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**Information technology — Guidance  
for the use of database language  
SQL —**

**Part 7:  
Polymorphic table functions**

*Technologies de l'information — Recommandations pour l'utilisation  
du langage de base de données SQL —*

*Partie 7: Fonctions de table polymorphes*





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<b>Contents</b>	Page
Foreword.....	xii
Introduction.....	xiv
<b>1 Scope.....</b>	<b>1</b>
<b>2 Normative references.....</b>	<b>2</b>
<b>3 Terms and definitions.....</b>	<b>3</b>
<b>4 Introduction to polymorphic table functions.....</b>	<b>4</b>
4.1 Context of polymorphic table functions.....	4
4.2 What is a polymorphic table function?.....	4
4.3 Audiences.....	4
4.4 Motivating examples.....	5
4.4.1 Summary of motivating examples.....	5
4.4.2 CSVreader.....	5
4.4.3 Pivot.....	6
4.4.4 Score.....	8
4.4.5 TopNplus.....	11
4.4.6 ExecR.....	14
4.4.7 Similarity.....	15
4.4.8 UDjoin.....	17
4.4.9 MapReduce.....	18
4.5 The life cycle of a PTF.....	19
<b>5 PTF processing model.....</b>	<b>21</b>
5.1 Introduction to the PTF processing model.....	21
5.2 Processing phases.....	21
5.3 Virtual processors.....	21
5.4 PTF component procedures.....	21
5.5 Input table characteristics.....	22
5.6 Partitioning and ordering.....	23
5.7 Flow of control.....	24
5.8 Flow of information.....	25
5.9 Flow of row types.....	26
5.10 Pass-through columns.....	27
5.11 Security model.....	28
5.12 Conformance features.....	29
<b>6 Specification.....</b>	<b>31</b>
6.1 Introduction to the specification of PTFs.....	31
6.2 Functional specification.....	31
6.2.1 Introduction to the functional specification.....	31
6.2.2 Parameter list.....	31

6.2.3	Input table semantics. . . . .	32
6.2.4	Prunability. . . . .	33
6.2.5	Pass-through columns. . . . .	33
6.2.6	Result row type. . . . .	34
6.2.7	Determinism. . . . .	34
6.2.8	SQL-data access. . . . .	35
6.2.9	Documenting the PTF to the query author. . . . .	35
6.3	Design specification. . . . .	36
6.3.1	Introduction to the design specification. . . . .	36
6.3.2	Name the component procedures. . . . .	36
6.3.3	Private data. . . . .	36
6.3.4	Routine characteristics of the component procedures. . . . .	37
6.3.5	Component procedure signatures. . . . .	38
<b>7</b>	<b>Data definition language. . . . .</b>	<b>43</b>
7.1	Introduction to data definition language. . . . .	43
7.2	PTF creation. . . . .	43
7.3	PTF component procedures. . . . .	45
7.4	Altering PTF component procedures and PTFs. . . . .	45
7.5	Dropping a PTF and its component procedures. . . . .	45
<b>8</b>	<b>Implementation. . . . .</b>	<b>46</b>
8.1	Introduction to PTF implementation. . . . .	46
8.2	PTF descriptor areas. . . . .	46
8.2.1	Introduction to PTF descriptor areas. . . . .	46
8.2.2	PTF descriptor area header. . . . .	47
8.2.3	SQL item descriptor areas for row types. . . . .	48
8.2.4	SQL item descriptor areas for partitioning. . . . .	51
8.2.5	SQL item descriptor areas for ordering. . . . .	51
8.3	PTF extended names. . . . .	52
8.4	Reading a PTF descriptor area. . . . .	52
8.5	Writing a PTF descriptor area. . . . .	53
8.5.1	Introduction to writing a PTF descriptor area. . . . .	53
8.5.2	Using DESCRIBE to populate a PTF descriptor area. . . . .	53
8.5.3	Using SET DESCRIPTOR to populate a PTF descriptor area. . . . .	54
8.5.4	Using COPY DESCRIPTOR to populate a PTF descriptor area. . . . .	55
8.6	Reading a PTF input cursor. . . . .	55
8.7	Outputting a row. . . . .	56
<b>9</b>	<b>Invocation. . . . .</b>	<b>58</b>
9.1	Introduction to PTF invocation. . . . .	58
9.2	<table primary>. . . . .	58
9.3	<PTF derived table>. . . . .	58
9.4	Proper result correlation name and proper result column naming. . . . .	58
9.5	<routine invocation>. . . . .	59
9.6	<table argument>. . . . .	60
9.7	<table argument proper>. . . . .	60
9.7.1	Types of table arguments. . . . .	60
9.7.2	<table or query name>. . . . .	61

