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200
1822 - 2022

Introduction to SQL

SQL Commands (DDL, DML, DCL, TCL)

*Man Geni Addysg Uwch yng Nghymru
Where Higher Education Began in Wales*

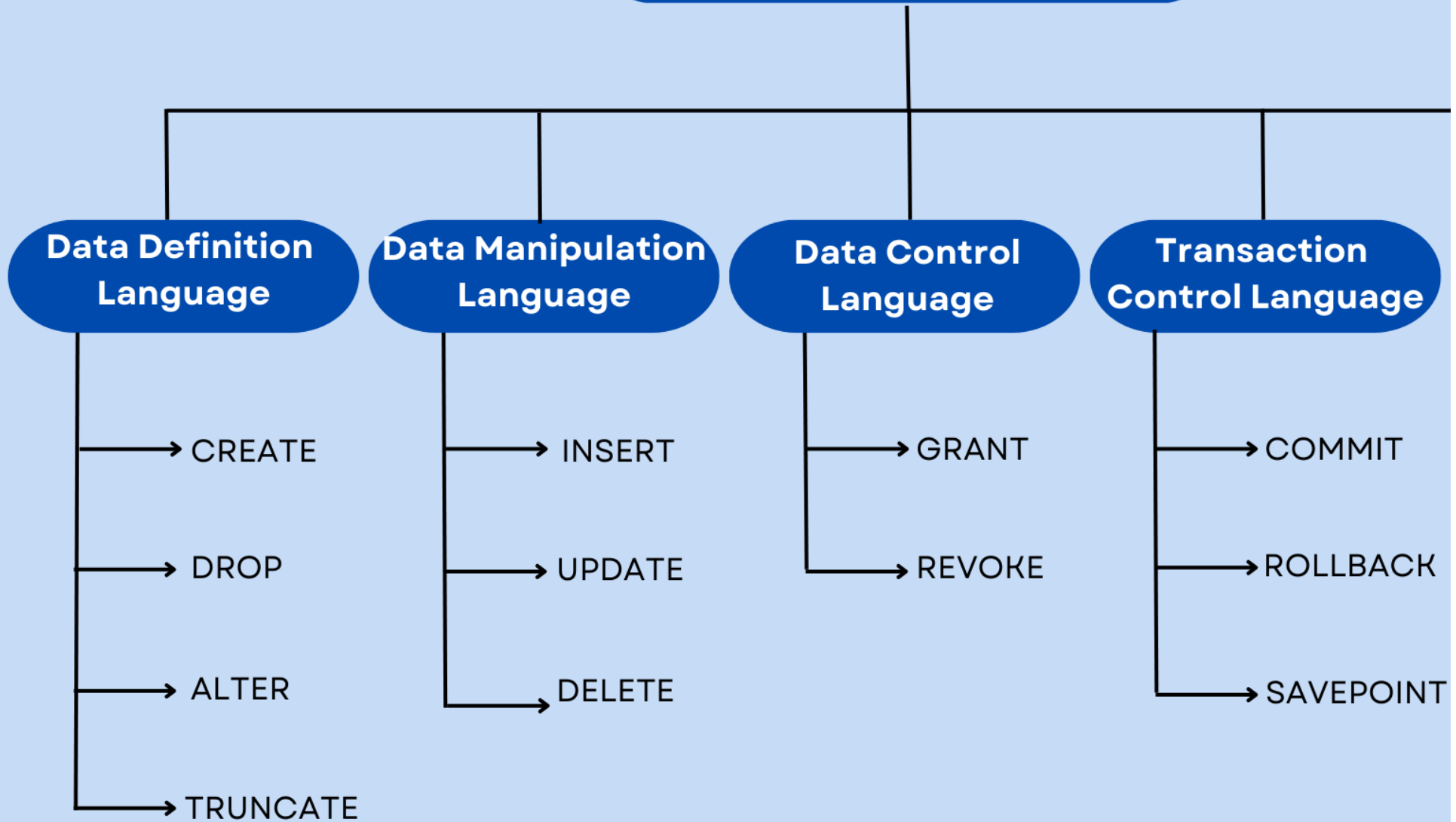
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Objectives of SQL

Ideally, a database language should allow a user to:

- create the database and relation structures;
- perform basic data management tasks, such as the insertion, modification, and deletion of data from the relations;
- perform both simple and complex queries.

SQL COMMANDS



DELETE

Purpose: Remove rows (records) from a table.

Scope: Affects data only, not the table structure.

Syntax:

```
DELETE FROM ParkingHistory WHERE vehicle_id = 101;
```

Key points:

delete all rows but row by row.

```
DELETE FROM ParkingHistory;
```

DROP

Purpose: Remove the entire table

Scope: Affects **structure and data** — table is gone entirely.

Syntax:

```
DROP TABLE ParkingHistory;
```

Key points:

- Deletes **all data and the table definition**.
- Usually, **cannot rollback** in many DBs.

TRUNCATE

Syntax

```
TRUNCATE TABLE ParkingHistory;
```

Keypoints:

deallocates the data pages instead of logging each row individually.

Resets auto-increment counters.

Cannot specify a WHERE clause.

Further reading

- Chapter 6 from Connolly,T.,&begg,C.(2005). Database systems: a practical approach to design, Implementation and management, Boston, MA: pearson Addison-Wesley