

```

dml_select ::=
  select_set [ORDER BY order_list]
  column_arithmetic ::= [NOT] [+ | -] {column | ROWNUM | LEVEL
    | (column_arithmetic)}
    [IS [NOT] NULL
    | binary_operator column_arithmetic
    | binary_operator [ANY | ALL] (dml_select)
    | [NOT] { BETWEEN column_arithmetic
      AND column_arithmetic
      | IN ((list | dml_select))
      | EXISTS (dml_select)}]

select_set ::=
  {select_atom | (select_set)}
  [{UNION [ALL] | INTERSECT | MINUS} select_set]

select_atom ::=
  [WITH with_list]
  SELECT [DISTINCT] {*} [column_list]
  FROM table_expression
  [WHERE column_arithmetic]
  [START WITH column_arithmetic]
  [CONNECT BY column_arithmetic]
  [GROUP BY (group_list_list | ())]
  [HAVING column_arithmetic]
  column ::= [PRIOR] {columnAlias | [tableAlias.]columnName [(+)]}
    | (list) | sequenceName.{CURRVAL | NEXTVAL}
    | constantValue | singleRowFunction(list)
    | aggregateFunction
      (([DISTINCT | ALL] column_arithmetic)
      | COUNT(*))
      | CASE column_arithmetic case_body END

dml_insert ::=
  INSERT INTO {tableName [(raw_column_list)]
  | (dml_select [WITH CHECK OPTION])}
  [VALUES (value_list) | dml_select]
  list ::= column_arithmetic [, list]

dml_update ::=
  UPDATE tableName SET set_list
  [WHERE column_arithmetic]
  case_body ::= WHEN column_arithmetic
  THEN column_arithmetic
  [case_body | ELSE column_arithmetic]

dml_delete ::=
  DELETE [FROM] tableName
  [WHERE column_arithmetic]
  binary_operator ::= + | - | * | / | || | = | <> | < | > | <= | >=
  | [NOT] LIKE | AND | OR

ddl_create_table ::=
  CREATE TABLE tableName
  {(column_type_list) | AS (dml_select)}
  table_expression ::= table [join_expression] [, table_expression]

ddl_alter_table ::=
  ALTER TABLE tableName
  {(ADD | MODIFY) (column_type_list)
  | ADD table_constraint
  | DROP {column | UNUSED COLUMNS} [CASCADE CONSTRAINTS]
  | DROP {CONSTRAINT constraintName | PRIMARY KEY
  | UNIQUE (raw_column_list)} [CASCADE]
  | SET UNUSED column}
  join_expression ::= {CROSS | NATURAL} JOIN table
  | JOIN table USING (raw_column_list)
  | [LEFT | RIGHT | FULL] [OUTER] JOIN
  ON column_arithmetic
  [join_expression]

ddl_drop ::=
  DROP {TABLE | VIEW | SEQUENCE | INDEX} objectName
  table ::= {tableName | (dml_select)} [tableAlias]

ddl_rename ::=
  RENAME objectName TO objectName
  raw_column_list ::= columnName [, raw_column_list]

ddl_truncate_table ::=
  TRUNCATE TABLE tableName
  group_list_list ::= [ROLLUP | CUBE | GROUPING SETS]
  {group_list | (group_list_list)} [, group_list_list]

ddl_create_view ::=
  CREATE [OR REPLACE] [FORCE | NOFORCE] VIEW viewName
  [(raw_column_list)]
  AS dml_select
  [WITH CHECK OPTION [CONSTRAINT constraintName]]
  [WITH READ ONLY [CONSTRAINT constraintName]]
  group_list ::= {[tableAlias.]columnName | group_list_list} [, group_list]

ddl_create_sequence ::=
  CREATE SEQUENCE sequenceName
  [INCREMENT BY value_arithmetic]
  [START WITH value_arithmetic]
  [(MAXVALUE value_arithmetic | NOMAXVALUE)]
  [(MINVALUE value_arithmetic | NOMINVALUE)]
  [(CYCLE | NOCYCLE)]
  [(CACHE value_arithmetic | NOCACHE)]
  order_list ::= column_arithmetic [ASC | DESC] [, order_list]

ddl_alter_sequence ::=
  ALTER SEQUENCE sequenceName
  [INCREMENT BY value_arithmetic]
  [(MAXVALUE value_arithmetic | NOMAXVALUE)]
  [(MINVALUE value_arithmetic | NOMINVALUE)]
  [(CYCLE | NOCYCLE)]
  [(CACHE value_arithmetic | NOCACHE)]
  value_list ::= {value_arithmetic | DEFAULT} [, value_list]

ddl_create_index ::=
  CREATE INDEX indexName ON tableName (list)
  value_arithmetic ::= [NOT] [+|-] {value | (dml_select) | (value_arithmetic)}
  [binary_operator value_arithmetic]

dcl_user ::=
  {CREATE | ALTER} USER userName IDENTIFIED BY passWord
  value ::= constantValue | singleRowFunction(raw_value_list)

dcl_grant ::=
  GRANT privilege_list TO user_list [WITH GRANT OPTION]
  raw_value_list ::= value_arithmetic [, raw_value_list]

dcl_create_role ::=
  CREATE ROLE roleName
  set_list ::= columnName = {column_arithmetic | DEFAULT} [, set_list]

dcl_revoke ::=
  REVOKE [ALL | object_privilege_list] ON object
  FROM user_list [CASCADE CONSTRAINTS]
  column_type_list ::= columnName dataType [DEFAULT value_arithmetic]
  [column_constraint] [NOT NULL]
  [, {column_type_list | constraint_list}]

with_list ::= tableAlias AS (dml_select)
  [, with_list]
  column_constraint ::= [CONSTRAINT constraintName] column_constraint_type

column_list ::= column_expression
  [, column_list]
  column_constraint_type ::= UNIQUE | PRIMARY KEY | references
  | CHECK (column_arithmetic)

column_expression ::= column_arithmetic
  [AS columnAlias]
  references ::= tableName(raw_column_list)

privilege_list ::= privilege [, privilege_list]
privilege ::= {CREATE | DROP}
  {USER | [ANY] {TABLE | VIEW | SEQUENCE | PROCEDURE}}
  | CREATE SESSION
  | BACKUP [ANY] TABLE
  | object_privilege ON objectName
  | roleName

object_privilege ::= EXECUTE | {ALTER | DELETE | INDEX | INSERT
  | REFERENCES | SELECT | UPDATE} [(raw_column_list)]

user_list ::= {userName | roleName | PUBLIC} [, user_list]

object_privilege_list ::= object_privilege [, object_privilege_list]

```