



Constraints & Triggers

Triggers – Demo (Part 1)

Features covered in demo – in two parts

- Before and After; Insert, Delete, and Update
- New and Old
- Conditions and actions
- Triggers enforcing constraints
- Trigger chaining
- Self-triggering, cycles
- Conflicts
- Nested trigger invocations

Introduction video used SQL standard

- No DBMS implements exact standard
- Some deviate considerably

In both syntax and behavior!

Postgres >

- Expressiveness/behavior = full standard
row-level + statement-level, old/new row & table
- Cumbersome & awkward syntax

SQLite >>

- Row-level only, immediate activation
⇒ no old/new table

MySQL

- Row-level only, immediate activation
⇒ no old/new table
- Only one trigger per event type
- Limited trigger chaining

SQLite – row-level triggers, immediate activation

- For Each Row implicit if not specified
- No Old Table or New Table
- No Referencing clause
 - Old and New predefined for Old Row and New Row
- Trigger action: SQL statements in begin-end block

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Simple college admissions database

College(cName, state, enrollment)

Student(sID, sName, GPA, sizeHS)

Apply(sID, cName, major, decision)