ISO/IEC 9075-11:2008-07 (E)

Information technology_- Database languages_- SQL_- Part_11: Information and Definition Schemas (SQL/Schemata)

Contents

Page

Foreword ix

Introduction x

1 Scope 1

2 Normative references 3
2.1 ISO and IEC standards 3

3 Definitions, notations, and conventions 5
3.1 Conventions 5

4 Concepts 7
4.1 Introduction to the Definition Schema 7
4.2 Introduction to the Information Schema 8

5 Information Schema 9
5.1 INFORMATION_SCHEMA Schema 9
5.2 INFORMATION_SCHEMA_CATALOG_NAME base table 10
5.3 CARDINAL_NUMBER domain 11
5.4 CHARACTER_DATA domain 12
5.5 SQL_IDENTIFIER domain 13
5.6 TIME_STAMP domain 14
5.7 YES_OR_NO domain 15
5.8 ADMINISTRABLE_ROLE_AUTHORIZATIONS view 16
5.9 APPLICABLE_ROLES view 17
5.10 ASSERTIONS view 18
5.11 ATTRIBUTES view 19
5.12 CHARACTER_SETS view 21
5.13 CHECK_CONSTRAINT_ROUTINE_USAGE view 22
5.14 CHECK_CONSTRAINTS view 23
5.15 COLLATIONS view 24
5.16 COLLATION_CHARACTER_SET_APPLICABILITY view 25
5.17 COLUMN_COLUMN_USAGE view 26
5.18 COLUMN_DOMAIN_USAGE view 27
5.19 COLUMN_PRIVILEGES view 28
5.20 COLUMN_UDT_USAGE view 29
5.21 COLUMNS view 30
5.22 CONSTRAINT_COLUMN_USAGE view 33
5.23 CONSTRAINT_TABLE_USAGE view 35
5.24 DATA_TYPE_PRIVILEGES view 37
5.25 DIRECT_SUPERTABLES view 39
5.26 DIRECT_SUPERTYPES view 40
5.27 DOMAIN_CONSTRAINTS view 41
5.28 DOMAINS view 42
5.29 ELEMENT_TYPES view 44
5.30 ENABLED_ROLES view 45
5.31 FIELDS view 46
5.32 KEY_COLUMN_USAGE view 48
5.33 METHOD_SPECIFICATION_PARAMETERS view 50
5.34 METHOD_SPECIFICATIONS view 52
5.35 PARAMETERS view 55

5.36 REFERENCED_TYPES view ... 57
5.37 REFERENTIAL_CONSTRAINTS view ... 58
5.38 ROLE_COLUMN_GRANTS view ... 59
5.39 ROLE_ROUTINE_GRANTS view ... 60
5.40 ROLE_TABLE_GRANTS view ... 61
5.41 ROLE_TABLE_METHOD_GRANTS view ... 62
5.42 ROLE_USAGE_GRANTS view ... 63
5.43 ROLE_UDT_GRANTS view ... 64
5.44 ROUTINE_COLUMN_USAGE view ... 65
5.45 ROUTINE_PRIVILEGES view ... 66
5.46 ROUTINE_ROUTINE_USAGE view ... 67
5.47 ROUTINE_SEQUENCE_USAGE view ... 68
5.48 ROUTINE_TABLE_USAGE view ... 69
5.49 ROUTINES view ... 70
5.50 SCHEMATA view ... 73
5.51 SEQUENCES view ... 74
5.52 SQL_FEATURES view ... 75
5.53 SQL_IMPLEMENTATION_INFO view ... 76
5.54 SQL_PACKAGES view ... 77
5.55 SQL_PARTS view ... 78
5.56 SQL_SIZING view ... 79
5.57 SQL_SIZING_PROFILES view ... 80
5.58 TABLE_CONSTRAINTS view ... 81
5.59 TABLE_METHOD_PRIVILEGES view ... 82
5.60 TABLE_PRIVILEGES view ... 83
5.61 TABLES view ... 84
5.62 TRANSFORMS view ... 85
5.63 TRANSLATIONS view ... 86
5.64 TRIGGERED_UPDATE_COLUMNS view ... 87
5.65 TRIGGER_COLUMN_USAGE view ... 88
5.66 TRIGGER_ROUTINE_USAGE view ... 89
5.67 TRIGGER_SEQUENCE_USAGE view ... 90
5.68 TRIGGER_TABLE_USAGE view ... 91
5.69 TRIGGERS view ... 92
5.70 UDT_PRIVILEGES view ... 94
5.71 USAGE_PRIVILEGES view ... 95
5.72 USER_DEFINED_TYPES view ... 96
5.73 VIEW_COLUMN_USAGE view ... 98
5.74 VIEW_ROUTINE_USAGE view ... 99
5.75 VIEW_TABLE_USAGE view ... 100
5.76 VIEWS view ... 101
5.77 Short name views ... 102

