
| 5.1 Functional specification.....                         | 35        |
| 5.1.1 Parameter list.....                                 | 35        |
| 5.1.2 Input table semantics.....                          | 36        |
| 5.1.3 Prunability.....                                    | 37        |
| 5.1.4 Pass-through columns.....                           | 37        |

|          |                                                                      |           |
|----------|----------------------------------------------------------------------|-----------|
| 5.1.5    | Result row type. ....                                                | 38        |
| 5.1.6    | Determinism. ....                                                    | 38        |
| 5.1.7    | SQL-data access. ....                                                | 39        |
| 5.1.8    | Documenting the PTF to the query author. ....                        | 39        |
| 5.2      | Design specification. ....                                           | 40        |
| 5.2.1    | Name the component procedures. ....                                  | 40        |
| 5.2.2    | Private data. ....                                                   | 40        |
| 5.2.3    | Routine characteristics of the component procedures. ....            | 41        |
| 5.2.4    | Component procedure signatures. ....                                 | 42        |
| <b>6</b> | <b>Data definition language. ....</b>                                | <b>47</b> |
| 6.1      | PTF creation. ....                                                   | 47        |
| 6.2      | PTF component procedures. ....                                       | 49        |
| 6.3      | Altering PTF component procedures and PTFs. ....                     | 49        |
| 6.4      | Dropping a PTF and its component procedures. ....                    | 50        |
| <b>7</b> | <b>Implementation. ....</b>                                          | <b>51</b> |
| 7.1      | PTF descriptor areas. ....                                           | 51        |
| 7.1.1    | PTF descriptor area header. ....                                     | 52        |
| 7.1.2    | SQL item descriptor areas for row types. ....                        | 53        |
| 7.1.3    | SQL item descriptor areas for partitioning. ....                     | 57        |
| 7.1.4    | SQL item descriptor areas for ordering. ....                         | 57        |
| 7.2      | PTF extended names. ....                                             | 57        |
| 7.3      | Reading a PTF descriptor area. ....                                  | 58        |
| 7.4      | Writing a PTF descriptor area. ....                                  | 58        |
| 7.4.1    | Using DESCRIBE to populate a PTF descriptor area. ....               | 59        |
| 7.4.2    | Using SET DESCRIPTOR to populate a PTF descriptor area. ....         | 59        |
| 7.4.3    | Using COPY DESCRIPTOR to populate a PTF descriptor area. ....        | 60        |
| 7.5      | Reading a PTF input cursor. ....                                     | 61        |
| 7.6      | Outputting a row. ....                                               | 62        |
| <b>8</b> | <b>Invocation. ....</b>                                              | <b>65</b> |
| 8.1      | <table primary>. ....                                                | 65        |
| 8.2      | <PTF derived table>. ....                                            | 65        |
| 8.3      | Proper result correlation name and proper result column naming. .... | 65        |
| 8.4      | <routine invocation>. ....                                           | 66        |
| 8.5      | <table argument>. ....                                               | 67        |
| 8.6      | <table argument proper>. ....                                        | 68        |
| 8.6.1    | <table or query name>. ....                                          | 68        |
| 8.6.2    | <table subquery>. ....                                               | 68        |
| 8.6.3    | Nested table function invocation. ....                               | 69        |
| 8.7      | Table argument correlation name. ....                                | 69        |
| 8.8      | Table argument column renaming. ....                                 | 70        |
| 8.9      | Range variables and column renaming in nested PTF. ....              | 70        |
| 8.10     | Partitioning. ....                                                   | 70        |
| 8.11     | Pruning. ....                                                        | 71        |

