

Creation de table

```
createdb -U sdesdevi [name]
psql -U sdesdevi [name]
```

Affiche table def

```
\d {[name]}
```

TP2

```
drop table if exists Client cascade ;
drop table if exists FactureProduit;
drop table if exists Produit;
drop table if exists Facture;

create table Client (
  code varchar(64) primary key,
  nom varchar(64),
  prenom varchar(64)
);

create table Produit (
  code varchar(64) primary key,
  designation varchar(64),
  prix double precision,
  nombreEnStock integer
);

create table Facture (
  numero integer primary key,
  dateVente date,
  codeClient varchar(64) references Client(code)
);

create table FactureProduit (
  refCodeProduit varchar(64) references Produit(code),
  refNumeroFacture integer references Facture(numero),
  nombreExemplaires integer,
  primary key (refCodeProduit, refNumeroFacture)
);

insert into Client values ('C2', 'Doe', 'Joe');

insert into Produit values ('P1', 'Pain', 0.5, 100);
insert into Produit values ('P2', 'Lait', 1.5, 50);
insert into Produit values ('P3', 'Beurre', 2.5, 30);
insert into Produit values ('P4', 'Fromage', 3.5, 20);

insert into Facture values (1, '2020-01-01');

insert into FactureProduit values ('P1', 1, 2);
insert into FactureProduit values ('P2', 1, 1);

alter table produit add column promotion boolean default false;

update client set nom = 'Dupont' where code = 'C2';
```

TP3

```
/* 1 */
SELECT * FROM film;

/* 2 */
SELECT UPPER(abonne.nomab || ' ' || abonne.prenomab) as NomPrenom FROM abonne;

/* 3 */
SELECT film.titre FROM film WHERE film.anneeproduction < 2005;

/* 4 */
SELECT film.titre
FROM film
WHERE film.anneeproduction >= 2005 and film.anneeproduction <= 2010
ORDER BY film.titre;

/* 5 */
SELECT film.titre
FROM film
WHERE lower(film.titre) LIKE 'p%';

/* 6 */
SELECT film.titre
FROM film
WHERE lower(film.titre) LIKE '%se%';

/* 7 with join */
SELECT distinct categorie.libelle
FROM categorie
RIGHT JOIN film f on categorie.ncat = f.ncat;
```

```

/* 7 with subquery */
SELECT categorie.libelle
FROM categorie
WHERE categorie.ncat IN (SELECT distinct film.ncat FROM film);

/* 8 */
SELECT count(distinct film.ncat) as nbCategories
FROM film;

/* 9 */
SELECT film.ncat, count(film.ncat) as nbFilm
FROM film
GROUP BY film.ncat;

/* 10 */
SELECT count(distinct emprunt.*) * 1.0 / count(distinct abonne.*) as moyenneEmpruntParAbonne
FROM emprunt, abonne;

/* 11 */
SELECT film.titre
FROM film
LEFT JOIN categorie on film.ncat = categorie.ncat
WHERE categorie.libelle = 'Drame';

/* 12 */
SELECT film.titre, film.anneeproduction
FROM film
WHERE film.realisateur = 'Tim Burton';

/* 13 */
SELECT count(*) as nbFilm
FROM film
WHERE film.realisateur = 'Clint Eastwood';

/* 14 */
SELECT film.titre, count(dvd.*) as nbDvd
FROM film
LEFT JOIN dvd on film.nfilm = dvd.nfilm
WHERE film.realisateur = 'Woody Allen'
GROUP BY film.titre;

/* 15 */
SELECT film.titre, count(dvd.*) as nbDvd
FROM film
LEFT JOIN dvd on film.nfilm = dvd.nfilm
GROUP BY film.titre
HAVING count(dvd.*) > 1;

/* 16 */
SELECT film.titre, count(dvd.*) as nbDvd
FROM film
JOIN dvd on film.nfilm = dvd.nfilm
GROUP BY film.titre;

/* 17 */
SELECT abonne.nomab, abonne.prenomab
FROM abonne
JOIN emprunt on abonne.nab = emprunt.nab
JOIN dvd on emprunt.ndvd = dvd.ndvd
JOIN film on dvd.nfilm = film.nfilm
WHERE film.titre = 'Pulp Fiction';

/* 18 */
SELECT film.titre
FROM film
JOIN categorie on film.ncat = categorie.ncat
WHERE categorie.libelle = 'Drame' OR categorie.libelle = 'Action';

/* 19 */
SELECT distinct film.titre
FROM film
JOIN dvd on film.nfilm = dvd.nfilm
JOIN emprunt on dvd.ndvd = emprunt.ndvd
JOIN abonne on emprunt.nab = abonne.nab
WHERE abonne.nomab = 'Dupont' AND abonne.prenomab = 'Marie';

/* 20 */
SELECT film.titre
FROM film
WHERE not exists(
    SELECT *
    FROM dvd
    WHERE dvd.nfilm = film.nfilm and exists(
        SELECT *
        FROM emprunt
        WHERE emprunt.ndvd = dvd.ndvd
    )
);

/* 21 */
SELECT film.titre
FROM film
JOIN categorie on film.ncat = categorie.ncat
WHERE categorie.libelle = 'Drame' AND film.realisateur = 'Woody Allen';

/* 22 */
SELECT distinct film.titre

