

SQL Data Types Cheatsheet

Numeric, text, date/time and boolean types across the major dialects

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Numeric types

Type	Use for
INT / INTEGER	Whole numbers, no decimals
BIGINT	Large whole numbers (IDs, counters)
DECIMAL(p, s) / NUMERIC(p, s)	Exact money & precise decimals
FLOAT / DOUBLE	Approximate scientific values
SMALLINT / TINYINT	Small ranges — flags, small counters

MONEY RULE

Never use FLOAT or DOUBLE for currency — binary floating point can't represent values like 0.1 exactly, which silently corrupts totals. Use DECIMAL(10,2) instead.

Text types

Type	Use for
CHAR(n)	Fixed-length text, padded with spaces
VARCHAR(n)	Variable-length text up to n characters
TEXT	Long, unbounded text

Date & time types

Type	Stores
DATE	Calendar date only (2026-08-15)
TIME	Time of day only (14:30:00)
DATETIME / TIMESTAMP	Date + time together
TIMESTAMP WITH TIME ZONE	Date + time + timezone offset (PostgreSQL)

- TIMESTAMP in MySQL is timezone-aware and range-limited (1970-2038); DATETIME is not.
- Always store timestamps in UTC and convert to local time only for display.

Boolean & other

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-- PostgreSQL: BOOLEAN (true / false)
-- MySQL:      TINYINT(1) (0 / 1) – no native boolean
-- SQL Server: BIT (0 / 1)
-- JSON:       JSON / JSONB (PostgreSQL JSONB is indexable & binary-stored)
```

Dialect naming quirks

Dialect	Auto-increment ID
MySQL	INT AUTO_INCREMENT PRIMARY KEY
PostgreSQL	SERIAL / GENERATED ALWAYS AS IDENTITY
SQL Server	INT IDENTITY(1,1)
SQLite	INTEGER PRIMARY KEY (rowid alias)
Oracle	GENERATED BY DEFAULT AS IDENTITY