\echo [INFO] Debut du script

\c postgres connecté avec la base postgres

drop table if existe vol;

drop table if exsits pilote;

\echo [INFO] Supression de la base de donnees

drop database gestion\_vol

\echo [INFO] Creation de la base de donnees

Create database gestion\_vol encoding ‘UTF8’;

\echo [INFO] Connexion a la nouvelle base de donnees

\c gestion vol

\echo [INFO] Creation de la table Pilote

\l permet de voir toutes les database déjà crée

1 - /\*1 création des tableax pilote et avion\*/

create table pilote

(plnum int not null,

plnom varchar(20),

plprenom varchar(20),

salaire int,

ville varchar(30),

constraint cle\_pilote primary key (plnum)

);

\echo [INFO] Creation de la table Avion

create table avion

(avnum int not null,

avnom varchar(20),

capacite int,

localisation varchar(30),

constraint cle\_avion primary key (avnum)

);

\d + avion

/\*2 remplir les tables pilote et avion\*/

\echo [INFO] Insertion des tuples dans la table Pilote

insert into pilote values(1,'Zighed','Djamel','Paris',21000);

insert into pilote values(2,'Boussaid','Omar','Toulouse',21000);

insert into pilote values(3,'Viallaneix','Jacques','Nice',18000);

insert into pilote values(4,'Nicoloyannis','Nicolas','Paris',17000);

insert into pilote values(5,'Darmont','Jerome','Toulouse',19000);

insert into pilote values(6,'Lallich','Stephane','Paris',18000);

insert into pilote values(7,'Rakotomalala','Ricco','Nice',17000);

insert into pilote values(8,'Chauchat','Jean-Hughes','Lyon',15000);

insert into pilote values(9,'Mahboubi','Hadj','Nice',18000);

insert into pilote values(10,'B ntayeb','Fadila','Paris',20000);

userpostgres=> select \* from pilote;

plnum | plnom | plprenom | ville | salaire

-------+--------------+-------------+----------+---------

1 | Zighed | Djamel | Paris | 21000

2 | Boussaid | Omar | Toulouse | 21000

3 | Viallaneix | Jacques | Nice | 18000

4 | Nicoloyannis | Nicolas | Paris | 17000

5 | Darmont | Jerome | Toulouse | 19000

6 | Lallich | Stephane | Paris | 18000

7 | Rakotomalala | Ricco | Nice | 17000

8 | Chauchat | Jean-Hughes | Lyon | 15000

9 | Mahboubi | Hadj | Nice | 18000

10 | B ntayeb | Fadila | Paris | 20000

(10 rows)

insert into avion values(1,'A300',300,'Nice');

insert into avion values(2,'A310',300,'Nice');

insert into avion values(3,'B707',250,'Paris');

insert into avion values(4,'A300',280,'Lyon');

insert into avion values(5,'Concorde',160,'Nice');

insert into avion values(6,'B747',460,'Paris');

insert into avion values(7,'B707',250,'Paris');

insert into avion values(8,'A310',300,'Toulouse');

insert into avion values(9,'Mercure',180,'Lyon');

insert into avion values(10,'Concorde',160,'Paris');

userpostgres=> select \* from avion;

avnum | avnom | capacite | localisation

-------+----------+----------+--------------

1 | A300 | 300 | Nice

2 | A310 | 300 | Nice

3 | B707 | 250 | Paris

4 | A300 | 280 | Lyon

5 | Concorde | 160 | Nice

6 | B747 | 460 | Paris

7 | B707 | 250 | Paris

8 | A310 | 300 | Toulouse

9 | Mercure | 180 | Lyon

10 | Concorde | 160 | Paris

(10 rows)

/\*3 - création du tableau vol\*/

create table vol

(volnum int not null,

plnum int,

avnum int,

villedep varchar(20),

villearr varchar(20),

heuredep int,

heurearr int,

constraint cle\_vol primary key (volnum),

foreign key (plnum) references pilote(plnum),

foreign key (avnum) references avion(avnum)

);

userpostgres=> select \* from vol;

volnum | plnum | avnum | villedep | villearr | heuredep | heurearr

--------+-------+-------+----------+----------+----------+----------

(0 rows)

create table vol

(volnum int not null,

plnum int,

avnum int,

villedep varchar(20),

villearr varchar(20),

heuredep int,

heurearr int,

constraint cle\_vol primary key (volnum)

);

ALTER TABLE vol

ADD FOREIGN KEY (plnum)

REFERENCES pilote(plnum);

ALTER TABLE vol

ADD FOREIGN KEY (avnum)

REFERENCES avion(avnum);

userpostgres=> select \* from vol;

volnum | plnum | avnum | villedep | villearr | heuredep | heurearr

--------+-------+-------+----------+----------+----------+----------

(0 rows)