|           |                                                      |           |
|-----------|------------------------------------------------------|-----------|
| 8.12      | Ordering. . . . .                                    | 71        |
| 8.13      | Copartitioning. . . . .                              | 72        |
| 8.14      | Cross products of partitions. . . . .                | 73        |
| 8.15      | <descriptor argument>. . . . .                       | 74        |
| <b>9</b>  | <b>Compilation. . . . .</b>                          | <b>75</b> |
| 9.1       | Calling the describe component procedure. . . . .    | 75        |
| 9.2       | Inside the describe component procedure. . . . .     | 75        |
| 9.3       | Using the result of describe. . . . .                | 76        |
| <b>10</b> | <b>Optimization. . . . .</b>                         | <b>77</b> |
| <b>11</b> | <b>Execution. . . . .</b>                            | <b>79</b> |
| 11.1      | Partitions and virtual processors. . . . .           | 79        |
| 11.2      | Calling the start component procedure. . . . .       | 80        |
| 11.3      | Inside the start component procedure. . . . .        | 81        |
| 11.4      | Calling the PTF fulfill component procedure. . . . . | 81        |
| 11.5      | Inside the PTF fulfill component procedure. . . . .  | 81        |
| 11.6      | Closing cursors. . . . .                             | 81        |
| 11.7      | Calling the PTF finish component procedure. . . . .  | 81        |
| 11.8      | Inside the PTF finish component procedure. . . . .   | 82        |
| 11.9      | Collecting the output. . . . .                       | 82        |
| 11.10     | Cleanup on a virtual processor. . . . .              | 82        |
| 11.11     | Final result. . . . .                                | 82        |
| <b>12</b> | <b>Examples. . . . .</b>                             | <b>83</b> |
| 12.1      | Projection. . . . .                                  | 84        |
| 12.1.1    | Overview. . . . .                                    | 84        |
| 12.1.2    | Functional specification of Projection. . . . .      | 84        |
| 12.1.3    | Design specification for Projection. . . . .         | 85        |
| 12.1.4    | Projection component procedures. . . . .             | 85        |
| 12.1.5    | Invoking Projection. . . . .                         | 87        |
| 12.1.6    | Calling Projection_describe. . . . .                 | 87        |
| 12.1.7    | Inside Projection_describe. . . . .                  | 89        |
| 12.1.8    | Result of Projection_describe. . . . .               | 91        |
| 12.1.9    | Virtual processors for Projection. . . . .           | 91        |
| 12.1.10   | Calling Projection_fulfill. . . . .                  | 92        |
| 12.1.11   | Inside Projection_fulfill. . . . .                   | 93        |
| 12.1.12   | Collecting the results. . . . .                      | 93        |
| 12.1.13   | Cleanup. . . . .                                     | 94        |
| 12.2      | CSVreader. . . . .                                   | 95        |
| 12.2.1    | Overview. . . . .                                    | 95        |
| 12.2.2    | Functional specification of CSVreader. . . . .       | 95        |
| 12.2.3    | Design specification for CSVreader. . . . .          | 95        |
| 12.2.4    | CSVreader component procedures. . . . .              | 96        |
| 12.2.5    | Implementation of CSVreader. . . . .                 | 97        |
| 12.2.6    | Invoking CSVreader. . . . .                          | 98        |

