DBA

Resetting all objects

Resetting all the objects in a schema

When we hand over our application to its owner, we have to reset all the objects in a schema. We have created a simple procedure reset_all_objects_from_schema to do this. The codes can be found here.

The workflow for this task is as:

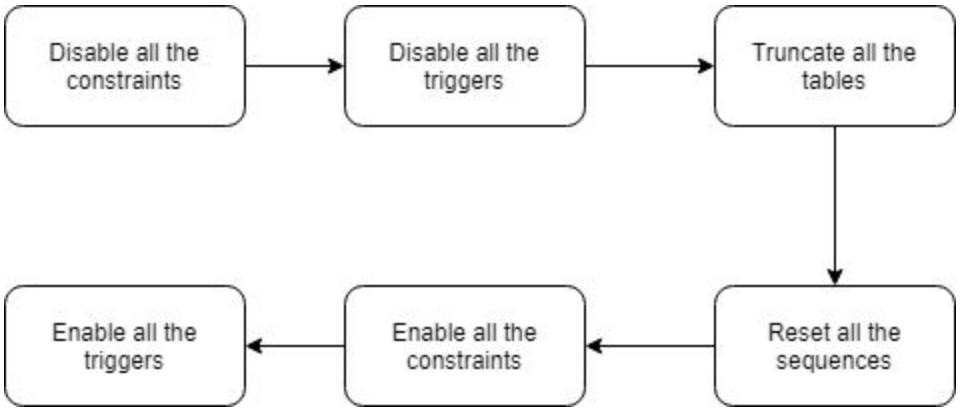

Fig : Workflow diagram

1. **Disable all the constraints:**

Before we reset all the tables, it is very important to disable all the constraints like primary key, foreign key, etc… Furthermore, we have to first disable foreign key then primary key (i.e. constraint_type 'R' and then constraint_type 'P'). Else, truncating or delete from a referenced table is not possible.

In our case, we have selected all the records of constraints under that schema from all_constraints table. We looped through all the records disabling the constraints. We have

first disabled R(Reference) constraints and other constraint(like check, unique) and then primary key constraints. We have also not included tables like 'BIN$%' and external tables.

SQL Script:

ALTER TABLE schema_name.tab_name DISABLE CONSTRAINT constraint_name;

2. **Disable all the triggers:**

Like constraints, we also have to disable all the triggers because our operation on table may have after or before or both triggers. For the safe resetting operation, we should disable all the triggers in the schema.

To disable all the triggers in a table, we collected all the tables in a schema -- from all_tables table -- except for external tables -- and we disabled all the trigger in the table.

SQL Script:

ALTER TABLE schema_name.tab_name DISABLE ALL TRIGGERS;

3. **Truncate tables:**

Now we finally reset all the tables. By saying reset, I meant deleting all the records for the table.So we truncate all the records from the table -- except external tables.

SQL Script:

TRUNCATE TABLE schema_name.tab_name;

4. **Reset all the sequences:**

After truncating(resetting) all the records from all the tables, it is time to reset all the sequences in the schema as well. Too bad :(, we don't have a reset keyword to do this in oracle; However, we had come up will simple easy idea to reset the sequence: And that is Dropping the table and again creating it ;) :P .

First we selected all the sequences from all_sequences table. Then, we first dropped all sequences and creates sequences restoring all the previous values.

There was further one more problem, the syntax for sequence with cache or nocache, cycle or nocycle, order or noorder were different. Therefore, I used double-nested conditions to divide into 8 branches.

Cycle	Order	Cache
N	N	0
Y	N	0
N	Y	0
Y	Y	0
Y	Y	VALUE
Y	N	VALUE
N	Y	VALUE
Y	Y	VALUE

5. **Enable all the constraints:**

After resetting the all tables and sequences, we have to enable all the constraint back again. But this time we enable primary key first then only we enable other constraints i.e. constraint_type 'P' then constraint_type 'R'.

Like disabling constraint, we , similarly, enable all the constraints from the tables we disabled earlier.

SQL Script:

ALTER TABLE schema_name.tab_name ENABLE CONSTRAINT constraint_name;

6. **Enable all the triggers:**

Similarly, we enabled the triggers as well.

SQL Script:

ALTER TABLE schema_name.tab_name ENABLE ALL TRIGGERS;

References:

[1]. https://www.techonthenet.com/oracle/