
--ADD Columns with Script

ALTER TABLE staff
ADD COLUMN email **varchar**(100);

ALTER TABLE staff
ADD COLUMN salary **numeric**(8,2) **DEFAULT** 0;

ALTER TABLE movie_reviews
ADD COLUMN review_date **date**,
ADD COLUMN last_update **date** **DEFAULT** CURRENT_DATE,
ADD COLUMN review_rate **int** **DEFAULT** 1;

--RENAME a Column

ALTER TABLE movie_reviews
RENAME COLUMN review_date **to** user_review_date;

ALTER TABLE student
RENAME COLUMN class **to** class_no;

--Change Default Value

ALTER TABLE movie_reviews
ALTER COLUMN review
SET DEFAULT 'Good';

ALTER TABLE movie_reviews
ALTER COLUMN review_rate
DROP DEFAULT;

--Change Column Type

ALTER TABLE courses
ALTER COLUMN description **TYPE** TEXT;

ALTER TABLE colors
ALTER COLUMN color **TYPE** **VARCHAR**(20);

ALTER TABLE budgets
ALTER COLUMN current_year **TYPE** **smallint**,
ALTER COLUMN previous_year **TYPE** **smallint**;

--ADD Comment

```
comment on table cars is 'This table contains car information';
comment on table educations is 'All education information is here';
```

```
comment on column cars.brand is 'Car brand';
comment on column product.net_price is 'In this column, net price information
is kept';
```

--Comment List

```
select * from
(
  select t.table_schema, t.table_name,
    pg_catalog.obj_description(pgc.oid, 'pg_class') as table_comment
  from information_schema.tables t
    inner join pg_catalog.pg_class pgc
      on t.table_name = pgc.relname
  where t.table_type='BASE TABLE'
    and t.table_schema='public'
) sub
where table_comment is not null;
```

```
select
  c.table_schema, c.table_name, c.column_name,
  pgd.description as column_comment
from pg_catalog.pg_statio_all_tables as st
  inner join pg_catalog.pg_description pgd
    on pgd.objoid = st.relid
  inner join information_schema.columns c
    on pgd.objsubid = c.ordinal_position
    and c.table_schema = st.schemaname
    and c.table_name = st.relname;
```

--Add - Drop NOT NULL

```
ALTER TABLE movie_reviews
ALTER COLUMN review_rate
SET NOT NULL;
```

```
ALTER TABLE movie_reviews
ALTER COLUMN review_rate
DROP NOT NULL;
```

--Drop Columns

ALTER TABLE movie_reviews
DROP COLUMN review_date,
DROP COLUMN last_update;

--CHECK Constraint

ALTER TABLE movie_reviews
ADD CHECK (review_rate **between** 1 **and** 5)

--ADD Constraint

ALTER TABLE courses
ADD CONSTRAINT uq_courses **UNIQUE** (course_name);

--DROP Constraint

ALTER TABLE courses
DROP CONSTRAINT uq_courses;

--Rename Table

ALTER TABLE courses
RENAME TO courses_technical;

--DROP Table

DROP TABLE IF EXISTS budgets2;

DROP TABLE authors, pages;

CREATE TABLE authors (
 author_id SMALLSERIAL **PRIMARY KEY**,
 firstname **VARCHAR** (50),
 lastname **VARCHAR** (50)
);

CREATE TABLE pages (
 page_id SMALLSERIAL **PRIMARY KEY**,
 title **VARCHAR** (255) **NOT NULL**,
 author_id **INT NOT NULL**,
 FOREIGN KEY (author_id)
 REFERENCES authors (author_id)
);

```
DROP TABLE IF EXISTS authors;
```

```
DROP TABLE authors CASCADE;
```

```
-----  
--TRUNCATE Table  
-----
```

```
TRUNCATE TABLE colors;
```

--EXERCISE ANSWERS

--Alter Tables

```
-- Add primary key for artist_id column
alter table artist add constraint atrist_pk primary key(artist_id);

-- Fix column names
alter table artist rename column firstname to first_name
alter table artist rename column lastname to last_name

-- Add date of birth column
alter table artist add column date_of_birth date

-- Add address column (max 200 chars)
alter table artist add column address varchar(200)

-- Add city column with not null constraint
alter table artist add column city varchar(100) not null

-- Add zip code column (max value is 9999)
alter table artist add zip_code int check (zip_code < 9999)

-- Add company column (default value is Warner Bros)
alter table artist add column company varchar(100) default 'Warner Bros'

-- Address column change type to varchar(500)
alter table artist alter column address type varchar(500)

-- Add not null constraint to zip code column
alter table artist alter column zip_code set not null

-- Change table name: artist_info
alter table artist rename to artist_info
```