|         |                                               |     |
|---------|-----------------------------------------------|-----|
| 12.2.7  | Calling CSVreader_describe. . . . .           | 98  |
| 12.2.8  | Inside CSVreader_describe. . . . .            | 100 |
| 12.2.9  | Result of CSVreader_describe. . . . .         | 101 |
| 12.2.10 | Virtual processor for CSVreader. . . . .      | 103 |
| 12.2.11 | Calling CSVreader_start. . . . .              | 103 |
| 12.2.12 | Inside CSVreader_start. . . . .               | 104 |
| 12.2.13 | Calling CSVreader_fulfill. . . . .            | 104 |
| 12.2.14 | Inside CSVreader_fulfill. . . . .             | 104 |
| 12.2.15 | Collecting the output. . . . .                | 105 |
| 12.2.16 | Calling CSVreader_finish. . . . .             | 105 |
| 12.2.17 | Inside CSVreader_finish. . . . .              | 106 |
| 12.2.18 | Cleanup. . . . .                              | 106 |
| 12.3    | Pivot. . . . .                                | 107 |
| 12.3.1  | Overview. . . . .                             | 107 |
| 12.3.2  | Functional specification of Pivot. . . . .    | 107 |
| 12.3.3  | Design specification for Pivot. . . . .       | 108 |
| 12.3.4  | Pivot component procedures. . . . .           | 108 |
| 12.3.5  | Invoking pivot. . . . .                       | 109 |
| 12.3.6  | Calling Pivot_describe. . . . .               | 109 |
| 12.3.7  | Inside Pivot_describe. . . . .                | 113 |
| 12.3.8  | Result of Pivot_describe. . . . .             | 115 |
| 12.3.9  | Virtual processors for Pivot. . . . .         | 117 |
| 12.3.10 | Calling Pivot_fulfill. . . . .                | 117 |
| 12.3.11 | Inside Pivot_fulfill. . . . .                 | 118 |
| 12.3.12 | Collecting the results. . . . .               | 118 |
| 12.3.13 | Cleanup. . . . .                              | 119 |
| 12.4    | Score. . . . .                                | 120 |
| 12.4.1  | Overview. . . . .                             | 120 |
| 12.4.2  | Functional specification of Score. . . . .    | 120 |
| 12.4.3  | Design specification for Score. . . . .       | 120 |
| 12.4.4  | Score component procedures. . . . .           | 121 |
| 12.4.5  | Invoking Score. . . . .                       | 122 |
| 12.4.6  | Calling Score_describe. . . . .               | 122 |
| 12.4.7  | Inside Score_describe. . . . .                | 125 |
| 12.4.8  | Result of Score_describe. . . . .             | 126 |
| 12.4.9  | Virtual processors for Score. . . . .         | 127 |
| 12.4.10 | Calling Score_fulfill. . . . .                | 129 |
| 12.4.11 | Inside Score_fulfill. . . . .                 | 129 |
| 12.4.12 | Collecting the output. . . . .                | 130 |
| 12.4.13 | Cleanup. . . . .                              | 131 |
| 12.5    | TopNplus. . . . .                             | 132 |
| 12.5.1  | Overview. . . . .                             | 132 |
| 12.5.2  | Functional specification of TopNplus. . . . . | 132 |
| 12.5.3  | Design specification for TopNplus. . . . .    | 132 |

|         |                                              |     |
|---------|----------------------------------------------|-----|
| 12.5.4  | TopNplus component procedures. ....          | 133 |
| 12.5.5  | Invoking TopNplus. ....                      | 134 |
| 12.5.6  | Calling TopNplus_describe. ....              | 134 |
| 12.5.7  | Inside TopNplus_describe. ....               | 137 |
| 12.5.8  | Result of TopNplus_describe. ....            | 139 |
| 12.5.9  | Virtual processors for TopNplus. ....        | 139 |
| 12.5.10 | Calling TopNplus_fulfill. ....               | 141 |
| 12.5.11 | Inside TopNplus_fulfill. ....                | 141 |
| 12.5.12 | Collecting the output. ....                  | 142 |
| 12.5.13 | Cleanup. ....                                | 142 |
| 12.5.14 | TopNplus using pass-through columns. ....    | 143 |
| 12.6    | ExecR. ....                                  | 145 |
| 12.6.1  | Overview. ....                               | 145 |
| 12.6.2  | Functional specification of ExecR. ....      | 145 |
| 12.6.3  | Design specification for ExecR. ....         | 145 |
| 12.6.4  | ExecR component procedures. ....             | 146 |
| 12.6.5  | Invoking ExecR. ....                         | 147 |
| 12.6.6  | Calling ExecR_describe. ....                 | 147 |
| 12.6.7  | Inside ExecR_describe. ....                  | 149 |
| 12.6.8  | Result of ExecR_describe. ....               | 150 |
| 12.6.9  | Virtual processors for ExecR. ....           | 150 |
| 12.6.10 | Calling ExecR_start. ....                    | 151 |
| 12.6.11 | Inside ExecR_start. ....                     | 152 |
| 12.6.12 | Calling ExecR_fulfill. ....                  | 152 |
| 12.6.13 | Inside ExecR_fulfill. ....                   | 152 |
| 12.6.14 | Collecting the output. ....                  | 153 |
| 12.6.15 | Calling ExecR_finish. ....                   | 153 |
| 12.6.16 | Inside ExecR_finish. ....                    | 153 |
| 12.6.17 | Cleanup. ....                                | 153 |
| 12.7    | Similarity. ....                             | 154 |
| 12.7.1  | Overview. ....                               | 154 |
| 12.7.2  | Functional specification of Similarity. .... | 154 |
| 12.7.3  | Design specification for Similarity. ....    | 154 |
| 12.7.4  | Similarity component procedures. ....        | 155 |
| 12.7.5  | Invoking Similarity. ....                    | 156 |
| 12.7.6  | Calling Similarity_describe. ....            | 156 |
| 12.7.7  | Inside Similarity_describe. ....             | 158 |
| 12.7.8  | Result of Similarity_describe. ....          | 159 |
| 12.7.9  | Virtual processors for Similarity. ....      | 159 |
| 12.7.10 | Calling Similarity_fulfill. ....             | 163 |
| 12.7.11 | Inside Similarity_fulfill. ....              | 163 |
| 12.7.12 | Collecting the output. ....                  | 164 |
| 12.7.13 | Cleanup. ....                                | 164 |
| 12.8    | UDjoin. ....                                 | 165 |