6 Definition Schema ... 121
6.1 DEFINITION_SCHEMA Schema ... 121
6.2 EQUAL_KEY_DEGREES assertion ... 122
6.3 KEY_DEGREE_GREATER_THAN_OR_EQUAL_TO_1 assertion ... 123
6.4 UNIQUE_CONSTRAINT_NAME assertion ... 124
6.5 ASSERTIONS base table ... 125
6.6 ATTRIBUTES base table ... 127
6.7 AUTHORIZATIONS base table ... 129
6.8 CATALOG_NAME base table ... 130
6.9 CHARACTER_ENCODING_FORMS base table ... 131
6.10 CHARACTER_REPERTOIRES base table ... 132
6.11 CHARACTER_SETS base table ... 133
6.12 CHECK_COLUMN_USAGE base table ... 135
6.13 CHECK_CONSTRAINT_ROUTINE_USAGE base table ... 136
6.14 CHECK_CONSTRAINTS base table ... 137
6.15 CHECK_TABLE_USAGE base table ... 138
6.16 COLLATIONS base table ... 139
6.17 COLLATION_CHARACTER_SET_APPLICABILITY base table ... 140
6.18 COLUMN_COLUMN_USAGE base table ... 141

6.19 COLUMN_PRIVILEGES base table 142
6.20 COLUMNS base table 144
6.21 DATA_TYPE_DESCRIPTOR base table 149
6.22 DIRECT_SUPERTABLES base table 159
6.23 DIRECT_SUPERTYPES base table 161
6.24 DOMAIN_CONSTRAINTS base table 163
6.25 DOMAINS base table 165
6.26 ELEMENT_TYPES base table 166
6.27 FIELDS base table 168
6.28 KEY_COLUMN_USAGE base table 170
6.29 METHOD_SPECIFICATION_PARAMETERS base table 172
6.30 METHOD_SPECIFICATIONS base table 174
6.31 PARAMETERS base table 179
6.32 REFERENCED_TYPES base table 182
6.33 REFERENTIAL_CONSTRAINTS base table 184
6.34 ROLE_AUTHORIZATION_DESCRIPTORS base table 187
6.35 ROUTINE_COLUMN_USAGE base table 189
6.36 ROUTINE_PRIVILEGES base table 190
6.37 ROUTINE_ROUTINE_USAGE base table 192
6.38 ROUTINE_SEQUENCE_USAGE base table 193
6.39 ROUTINE_TABLE_USAGE base table 194
6.40 ROUTINES base table 195
6.41 SCHEMATA base table 202
6.42 SEQUENCES base table 204
6.43 SQL_CONFORMANCE base table 206
6.44 SQL_IMPLEMENTATION_INFO base table 208
6.45 SQL_SIZING base table 209
6.46 SQL_SIZING_PROFILES base table 211
6.47 TABLE_CONSTRAINTS base table 213
6.48 TABLE_METHOD_PRIVILEGES base table 215
6.49 TABLE_PRIVILEGES base table 217
6.50 TABLES base table 220
6.51 TRANSFORMS base table 224
6.52 TRANSLATIONS base table 226
6.53 TRIGGERED_UPDATE_COLUMNS base table 228
6.54 TRIGGER_COLUMN_USAGE base table 229
6.55 TRIGGER_ROUTINE_USAGE base table 230
6.56 TRIGGER_SEQUENCE_USAGE base table 231
6.57 TRIGGER_TABLE_USAGE base table 232
6.58 TRIGGERS base table 233
6.59 USAGE_PRIVILEGES base table 236
6.60 USER_DEFINED_TYPE_PRIVILEGES base table 238
6.61 USER_DEFINED_TYPES base table 240
6.62 VIEW_COLUMN_USAGE base table 244
6.63 VIEW_ROUTINE_USAGE base table 245
6.64 VIEW_TABLE_USAGE base table 246
6.65 VIEWS base table 247

7 Conformance 251
7.1 Claims of conformance to SQL/Schemata 251
7.2 Additional conformance requirements for SQL/Schemata 251
7.3 Implied feature relationships of SQL/Schemata 251

Annex A SQL Conformance Summary (informative) 253

Annex B Implementation-defined elements (informative) 271

Annex C Implementation-dependent elements (informative) 273

Annex D Deprecated features (informative) 275

Annex E Incompatibilities with ISO/IEC 9075:2003 (informative) 277

Annex F SQL feature taxonomy (informative) 279

Annex G Defect reports not addressed in this edition of this part of ISO/IEC 9075 (informative) 283

Index 285

Table

Page

1 Implied feature relationships of SQL/Schemata. 251
2 Feature taxonomy and definition for mandatory features. 279
3 Feature taxonomy for optional features. 281