POWERING POTENTIAL

Working with Tables

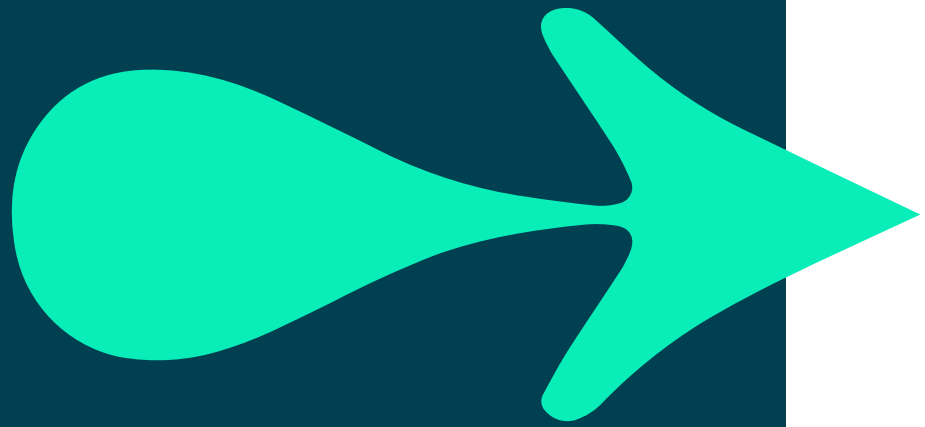
OVERVIEW

Data Definition Language (DDL)

- CREATE
- ALTER
- DROP

Data Manipulation Language (DML)

- INSERT
- UPDATE
- DELETE



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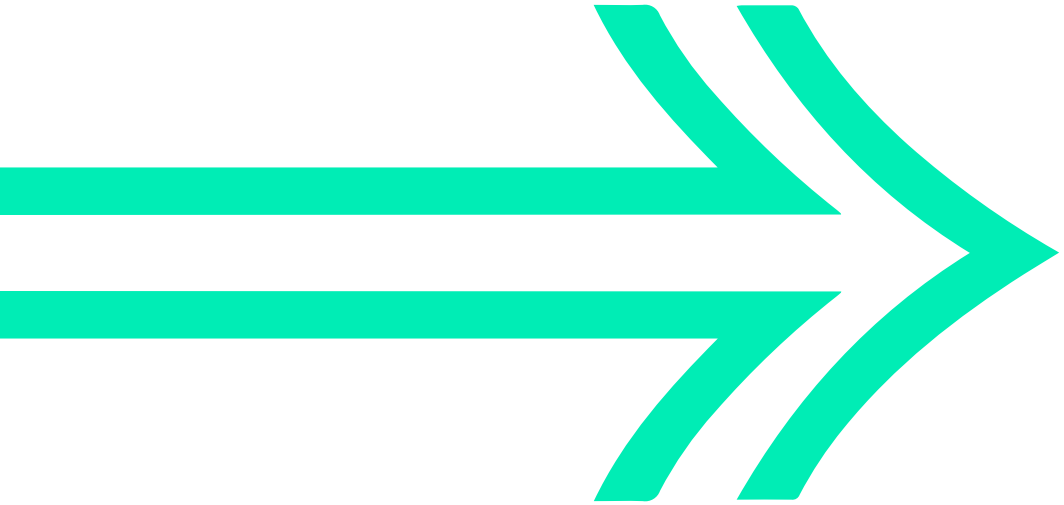
POTENTIAL

CREATE

CREATE

- **Use CREATE to add a table to the database with the columns defined**
- **CREATE TABLE table**
  (
  ColumnName datatype <options>
  ...
)
- **Options:**
  - NULL / NOT NULL
  - **DEFAULT**
  - **CHECK**
  - **PRIMARY KEY**

