CHAPTER 05

More SQL: Schema Modification

Schema Change Statements in SQL

- **Schema evolution commands**
    - DBA may want to change the schema while the database is operational
    - Does not require recompilation of the database schema

The DROP Command

- `DROP` command
  - Used to drop named schema elements, such as tables, domains, or constraint
- Drop behavior options:
  - `CASCADE` and `RESTRICT`
- Example:
  - `DROP SCHEMA COMPANY CASCADE;`
  - This removes the schema and all its elements including tables,views, constraints, etc.

The ALTER table command

- **Alter table actions** include:
  - Adding or dropping a column (attribute)
  - Changing a column definition
  - Adding or dropping table constraints
- Example:
  - ```
    ALTER TABLE COMPANY.EMPLOYEE ADD
    COLUMN Job VARCHAR(12);
    ```

Adding and Dropping Constraints

- Change constraints specified on a table
  - Add or drop a named constraint

```
ALTER TABLE COMPANY.EMPLOYEE
DROP CONSTRAINT EMPSUPERFK CASCADE;
```

Dropping Columns, Default Values

- ■ To drop a column
  - ■ Choose either `CASCADE` or `RESTRICT`
  - ■ `CASCADE` would drop the column from views etc. `RESTRICT` is possible if no views refer to it.

  ALTER TABLE COMPANY.EMPLOYEE **DROP COLUMN** Address **CASCADE**;

- ■ Default values can be dropped and altered :

  ALTER TABLE COMPANY.DEPARTMENT **ALTER COLUMN** Mgr_ssn **DROP DEFAULT**;

  ALTER TABLE COMPANY.DEPARTMENT **ALTER COLUMN** Mgr_ssn **SET DEFAULT** '333445555';

Summary

Schema Modification for the DBAs using `ALTER TABLE` , `ADD` and `DROP COLUMN`, `ALTER CONSTRAINT` etc.