9.7.3	<table subquery>.....	61
9.7.4	Nested table function invocation. ....	62
9.8	Table argument correlation name. ....	62
9.9	Table argument column renaming. ....	62
9.10	Range variables and column renaming in nested PTF. ....	63
9.11	Partitioning. ....	63
9.12	Pruning. ....	64
9.13	Ordering. ....	64
9.14	Co-partitioning. ....	65
9.15	Cross products of partitions. ....	66
9.16	<descriptor argument>.....	66
<b>10</b>	<b>Compilation.....</b>	<b>67</b>
10.1	Introduction to PTF compilation. ....	67
10.2	Calling the describe component procedure. ....	67
10.3	Inside the describe component procedure. ....	67
10.4	Using the result of describe. ....	68
<b>11</b>	<b>Optimization.....</b>	<b>69</b>
<b>12</b>	<b>Execution.....</b>	<b>70</b>
12.1	Introduction to PTF execution. ....	70
12.2	Partitions and virtual processors. ....	70
12.3	Calling the start component procedure. ....	71
12.4	Inside the start component procedure. ....	71
12.5	Calling the PTF fulfill component procedure. ....	72
12.6	Inside the PTF fulfill component procedure. ....	72
12.7	Closing cursors. ....	72
12.8	Calling the PTF finish component procedure. ....	72
12.9	Inside the PTF finish component procedure. ....	73
12.10	Collecting the output. ....	73
12.11	Cleanup on a virtual processor. ....	73
12.12	Final result. ....	73
<b>13</b>	<b>Examples.....</b>	<b>74</b>
13.1	Introduction to the examples. ....	74
13.2	Projection. ....	75
13.2.1	Overview. ....	75
13.2.2	Functional specification of Projection. ....	75
13.2.3	Design specification for Projection. ....	76
13.2.4	Projection component procedures. ....	76
13.2.5	Invoking Projection. ....	78
13.2.6	Calling Projection_describe. ....	78
13.2.7	Inside Projection_describe. ....	80
13.2.8	Result of Projection_describe. ....	82
13.2.9	Virtual processors for Projection. ....	82
13.2.10	Calling Projection_fulfill. ....	83
13.2.11	Inside Projection_fulfill. ....	84
13.2.12	Collecting the results. ....	84
13.2.13	Cleanup. ....	85

13.3	CSVreader. ....	86
13.3.1	Overview. ....	86
13.3.2	Functional specification of CSVreader. ....	86
13.3.3	Design specification for CSVreader. ....	86
13.3.4	CSVreader component procedures. ....	87
13.3.5	Implementation of CSVreader. ....	88
13.3.6	Invoking CSVreader. ....	88
13.3.7	Calling CSVreader_describe. ....	89
13.3.8	Inside CSVreader_describe. ....	91
13.3.9	Result of CSVreader_describe. ....	92
13.3.10	Virtual processor for CSVreader. ....	94
13.3.11	Calling CSVreader_start. ....	94
13.3.12	Inside CSVreader_start. ....	95
13.3.13	Calling CSVreader_fulfill. ....	95
13.3.14	Inside CSVreader_fulfill. ....	95
13.3.15	Collecting the output. ....	96
13.3.16	Calling CSVreader_finish. ....	96
13.3.17	Inside CSVreader_finish. ....	96
13.3.18	Cleanup. ....	97
13.4	Pivot. ....	98
13.4.1	Overview. ....	98
13.4.2	Functional specification of Pivot. ....	98
13.4.3	Design specification for Pivot. ....	98
13.4.4	Pivot component procedures. ....	99
13.4.5	Invoking Pivot. ....	100
13.4.6	Calling Pivot_describe. ....	100
13.4.7	Inside Pivot_describe. ....	104
13.4.8	Result of Pivot_describe. ....	105
13.4.9	Virtual processors for Pivot. ....	107
13.4.10	Calling Pivot_fulfill. ....	108
13.4.11	Inside Pivot_fulfill. ....	108
13.4.12	Collecting the results. ....	109
13.4.13	Cleanup. ....	109
13.5	Score. ....	110
13.5.1	Overview. ....	110
13.5.2	Functional specification of Score. ....	110
13.5.3	Design specification for Score. ....	110
13.5.4	Score component procedures. ....	111
13.5.5	Invoking Score. ....	112
13.5.6	Calling Score_describe. ....	112
13.5.7	Inside Score_describe. ....	115
13.5.8	Result of Score_describe. ....	116
13.5.9	Virtual processors for Score. ....	117
13.5.10	Calling Score_fulfill. ....	119
13.5.11	Inside Score_fulfill. ....	119
13.5.12	Collecting the output. ....	120
13.5.13	Cleanup. ....	121

