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Australian Standard®

**Information processing systems—
Database language SQL with
integrity enhancement**



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PREFACE

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CONTENTS

	<i>Page</i>
1. Scope and field of application	5
2. References	6
3. Overview	7
3.1 Organization	7
3.2 Notation	7
3.3 Conventions	8
3.4 Conformance	8
4. Concepts	10
4.1 Sets	10
4.2 Data types	10
4.2.1 Character strings	10
4.2.2 Numbers	10
4.3 Columns	11
4.4 Tables	11
4.5 Integrity constraints	12
4.6 Schemas	12
4.7 The database	12
4.8 Modules	13
4.9 Procedures	13
4.10 Parameters	13
4.10.1 SQLCODE parameter	13
4.10.2 Indicator parameters	13
4.11 Standard programming languages	13
4.12 Cursors	14
4.13 Statements	15
4.14 Embedded syntax	15
4.15 Privileges	15
4.16 Transactions	16
5. Common elements	17
5.1 < character >	17
5.2 < literal >	18
5.3 < token >	20
5.4 Names	22
5.5 < data type >	24
5.6 < value specification > and < target specification >	26
5.7 < column specification >	28
5.8 < set function specification >	29
5.9 < value expression >	31
5.10 < predicate >	33
5.11 < comparison predicate >	34
5.12 < between predicate >	35
5.13 < in predicate >	36
5.14 < like predicate >	37
5.15 < null predicate >	39
5.16 < quantified predicate >	40
5.17 < exists predicate >	41
5.18 < search condition >	42
5.19 < table expression >	44
5.20 < from clause >	45

	<i>Page</i>
5.21 < where clause >	47
5.22 < group by clause >	48
5.23 < having clause >	49
5.24 < subquery >	50
5.25 < query specification >	52
6. Schema definition language	54
6.1 < schema >	54
6.2 < table definition >	55
6.3 < column definition >	56
6.4 < default clause >	58
6.5 < table constraint definition >	60
6.6 < unique constraint definition >	61
6.7 < referential constraint definition >	62
6.8 < check constraint definition >	64
6.9 < view definition >	65
6.10 < privilege definition >	67
7. Module language	69
7.1 < module >	69
7.2 < module name clause >	70
7.3 < procedure >	71
8. Data manipulation language	75
8.1 < close statement >	75
8.2 < commit statement >	76
8.3 < declare cursor >	77
8.4 < delete statement: positioned >	81
8.5 < delete statement: searched >	82
8.6 < fetch statement >	83
8.7 < insert statement >	85
8.8 < open statement >	88
8.9 < rollback statement >	89
8.10 < select statement >	90
8.11 < update statement: positioned >	92
8.12 < update statement: searched >	94
9. Levels	96
Annexes	99
Annex A. < embedded SQL host program >	99
Annex B. < embedded exception declaration >	103
Annex C. < embedded SQL COBOL program >	105
Annex D. < embedded SQL FORTRAN program >	107
Annex E. < embedded SQL Pascal program >	109
Annex F. < embedded SQL PL/I program >	111
Index	113

Information processing systems—Database language SQL with integrity enhancement

1. Scope and field of application

This standard specifies the syntax and semantics of two database languages:

- 1) A schema definition language (SQL-DDL), for declaring the structures and integrity constraints of an SQL database.
- 2) A module language and a data manipulation language (SQL-DML), for declaring the database procedures and executable statements of a specific database application program.

This standard defines the logical data structures and basic operations for an SQL database. It provides functional capabilities for designing, accessing, maintaining, controlling, and protecting the database.

This standard provides a vehicle for portability of database definitions and application programs between conforming implementations.

This standard specifies two levels and a separate integrity enhancement feature. Level 2 is the complete SQL database language excluding the integrity enhancement feature. Level 1 is the subset of Level 2 defined in clause 9, "Levels" on page 99.

NOTE: *Additional SQL language is planned for later addenda to this standard. Major topics under consideration for such addenda include enhanced transaction management, specification of certain implementor-defined rules, enhanced character handling facilities, and support for national character sets.*

The integrity enhancement feature comprises a means of specifying:

- 1) referential constraints between tables, which have to be satisfied;
- 2) check constraints to be applied to the rows of a table; and,
- 3) a default value for a column when a row is inserted into a table.

Annexes to this standard specify embedded syntax for including SQL data manipulation language statements in an otherwise standard application program. Such embedded syntax is defined to be a shorthand notation for a standard application program in which the embedded SQL statements have been replaced with explicit "calls" of database procedures that contain the SQL statements.

This standard applies to implementations that exist in an environment that may include application programming languages, end-user query languages, report generator systems, data dictionary systems, program library systems, and distributed communication systems, as well as various tools for database design, data administration, and performance optimization.