

PES UNIVERSITY,RR CAMPUS

DBMS LAB – WEEK4

SQL COMMANDS USING POSTGRESQL

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SECTION: 'A'

Question 1:

1. Create Tables with given attributes and conditions.

```
week4=# \i F:/Ananya/dbms/Week4_Commands_Final.sql
CREATE TABLE
CREATE TABLE
CREATE TABLE
CREATE TABLE
CREATE TABLE
CREATE TABLE
```

2. Display the tables skeleton with constraints.

```
Table "public.department_0058"
  Column      |      Type      | Collation | Nullable | Default
-----+-----+-----+-----+-----
 dname        | character varying(10) |           |          |
 dnumber      | character varying(10) |           | not null |
 mgr_ssn      | character varying(10) |           |          |
 mgr_start_date | date             |           |          |
Indexes:
 "department_0058_pkey" PRIMARY KEY, btree (dnumber)
 "department_0058_dname_key" UNIQUE CONSTRAINT, btree (dname)
Referenced by:
 TABLE "dept_locations_0058" CONSTRAINT "dept_locations_0058_dnumber_fkey" FOREIGN KEY (dnumber) REFERENCES department_0058(dnumber)
 TABLE "employee_0058" CONSTRAINT "employee_0058_dno_fkey" FOREIGN KEY (dno) REFERENCES department_0058(dnumber)
 TABLE "project_0058" CONSTRAINT "project_0058_dnum_fkey" FOREIGN KEY (dnum) REFERENCES department_0058(dnumber)
```

```
Table "public.employee_0058"
  Column      |      Type      | Collation | Nullable | Default
-----+-----+-----+-----+-----
 fname        | character varying(20) |           | not null |
 minit        | character varying(20) |           |          |
 lname        | character varying(20) |           | not null |
 ssn          | character varying(10) |           | not null |
 bdate        | date             |           |          |
 emp_address  | character varying    |           |          |
 sex          | character varying(1) |           |          |
 salary       | integer           |           |          |
 super_ssn    | character varying(10) |           |          |
 dno          | character varying(10) |           |          |
Indexes:
 "employee_0058_pkey" PRIMARY KEY, btree (ssn)
 "employee_0058_dno_key" UNIQUE CONSTRAINT, btree (dno)
Check constraints:
 "employee_0058_bdate_check" CHECK (bdate < '1985-01-01'::date)
Foreign-key constraints:
 "employee_0058_dno_fkey" FOREIGN KEY (dno) REFERENCES department_0058(dnumber)
 "employee_0058_super_ssn_fkey" FOREIGN KEY (super_ssn) REFERENCES employee_0058(ssn)
Referenced by:
 TABLE "dependent_0058" CONSTRAINT "dependent_0058_essn_fkey" FOREIGN KEY (essn) REFERENCES employee_0058(ssn)
 TABLE "employee_0058" CONSTRAINT "employee_0058_super_ssn_fkey" FOREIGN KEY (super_ssn) REFERENCES employee_0058(ssn)
 TABLE "works_on_0058" CONSTRAINT "works_on_0058_essn_fkey" FOREIGN KEY (essn) REFERENCES employee_0058(ssn)
```

```

Table "public.dept_locations_0058"
Column |          Type          | Collation | Nullable | Default
-----+-----+-----+-----+-----
dlocation | character varying |          | not null |
dnumber  | character varying(10) |          | not null |
Indexes:
    "dept_locations_0058_pkey" PRIMARY KEY, btree (dlocation, dnumber)
    "dept_locations_0058_dlocation_key" UNIQUE CONSTRAINT, btree (dlocation)
    "dept_locations_0058_dnumber_key" UNIQUE CONSTRAINT, btree (dnumber)
Foreign-key constraints:
    "dept_locations_0058_dnumber_fkey" FOREIGN KEY (dnumber) REFERENCES department_0058(dnumber)

Table "public.project_0058"
Column |          Type          | Collation | Nullable |          Default
-----+-----+-----+-----+-----
pname  | character varying(20) |          | not null | 'PROJECT_NAME'::character varying
pnumber | character varying(10) |          | not null |
plocation | character varying |          | not null |
dnum   | character varying(10) |          |          |
Indexes:
    "project_0058_pkey" PRIMARY KEY, btree (pnumber, plocation)
    "project_0058_dnum_key" UNIQUE CONSTRAINT, btree (dnum)
    "project_0058_plocation_key" UNIQUE CONSTRAINT, btree (plocation)
    "project_0058_pnumber_key" UNIQUE CONSTRAINT, btree (pnumber)
Foreign-key constraints:
    "project_0058_dnum_fkey" FOREIGN KEY (dnum) REFERENCES department_0058(dnumber)
Referred by:
    TABLE "works_on_0058" CONSTRAINT "works_on_0058_pno_fkey" FOREIGN KEY (pno) REFERENCES project_0058(pnumber)