Data Types



- **Numerics**
  - BigInt, Int, SmallInt, TinyInt, Bit
  - Decimal, Numeric
  - Money, SmallMoney
  - Float, Real
- **Date/Time**
  - DateTime, DateTime2, Date, Time, SmallDateTime, DateTimeOffset
- **Character strings**
  - VarChar, Char, NVarChar, NChar
- **Binary data**
  - Binary, Image, VarBinary
- **Other**
  - XML, Geometry, Geography, HierarchyID, Cursor

Options

- **NULL / NOT NULL**
  - NULL allows blank/empty values in the column.
  - NOT NULL does not allow blank/empty values.
- **DEFAULT**
  - Allows for a default to be entered if no value is given, such as No in an OrderedFilled column, as the field will be set to Yes only when the products are sent.
- **CHECK**
  - Allows for a rule to be placed on the field such as Age < 130 AND Age>= 0 on a column holding human ages.
- **PRIMARY KEY**
  - This designates the column (or columns combined) as unique within the table, so no duplicates can be held and no nulls are allowed.
  - One primary key is allowed per table.

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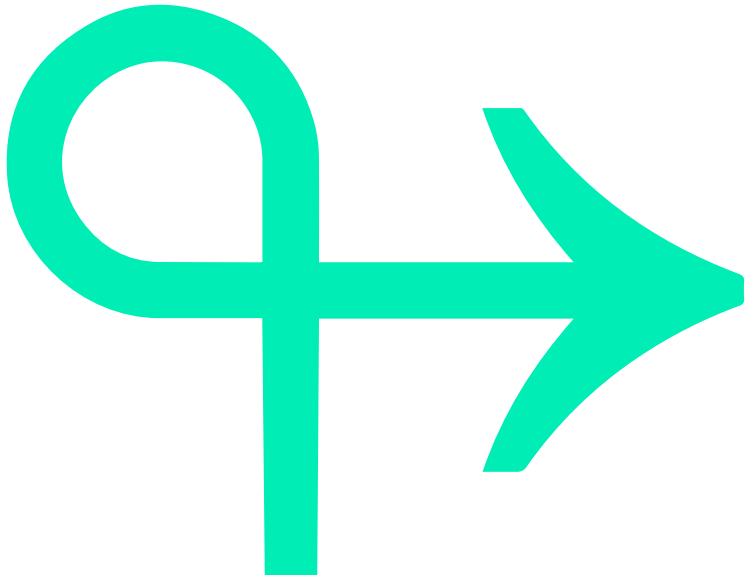
ALTER

ALTER

- **Use ALTER to change the structure of a table:**
  - → Add columns
  - → Remove columns

- **ALTER tableName**
  ADD columnName datatype <options>

- **ALTER tableName**
  DROP COLUMN columnName



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DROP

DROP

- Use DROP to remove the table from the database
- DROP tableName

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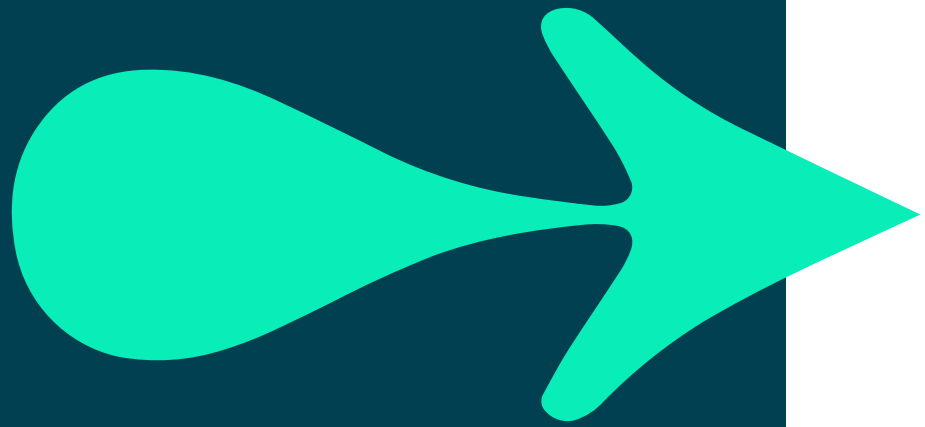
INSERT

INSERT

- **INSERT [INTO]** *table* **(***col1*, ... *colN***)**
  VALUES (*val1*, ..., *valN***)**
- **INSERT [INTO]** *table*
  SELECT ...



