**Ontology of Generated SQL Errors**

**1. Query Structure Errors**

* **1.1 Modify Filter Clause**
  + Description: Changes made to the **WHERE** clause, such as adding, removing, or modifying conditions.
  + Example: Adding **AND T2.City = 'Prague'** to the **WHERE** clause.
  + Count: 55
* **1.2 Modify Join Type**
  + Description: Changes made to the type of join (e.g., **INNER JOIN** to **LEFT JOIN**).
  + Example: Changing **INNER JOIN** to **LEFT JOIN**.
  + Count: 33
* **1.3 Modify Group by Clause**
  + Description: Changes made to the **GROUP BY** clause, such as adding or removing columns.
  + Example: Adding **GROUP BY T3.Description**.
  + Count: 7
* **1.4 Modify Having Clause**
  + Description: Changes made to the **HAVING** clause, such as adding or modifying conditions.
  + Example: Adding **HAVING COUNT(\*) > 10**.
  + Count: 2

**2. Operator Errors**

* **2.1 Change Comparison Operator**
  + Description: Changes made to comparison operators in conditions (e.g., **=** to **!=**, **>** to **<**).
  + Example: Changing **WHERE T2.Country = 'CZE'** to **WHERE T2.Country != 'CZE'**.
  + Count: 54
* **2.2 Swapping Logical Operators**
  + Description: Changes made to logical operators (e.g., **AND** to **OR**).
  + Example: Changing **WHERE T2.Country = 'CZE' AND T2.City = 'Prague'** to **WHERE T2.Country = 'CZE' OR T2.City = 'Prague'**.
  + Count: 18

**3. Clause Errors**

* **3.1 Add/Modify Limit Clause**
  + Description: Changes made to the **LIMIT** clause, such as adding or modifying the limit value.
  + Example: Adding **LIMIT 10** to the query.
  + Count: 32
* **3.2 Add/Remove Distinct Clause**
  + Description: Adding or removing the **DISTINCT** keyword from the **SELECT** clause.
  + Example: Changing **SELECT DISTINCT T3.Description** to **SELECT T3.Description**.
  + Count: 26
* **3.3 Modify Order by Clause**
  + Description: Changes made to the **ORDER BY** clause, such as modifying the column or direction.
  + Example: Changing **ORDER BY T3.Description ASC** to **ORDER BY T3.Description DESC**.
  + Count: 19

**4. Function Errors**

* **4.1 Modify Aggregate Function**
  + Description: Changes made to aggregate functions (e.g., **COUNT** to **MAX**).
  + Example: Changing **COUNT(\*)** to **MAX(T1.id)**.
  + Count: 23

A screenshot of a computer program

AI-generated content may be incorrect.