```

```

Table "public.works_on_0058"
Column |          Type          | Collation | Nullable | Default
-----+-----+-----+-----+-----
essn   | character varying(10) |          | not null |
pno    | character varying(10) |          | not null |
p_hours | integer |          |          |
Indexes:
    "works_on_0058_pkey" PRIMARY KEY, btree (essn, pno)
Foreign-key constraints:
    "works_on_0058_essn_fkey" FOREIGN KEY (essn) REFERENCES employee_0058(ssn)
    "works_on_0058_pno_fkey" FOREIGN KEY (pno) REFERENCES project_0058(pnumber)

Table "public.dependent_0058"
Column |          Type          | Collation | Nullable |          Default
-----+-----+-----+-----+-----
dependent_name | character varying(20) |          | not null |
sex            | character varying(1)  |          |          |
bdate         | date                  |          |          |
relationship   | character varying(20) |          | not null | 'parent'::character varying
essn          | character varying(10) |          | not null |
Indexes:
    "dependent_0058_pkey" PRIMARY KEY, btree (dependent_name, essn)
    "dependent_0058_dependent_name_key" UNIQUE CONSTRAINT, btree (dependent_name)
    "dependent_0058_essn_key" UNIQUE CONSTRAINT, btree (essn)
Check constraints:
    "dependent_0058_bdate_check" CHECK (bdate < '1985-01-01'::date)
Foreign-key constraints:
    "dependent_0058_essn_fkey" FOREIGN KEY (essn) REFERENCES employee_0058(ssn)

```

[illegible]

```

dname | dnumber | mgr_ssn | mgr_start_date
-----+-----+-----+-----
1      | 11      | a       | 2000-01-01
2      | 22      | b       | 2000-02-01
3      | 33      | c       | 2000-04-01
4      | 44      | d       | 2000-06-01
5      | 55      | e       | 2000-05-01
(5 rows)

fname | minit | lname | ssn | bdate | emp_address | sex | salary | super_ssn | dno
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----
a      | a      | a      | a    | 1980-01-01 | home        | F   | 1       | a          | 11
b      | b      | b      | b    | 1980-01-01 | home        | F   | 1       | b          | 22
c      | c      | c      | c    | 1980-01-01 | home        | F   | 1       | c          | 33
d      | d      | d      | d    | 1980-01-01 | home        | F   | 1       | d          | 44
e      | e      | e      | e    | 1980-01-01 | home        | F   | 1       | e          | 55
(5 rows)

dlocation | dnumber
-----+-----
aaa       | 11
bbb       | 22
ccc       | 33
ddd       | 44
eee       | 55
(5 rows)

```

pname	pnumber	plocation	dnum
Z	1	aaa	11
Y	2	bbb	22
X	3	ccc	33
W	4	ddd	44
V	5	eee	55

(5 rows)

essn	pno	p_hours
a	1	1
b	2	2
c	3	3
d	4	4
e	5	5

(5 rows)

dependent_name	sex	bdate	relationship	essn
a	M	1980-01-01	parent	a
b	M	1980-01-01	son	b
c	M	1980-01-01	parent	c
d	M	1980-01-01	daughter	d
e	M	1980-01-01	parent	e

(5 rows)

Question 2:

1. Drop and Truncate.

List of relations			
Schema	Name	Type	Owner
public	department_0058	table	postgres
public	dependent_0058	table	postgres
public	dept_locations_0058	table	postgres
public	employee_0058	table	postgres
public	project_0058	table	postgres
public	works_on_0058	table	postgres

(6 rows)

DROP TABLE

List of relations			
Schema	Name	Type	Owner
public	department_0058	table	postgres
public	dependent_0058	table	postgres
public	dept_locations_0058	table	postgres
public	employee_0058	table	postgres
public	project_0058	table	postgres

(5 rows)

pname	pnumber	plocation	dnum
Z	1	aaa	11
Y	2	bbb	22
X	3	ccc	33
W	4	ddd	44
V	5	eee	55

(5 rows)

TRUNCATE TABLE

pname	pnumber	plocation	dnum
-------	---------	-----------	------

(0 rows)