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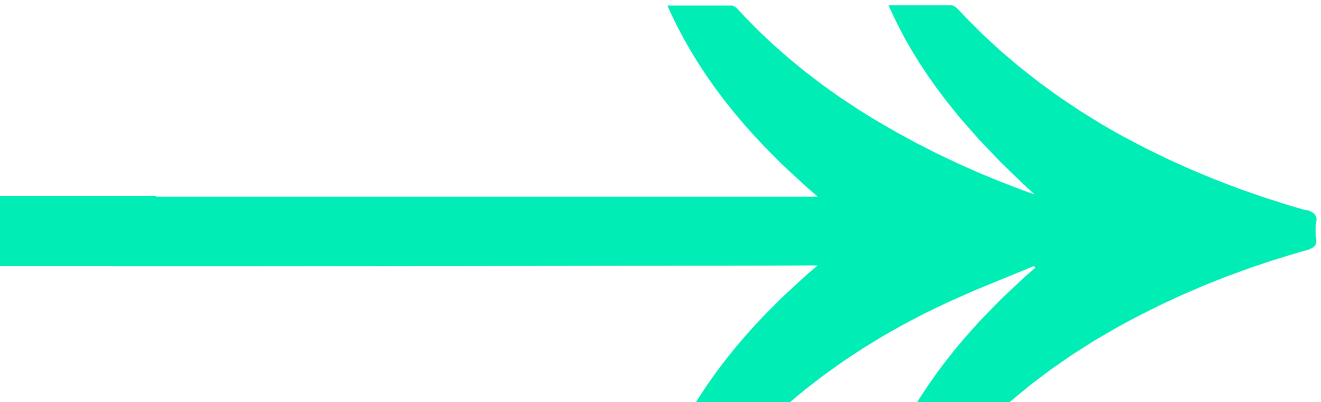
UPDATE

UPDATE

- **UPDATE**
  table
  SET
  col1 **=** *val1*,
  …,
  colN **=** *valN*
  WHERE
  colX **=** *valX*



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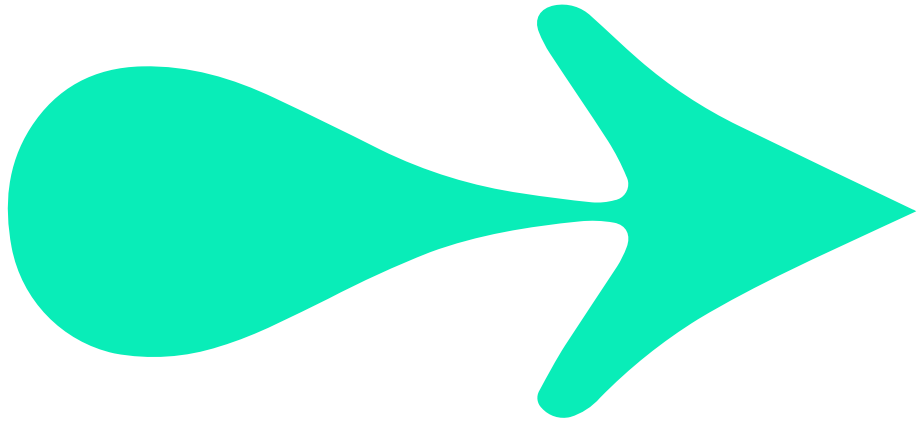
DELETE

DELETE

- **DELETE [FROM]** *table*
  WHERE ...



REVIEW

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- DROP
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