13.6	TopNplus. ....	122
13.6.1	Overview. ....	122
13.6.2	Functional specification of TopNplus. ....	122
13.6.3	Design specification for TopNplus. ....	122
13.6.4	TopNplus component procedures. ....	123
13.6.5	Invoking TopNplus. ....	124
13.6.6	Calling TopNplus_describe. ....	124
13.6.7	Inside TopNplus_describe. ....	127
13.6.8	Result of TopNplus_describe. ....	129
13.6.9	Virtual processors for TopNplus. ....	129
13.6.10	Calling TopNplus_fulfill. ....	131
13.6.11	Inside TopNplus_fulfill. ....	131
13.6.12	Collecting the output. ....	132
13.6.13	Cleanup. ....	132
13.6.14	TopNplus using pass-through columns. ....	132
13.7	ExecR. ....	135
13.7.1	Overview. ....	135
13.7.2	Functional specification of ExecR. ....	135
13.7.3	Design specification for ExecR. ....	135
13.7.4	ExecR component procedures. ....	136
13.7.5	Invoking ExecR. ....	137
13.7.6	Calling ExecR_describe. ....	137
13.7.7	Inside ExecR_describe. ....	139
13.7.8	Result of ExecR_describe. ....	140
13.7.9	Virtual processors for ExecR. ....	140
13.7.10	Calling ExecR_start. ....	141
13.7.11	Inside ExecR_start. ....	141
13.7.12	Calling ExecR_fulfill. ....	142
13.7.13	Inside ExecR_fulfill. ....	142
13.7.14	Collecting the output. ....	142
13.7.15	Calling ExecR_finish. ....	143
13.7.16	Inside ExecR_finish. ....	143
13.7.17	Cleanup. ....	143
13.8	Similarity. ....	144
13.8.1	Overview. ....	144
13.8.2	Functional specification of Similarity. ....	144
13.8.3	Design specification for Similarity. ....	144
13.8.4	Similarity component procedures. ....	145
13.8.5	Invoking Similarity. ....	145
13.8.6	Calling Similarity_describe. ....	146
13.8.7	Inside Similarity_describe. ....	148
13.8.8	Result of Similarity_describe. ....	149
13.8.9	Virtual processors for Similarity. ....	149
13.8.10	Calling Similarity_fulfill. ....	153
13.8.11	Inside Similarity_fulfill. ....	153
13.8.12	Collecting the output. ....	154
13.8.13	Cleanup. ....	154

## ISO/IEC 19075-7:2021(E)

13.9	UDjoin.....	155
13.9.1	Overview.....	155
13.9.2	Functional specification of UDjoin.....	155
13.9.3	Design specification for UDjoin.....	155
13.9.4	UDjoin component procedures.....	156
13.9.5	Invoking UDjoin.....	156
13.9.6	Calling UDjoin_describe.....	157
13.9.7	Inside UDjoin_describe.....	157
13.9.8	Result of UDjoin_describe.....	158
13.9.9	Virtual processors for UDjoin.....	158
13.9.10	Calling UDjoin_fulfill.....	158
13.9.11	Inside UDjoin_fulfill.....	159
13.9.12	Collecting the output.....	159
13.9.13	Cleanup.....	159
13.10	Nested PTF invocation.....	160
13.10.1	Introduction to nested PTF invocation.....	160
13.10.2	Nested PTF syntax and semantics.....	160
13.10.3	Nested PTF compilation.....	162
13.10.4	Nested PTF execution.....	164
13.10.5	The PTF author's view of nested PTF invocations.....	165
<b>Bibliography.....</b>		<b>166</b>
<b>Index.....</b>		<b>167</b>