/\*4 remplir le tableau vol\*/

insert into vol values(1,1,1,'Nice','Toulouse',11,12);

insert into vol values(2,1,8,'Paris','Toulouse',17,18);

insert into vol values(3,2,1,'Toulouse','Lyon',14,16);

insert into vol values(4,5,3,'Toulouse','Lyon',18,20);

insert into vol values(5,9,1,'Paris','Nice',6,8);

insert into vol values(6,10,2,'Lyon','Nice',11,12);

insert into vol values(7,1,4,'Paris','Lyon',8,9);

insert into vol values(8,8,4,'Nice','Paris',7,8);

insert into vol values(9,1,8,'Nantes','Lyon',9,15);

insert into vol values(10,8,2,'Nice','Paris',12,13);

insert into vol values(11,9,2,'Paris','Lyon',15,16);

insert into vol values(12,1,2,'Lyon','Nantes',16,20);

insert into vol values(13,4,5,'Nice','Lens',11,14);

insert into vol values(14,3,5,'Lens','Paris',15,16);

insert into vol values(15,8,9,'Paris','Toulouse',17,18);

insert into vol values(16,7,5,'Paris','Toulouse',18,19);

userpostgres=> select \* from vol;

volnum | plnum | avnum | villedep | villearr | heuredep | heurearr

--------+-------+-------+----------+----------+----------+----------

1 | 1 | 1 | Nice | Toulouse | 11 | 12

2 | 1 | 8 | Paris | Toulouse | 17 | 18

3 | 2 | 1 | Toulouse | Lyon | 14 | 16

4 | 5 | 3 | Toulouse | Lyon | 18 | 20

5 | 9 | 1 | Paris | Nice | 6 | 8

6 | 10 | 2 | Lyon | Nice | 11 | 12

7 | 1 | 4 | Paris | Lyon | 8 | 9

8 | 8 | 4 | Nice | Paris | 7 | 8

9 | 1 | 8 | Nantes | Lyon | 9 | 15

10 | 8 | 2 | Nice | Paris | 12 | 13

11 | 9 | 2 | Paris | Lyon | 15 | 16

12 | 1 | 2 | Lyon | Nantes | 16 | 20

13 | 4 | 5 | Nice | Lens | 11 | 14

14 | 3 | 5 | Lens | Paris | 15 | 16

15 | 8 | 9 | Paris | Toulouse | 17 | 18

16 | 7 | 5 | Paris | Toulouse | 18 | 19

(16 rows)

/\*5 ajouter les enregistrements suivants dans le tableau vol Remarque\*/

insert into vol values(17,5,8,'Bordeaux','clemont-Fd',12,13);

insert into vol values(18,12,7,'Paris','Lille',11,12);

psql:TPSGBD/tp.sql:111: ERROR: insert or update on table "vol" violates foreign key constraint "vol\_plnum\_fkey"

DETAIL: Key (plnum)=(12) is not present in table "pilote".

/\*Remarque :

le première enregistrement peut être ajouté dans le tableau mais le deuxième non, car le clé "12" de plnum n'existe pas dans le tableau pilote, on a que 10 lignes dans le tableau pilote pour l'instant

\*/

/\*6 modifier tableau avion pour que capacite entre 150 et 480\*/

alter table avion

add check (capacite between 150 and 480);

alter table avion alter column capacite set not null;

ou

alter table avion

add constraint r2\_vérif check (capacite is not null and capacite between 150 and 480);

/\*7 modifier ligne 14 dans tableau vol\*/

update vol

set villedep = 'Lille', heurearr = 17

where volnum = 14;

volnum | plnum | avnum | villedep | villearr | heuredep | heurearr

--------+-------+-------+----------+------------+----------+----------

1 | 1 | 1 | Nice | Toulouse | 11 | 12

2 | 1 | 8 | Paris | Toulouse | 17 | 18

3 | 2 | 1 | Toulouse | Lyon | 14 | 16

4 | 5 | 3 | Toulouse | Lyon | 18 | 20

5 | 9 | 1 | Paris | Nice | 6 | 8

6 | 10 | 2 | Lyon | Nice | 11 | 12

7 | 1 | 4 | Paris | Lyon | 8 | 9

8 | 8 | 4 | Nice | Paris | 7 | 8

9 | 1 | 8 | Nantes | Lyon | 9 | 15

10 | 8 | 2 | Nice | Paris | 12 | 13

11 | 9 | 2 | Paris | Lyon | 15 | 16

12 | 1 | 2 | Lyon | Nantes | 16 | 20

13 | 4 | 5 | Nice | Lens | 11 | 14

15 | 8 | 9 | Paris | Toulouse | 17 | 18

16 | 7 | 5 | Paris | Toulouse | 18 | 19

17 | 5 | 8 | Bordeaux | clemont-Fd | 12 | 13

14 | 3 | 5 | Lille | Paris | 15 | 17

(17 rows)

/\*8 delete vol 17\*/

DELETE FROM vol

WHERE volnum = 17;

/\*9 ajouter une colonne date\_de\_naissance entre 1950 et 1980\*/

alter table pilote

add column date\_de\_naissance date;

alter table pilote add constraint ck\_birth check (date\_de\_naissance >= ‘01/01/1950’ and date\_de\_naissance<01/01/1981);

alter table Pilote add constraint ck\_birth check(Extract (year from date\_de\_naissance) between 1950 and 1980;

alter table pilote add constraint ck\_birth2 check(date\_part(‘year’, date\_de\_naissance) between 1950 and 1980);