2. Create and Drop Views. Alter permissions.

```
CREATE VIEW
dependent_name | sex | bdate | relationship | essn
-----+-----+-----+-----+-----
a | M | 1980-01-01 | parent | a
c | M | 1980-01-01 | parent | c
e | M | 1980-01-01 | parent | e
(3 rows)

DROP VIEW
psql:F:/Ananya/dbms/Week4_Commands_Final.sql:125: ERROR: role "user1_0058" already exists
psql:F:/Ananya/dbms/Week4_Commands_Final.sql:126: ERROR: role "user2_0058" already exists
psql:F:/Ananya/dbms/Week4_Commands_Final.sql:127: ERROR: role "user3_0058" already exists
psql:F:/Ananya/dbms/Week4_Commands_Final.sql:128: ERROR: role "user4_0058" already exists
GRANT
psql:F:/Ananya/dbms/Week4_Commands_Final.sql:131: ERROR: unrecognized privilege type "alter"
GRANT
psql:F:/Ananya/dbms/Week4_Commands_Final.sql:133: ERROR: unrecognized privilege type "alter"
ALTER TABLE
```

3. Alter table commands.

Column	Type	Collation	Nullable	Default
fname	character varying(20)		not null	
minit	character varying(20)			
lname	character varying(20)		not null	
ssn	character varying(10)		not null	
bdate	date			
emp_address	character varying			
sex	character varying(1)			
salary	integer			
super_ssn	character varying(10)			
dno	character varying(10)			
join_date	date			

Indexes:

- "employee_0058_pkey" PRIMARY KEY, btree (ssn)
- "employee_0058_dno_key" UNIQUE CONSTRAINT, btree (dno)

Check constraints:

- "employee_0058_bdate_check" CHECK (bdate < '1985-01-01'::date)
- "employee_0058_check" CHECK (join_date > bdate)

Foreign-key constraints:

- "employee_0058_dno_fkey" FOREIGN KEY (dno) REFERENCES department_0058(dnumber)
- "employee_0058_super_ssn_fkey" FOREIGN KEY (super_ssn) REFERENCES employee_0058(ssn)

Referenced by:

- TABLE "dependent_0058" CONSTRAINT "dependent_0058_essn_fkey" FOREIGN KEY (essn) REFERENCES employee_0058(ssn)
- TABLE "employee_0058" CONSTRAINT "employee_0058_super_ssn_fkey" FOREIGN KEY (super_ssn) REFERENCES employee_0058(ssn)

ALTER TABLE

Table "public.employee_0058"				
Column	Type	Collation	Nullable	Default
fname	character varying(20)		not null	
minit	character varying(20)			
lname	character varying(20)		not null	
ssn	character varying(10)		not null	
bdate	date			
emp_address	character varying			
sex	character varying(1)			
salary	integer			
super_ssn	character varying(10)			
dno	character varying(10)			

Indexes:

"employee_0058_pkey" PRIMARY KEY, btree (ssn)

"employee_0058_dno_key" UNIQUE CONSTRAINT, btree (dno)

Check constraints:

"employee_0058_bdate_check" CHECK (bdate < '1985-01-01'::date)

Foreign-key constraints:

"employee_0058_dno_fkey" FOREIGN KEY (dno) REFERENCES department_0058(dnumber)

"employee_0058_super_ssn_fkey" FOREIGN KEY (super_ssn) REFERENCES employee_0058(ssn)

Referenced by:

TABLE "dependent_0058" CONSTRAINT "dependent_0058_essn_fkey" FOREIGN KEY (essn) REFERENCES employee_0058(ssn)

TABLE "employee_0058" CONSTRAINT "employee_0058_super_ssn_fkey" FOREIGN KEY (super_ssn) REFERENCES employee_0058(ssn)

ALTER TABLE

Table "public.employee_0058"				
Column	Type	Collation	Nullable	Default
fname	character varying(20)		not null	
minit	character varying(20)			
lname	character varying(20)		not null	
ssn	character varying(10)		not null	
bdate	date			
emp_address	character varying			
sex	character varying(1)			
salary	integer			
super_ssn	character varying(10)			
dno	character varying(10)			
join_date	date			

Indexes:

"employee_0058_pkey" PRIMARY KEY, btree (ssn)

"employee_0058_dno_key" UNIQUE CONSTRAINT, btree (dno)

Check constraints:

"employee_0058_bdate_check" CHECK (bdate < '1985-01-01'::date)

"employee_0058_check" CHECK (bdate < (join_date - '21 years'::interval))

Foreign-key constraints:

"employee_0058_dno_fkey" FOREIGN KEY (dno) REFERENCES department_0058(dnumber)

"employee_0058_super_ssn_fkey" FOREIGN KEY (super_ssn) REFERENCES employee_0058(ssn)

Referenced by:

TABLE "dependent_0058" CONSTRAINT "dependent_0058_essn_fkey" FOREIGN KEY (essn) REFERENCES employee_0058(ssn)

TABLE "employee_0058" CONSTRAINT "employee_0058_super_ssn_fkey" FOREIGN KEY (super_ssn) REFERENCES employee_0058(ssn)