|                              |                                                          |            |
|------------------------------|----------------------------------------------------------|------------|
| 12.8.1                       | Overview. . . . .                                        | 165        |
| 12.8.2                       | Functional specification of UDjoin. . . . .              | 165        |
| 12.8.3                       | Design specification for UDjoin. . . . .                 | 165        |
| 12.8.4                       | UDjoin component procedures. . . . .                     | 166        |
| 12.8.5                       | Invoking UDjoin. . . . .                                 | 167        |
| 12.8.6                       | Calling UDjoin_describe. . . . .                         | 167        |
| 12.8.7                       | Inside UDjoin_describe. . . . .                          | 168        |
| 12.8.8                       | Result of UDjoin_describe. . . . .                       | 168        |
| 12.8.9                       | Virtual processors for UDjoin. . . . .                   | 168        |
| 12.8.10                      | Calling UDjoin_fulfill. . . . .                          | 168        |
| 12.8.11                      | Inside UDjoin_fulfill. . . . .                           | 169        |
| 12.8.12                      | Collecting the output. . . . .                           | 170        |
| 12.8.13                      | Cleanup. . . . .                                         | 170        |
| 12.9                         | Nested PTF invocation. . . . .                           | 171        |
| 12.9.1                       | Nested PTF syntax and semantics. . . . .                 | 171        |
| 12.9.2                       | Nested PTF compilation. . . . .                          | 174        |
| 12.9.3                       | Nested PTF execution. . . . .                            | 175        |
| 12.9.4                       | The PTF author's view of nested PTF invocations. . . . . | 176        |
| <b>Bibliography. . . . .</b> |                                                          | <b>177</b> |
| <b>Index. . . . .</b>        |                                                          | <b>179</b> |

ISO/IEC TR 19075-7:2017

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## Tables

| <b>Table</b>                                                                  | <b>Page</b> |
|-------------------------------------------------------------------------------|-------------|
| 1 Primary audiences for Clauses and Subclauses in this Technical Report. .... | 20          |
| 2 PTF routine characteristics. ....                                           | 41          |
| 3 Table parameter semantics. ....                                             | 43          |
| 4 Corresponding PTF component procedure parameters. ....                      | 44          |
| 5 PTF descriptor area. ....                                                   | 52          |
| 6 PTF descriptor area header. ....                                            | 52          |
| 7 Relevant SQL item descriptor components. ....                               | 53          |

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Figures

| Figure                                        | Page |
|-----------------------------------------------|------|
| 1 PTF information flow. . . . .               | 28   |
| 2 Row type relationships. . . . .             | 29   |
| 3 Nested PTF data flow. . . . .               | 172  |
| 4 Flow of row types. . . . .                  | 174  |
| 5 Simplified flow of row types. . . . .       | 175  |
| 6 Net effect of complete compilation. . . . . | 175  |

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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](http://www.iso.org/directives)).

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

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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, “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.

**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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