/\*10\*/

update pilote set date\_de\_naissance = ‘07/10/1956’ where plnum = 1;

……

set datastyle to ‘sql, DMY’;

/\*11\*/

a -

select Pilote.plnom from pilote order by salaire desc, plnom asc;

b -

select round(avg(salaire),2) as ‘salaire moyen’ from pilote;

c -

select plnom,plprenom, salaire

from pilote where salaire > 20000;

d -

select round(avg(salaire),2) as salaire moyen, ville from pilote group by ville;

e -

select distinct avnom from avion order by avnom;

f -

select count(\*) as ‘nb avion’ from avion where upper(localisation) = upper(‘lyon’);

g -

select count(distinct avnom) as ‘nb’ from avion where upper(localisation) != upper(‘lyon’);

h -

select p1.plnom, extract(year from p1.date\_de\_naissance) as “Annee de naissance”

from pilote p1

where Exsits(

select p2.plnom, p2 date\_de\_naissance from pilote p2

where date\_part(‘year’, p2.date\_de\_naissance) =

date\_part(‘year’, p1.date\_de\_naissance)

and p1.plnum<>p2.plnum);

ou

select distinct p1.plnom, p2.plnom, extract (year from p1.date\_de\_naissance) as “Annee de naissance”

from pilote p1, pilote p2

where date\_part(‘year’, p2.date de naissance) = date\_part(‘year’, p1.date\_de\_naissance)

and p1.plnum!=p2.plnum;

i -

select distinct p1.plnom, p1.date\_de\_naissance from pilote p1, pilote p2

where date\_part(‘day’, p2.date\_de\_naissance)=date\_part(‘day’, p1.date\_de\_naissance)

and date\_part(‘month’,p2.date\_de\_naissance)=date\_part(‘month’,p1.date\_de\_naissance)

and p1.plnum = p2.plnum;

select distinct p1.plnom, date\_part(‘day’, p1.date\_de\_naissance) as ‘jour’, date\_part(‘month’’, p1.date\_de\_naissance) as ‘mois’

from pilote p1, pilote p2

where date\_part(‘day’, p2.date\_de\_naissance)=jour

and date\_part(‘month’,p2.date\_de\_naissance)=mois

and p1.plnum = p2.plnum;

j -

select plnom, date\_part(‘year’,age(date\_de\_naissance)) as Age from pilote;

select plnom, extract(‘year’ from age(date\_de\_naissance)) as Age from pilote;

select plnom, data\_trunc(‘year’,age(date\_de\_naissance)) as Age from pilote;

select plnom, data\_trunc(‘month’’,age(date\_de\_naissance)) as Age from pilote;

k -

select sum(capacite) from avion;

l -

select avg(heurearr-heuredep) as duree moyenne from vol;

m -

select date\_part(‘year’, date\_de\_naissance) as annee, round(avg(salaire),2) as “moyen salaire”

from pilote group by annee

order by annee

n-

select min(capacite) as capacite\_min, max(capacite) as capacite\_max from avion;

ou

select localisation, min(capacite) as capacite\_min, max(capacite) as capacite\_max from avion

group by localisation;

o -

select round(avg(salaire),2) as salaireMoyenMax,ville from pilote group by ville

having avg(salaire)>= all

(select avg(salaire) from pilote

group by ville);

select round(max(salaire),2) as salaire\_max, ville from pilote group by ville;

q -

select dinstinct villearr as ville\_arr from vol where upper(villedep) = upper(‘paris’);

r -

select avion.\* from avion, pilote where avion.localisation ) pilote = ville

s -

select vomnul, villedep, villearr, heuredep, heurearr, avnom, plnom

from vol, pilote,avion

where vol.plnum = pilote.plnum

t -

select distinct plnom, plprenom from pilote, vol

whrer vpl.plnum = pilote.plnum

select p.plnom, p.plprenom, count(v.volnum)

from polite p, vol v

where v.plnum=p.plnum

groupe by p.plnom, p.plprenom

having count (v.volnum)>=2;

u

select dinstinct avion.avnum, avnom from avion, vol

where vol.avnum = avion.avnum;

v

select count(\*), plnum from vol group by plnum

w

select sum(heurrearr-heuredep),plnom from vol v, pilote p

where v.plnum = p.plnum

groupe by plnom

x

select a.avnum, a.avnom from avion a

except

select distinct a1.avnum, a1.avnom from avion a1, vol v

where v.avnum = a1.avnum;

select a.avnum, a.avnom from avion a

where not exists ‘select \* from vol v where v.avnum = a.avnum);

select a.avnum, a.avnom from avion a

where a.avnum not in (select v.avnum from vol v);

select avion.avnum,avnom, vol.volnum

from avion

left join vol on avion.anum = vol.avnum;

y

select p.plnom, p.plprenom from pilote

where not exsits

(select \* from avion

where not exists(select \*from vol where avion.avnum = vol.avnum));

select pilote.plnim, pilote.plprenom from pilote

where (select count(\*) from avion)<=(select count(distinct vol.avnum) from vol where vol.plnum = pilote.plnum);