## Tables

<b>Table</b>	<b>Page</b>
1	Results of CVSreader sample query. . . . . 6
2	Sample data for pivot example. . . . . 8
3	Pivot example result with sample data. . . . . 8
4	Score example: contents of Model table. . . . . 10
5	Score example: data to be scored. . . . . 10
6	Score example: result. . . . . 10
7	TopNplus example: input data. . . . . 12
8	TopNplus example: East input data. . . . . 12
9	TopNplus example: West input data. . . . . 12
10	TopNplus example: result. . . . . 13
11	TopNplus example: result with statistics. . . . . 14
12	Similarity example: result. . . . . 17
13	UDjoin example: result. . . . . 18
14	Primary audiences for Clauses and Subclauses in this document. . . . . 19
15	Examples and table parameter characteristics. . . . . 23
16	Schematic execution plan. . . . . 24
17	PTF routine characteristics. . . . . 37
18	Table parameter semantics. . . . . 39
19	Corresponding PTF component procedure parameters. . . . . 40
20	PTF descriptor area. . . . . 47
21	PTF descriptor area header. . . . . 47
22	Relevant SQL item descriptor components. . . . . 48
23	Scenarios illustrated by the examples. . . . . 74
24	Deriving parameter names. . . . . 77
25	Descriptor for Emp's row type. . . . . 78
26	Input table's requested row type. . . . . 79
27	Descriptor generated from query's argument. . . . . 79
28	Descriptor of initial result row. . . . . 80
29	Populated input request descriptor. . . . . 82
30	Populated initial result row descriptor. . . . . 82
31	Input cursor's row type descriptor. . . . . 83
32	PTF descriptor area for floats. . . . . 90
33	PTF descriptor area for dates. . . . . 90
34	PTF descriptor area for initial result. . . . . 90
35	PTF descriptor area after describe of initial result. . . . . 92
36	Row type corresponding to descriptor. . . . . 93
37	Pivot: row type descriptor. . . . . 101
38	Pivot: requested row type descriptor. . . . . 102
39	Pivot: descriptor for first argument. . . . . 102
40	Pivot: descriptor for second argument. . . . . 103
41	Pivot: descriptor for third argument. . . . . 103
42	Pivot: initial row type descriptor. . . . . 104
43	Pivot: requested row type descriptor. . . . . 106
44	Pivot: initial result row type descriptor. . . . . 106
45	Pivot: columns of the result row type. . . . . 107
46	Score: first argument full row type descriptor. . . . . 112
47	Score: first argument requested row type descriptor. . . . . 113

48	Score: second argument full row type descriptor. . . . .	113
49	Score: second argument partitioning descriptor. . . . .	114
50	Score: second argument ordering descriptor. . . . .	114
51	Score: initial result row type descriptor. . . . .	115
52	Score: first input table requested row descriptors. . . . .	116
53	Score: second input table requested row descriptors. . . . .	116
54	Score: result row type. . . . .	117
55	Score: second input table data. . . . .	117
56	Score: first input table data. . . . .	118
57	Score: virtual processor cursors. . . . .	118
58	Score: full row type descriptor. . . . .	125
59	Score: partitioning descriptor. . . . .	126
60	Score: ordering descriptor. . . . .	126
61	Score: requested row type descriptor. . . . .	126
62	Score: intermediate row type descriptor. . . . .	127
63	Score: complete result row type. . . . .	129
64	Wcore: sample data. . . . .	129
65	ExecR: input table partitioning descriptor. . . . .	138
66	ExecR: fifth descriptor. . . . .	138
67	ExecR: sixth descriptor. . . . .	139
68	ExecR: result row type descriptor. . . . .	140
69	Similarity: full row type descriptor for Input1. . . . .	146
70	Similarity: partitioning descriptor for Input1. . . . .	147
71	Similarity: ordering descriptor for Input1. . . . .	147
72	Similarity: result row type. . . . .	149
73	Similarity: query result. . . . .	149
74	Similarity: master list query result. . . . .	151
75	Similarity: master list query result without co-partitioning. . . . .	152
76	Similarity: complete output. . . . .	154
77	UDjoin: result row type. . . . .	158
78	Nested PTF posited PTFs. . . . .	160

## Figures

<b>Figure</b>		<b>Page</b>
1	PTF information flow. . . . .	26
2	Row type relationships. . . . .	27
3	Nested PTF data flow. . . . .	161
4	Flow of row types. . . . .	163
5	Simplified flow of row types. . . . .	164
6	Net effect of complete compilation. . . . .	164

## 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.

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## Introduction

The organization of this document is as follows:

- 1) **Clause 1, “Scope”**, specifies the scope of this document.
- 2) **Clause 2, “Normative references”**, identifies additional standards that, through reference in this document, constitute provisions of this document.
- 3) **Clause 3, “Terms and definitions”**, defines the terms and definitions used in this document.
- 4) **Clause 4, “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.
- 5) **Clause 5, “PTF processing model”**, describes the abstract processing model for polymorphic table functions in the context of an SQL-implementation.
- 6) **Clause 6, “Specification”**, describes the manner in which polymorphic table functions are specified in the SQL standard.
- 7) **Clause 7, “Data definition language”**, provides the syntax and semantics of the SQL statements that create, modify, and drop polymorphic table functions.
- 8) **Clause 8, “Implementation”**, guides authors of polymorphic table functions through the steps required to create all of the functions necessary to accomplish particular purposes.
- 9) **Clause 9, “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.
- 10) **Clause 10, “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.
- 11) **Clause 11, “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.
- 12) **Clause 12, “Execution”**, discusses the details of executing polymorphic table functions in the context of the processing model.
- 13) **Clause 13, “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 — Guidance for the use of database language SQL —****Part 7:****Polymorphic table functions****1 Scope**

This document 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.