

## COURSE GLOSSARY

# Functions for Manipulating Data in PostgreSQL

**AGE():** A PostgreSQL function that computes the difference between two timestamps and returns the result as an INTERVAL representing the elapsed time

**ARRAY:** A column type that holds ordered lists of values (including multi-dimensional arrays) of any supported base type, accessed with 1-based indexes and array notation

**Casting (CAST / :: operator):** Converting a value from one data type to another using either the standard CAST(expression AS type) syntax or PostgreSQL's double-colon (::) shorthand

**CREATE TABLE:** A SQL command used to define a new table and its columns, including column names and data types, in a database

**DATE\_TRUNC():** A function that truncates a TIMESTAMP or INTERVAL to a specified precision (for example, to the start of the month or year) and returns a TIMESTAMP or INTERVAL value

**DATE:** A data type that stores only a calendar date (year, month, day) without a time component

**DECIMAL (numeric):** A numeric data type that stores exact fixed-point numbers with user-defined precision and scale, useful for money and other exact calculations

**Dual coding:** The practice of pairing complementary verbal and visual information so audiences can process and remember messages more effectively

**Flash Fill:** An Excel feature that automatically fills in values by detecting a pattern from user-entered examples, useful for extracting or combining text across cells

**Full-text search (to\_tsvector, to\_tsquery, tsvector, lexeme):** A set of PostgreSQL features and functions that convert text into normalized searchable tokens (tsvector and lexemes) and perform natural-language queries (to\_tsvector/to\_tsquery) with stemming, ranking, and case-insensitive matching

**INFORMATION\_SCHEMA:** A standardized system schema containing metadata tables that describe database objects (tables, columns, data types, etc.) so users can inspect schema details programmatically

**INSERT statement:** A SQL command that adds new rows (records) into a table, supplying values for one or more columns

**INT (integer):** A numeric data type that stores whole numbers without fractional components

**INTERVAL:** A data type that represents a span of time (years, months, days, hours, minutes, seconds, etc.) and is used for relative date/time arithmetic

**Levenshtein distance (fuzzystrmatch):** A string metric provided by the fuzzystrmatch extension that returns the minimum number of single-character edits (insertions, deletions, substitutions) required to change one string into another

**LIKE operator and wildcards:** A pattern-matching operator for strings where % matches zero or more characters and \_ matches exactly one character, and matching is case-sensitive by default

**NOW() / CURRENT\_TIMESTAMP:** Functions that return the current date and time as a TIMESTAMP (NOW() returns the current timestamp with time zone and CURRENT\_TIMESTAMP behaves similarly and optionally accepts a precision parameter)

**PostgreSQL:** An open-source relational database management system (RDBMS) that stores, queries, and manages structured data and provides native support for SQL, extensibility, and advanced data types

**SELECT statement:** A SQL command used to retrieve data from one or more tables, optionally transforming, filtering, and aggregating the results

**String concatenation / CONCAT():** The operation of joining two or more strings into one, performed with the || operator or the CONCAT() function that accepts multiple arguments

**Substring functions (LEFT, RIGHT, SUBSTRING, SUBSTR):** Functions that extract parts of a string, where LEFT/RIGHT return the first/last n characters and SUBSTRING/SUBSTR extract a substring given a start position and length

**Text data types (CHAR, VARCHAR, TEXT):** Data types for storing character strings where CHAR is fixed-length, VARCHAR is variable-length with a limit, and TEXT is variable-length with effectively no limit

**TIME:** A data type that stores only a time-of-day value (hours, minutes, seconds) without an associated date

**TIMESTAMP:** A date-and-time data type that stores both calendar date and time-of-day with microsecond precision and can be represented with or without timezone information

**Trigram and similarity (pg\_trgm):** An approach from the pg\_trgm extension that breaks strings into overlapping three-character sequences (trigrams) and computes a similarity score between 0 and 1 based on matching trigrams to measure string likeness.

**TRIM / LTRIM / RTRIM:** Functions that remove unwanted characters (by default whitespace) from the start and/or end of a string, where TRIM removes both ends and LTRIM/RTRIM remove only the left or right side respectively

**User-defined function (CREATE FUNCTION):** A database object created with CREATE FUNCTION that bundles SQL or procedural code to perform reusable computations or operations, similar to stored procedures