```

```

FROM film
JOIN dvd on film.nfilm = dvd.nfilm
WHERE dvd.anneeachat = 2009 AND dvd.moisachat = 8;

/* 23 */
SELECT distinct abon.ne.nomab, abon.ne.prenomab
FROM abon.ne
WHERE abon.ne.nab in (
    SELECT emprunt.nab
    FROM emprunt
    JOIN dvd on emprunt.ndvd = dvd.ndvd
    JOIN film on dvd.nfilm = film.nfilm
    WHERE film.realisateur = 'Woody Allen' OR film.realisateur = 'Tim Burton'
);

/* 24 */
SELECT distinct film.titre
FROM film
WHERE not exists(
    SELECT *
    FROM abon.ne
    WHERE not exists(
        SELECT *
        FROM emprunt
        JOIN dvd on emprunt.ndvd = dvd.ndvd
        WHERE dvd.nfilm = film.nfilm and emprunt.nab = abon.ne.nab
    )
);

/* 25 */
WITH minBurton as (
    SELECT min(film.anneeproduction) as minBurton
    FROM film
    WHERE film.realisateur = 'Tim Burton'
)

SELECT distinct film.titre
FROM film
WHERE film.anneeproduction < (SELECT minBurton FROM minBurton);

/* 26 */
SELECT distinct film.titre
FROM film
WHERE not exists(
    SELECT *
    FROM dvd
    WHERE dvd.nfilm = film.nfilm
);

/* 27 */
SELECT a.nomab, a.prenomab
FROM abon.ne as a
WHERE not exists(
    SELECT *
    FROM film as f
    WHERE réalisateur = 'Quentin Tarantino'
    AND not exists(
        SELECT *
        FROM emprunt
        JOIN dvd on emprunt.ndvd = dvd.ndvd
        WHERE emprunt.nab = a.nab
        AND f.nfilm = dvd.nfilm
    )
);

/* 28 */
SELECT film.titre
FROM film
WHERE anneeproduction = 2008
OR anneeproduction = 2009;

/* 29 */
SELECT film.titre
FROM film
WHERE exists(
    SELECT *
    FROM dvd
    WHERE dvd.nfilm = film.nfilm
    AND dvd.anneeachat = film.anneeproduction
);

/* 30 */
SELECT film.titre
FROM film
WHERE anneeproduction != 2007
AND anneeproduction != 2008
AND anneeproduction != 2009;

/* 31 */
SELECT distinct f_réalisateur.réalisateur
FROM film as f_réalisateur
WHERE not exists(
    SELECT *
    FROM film
    WHERE
        film.réalisateur = f_réalisateur.réalisateur

```

```
);
    AND film.anneeproduction = 2009
```

Annale

```
/* 1 */
SELECT bar.nom
FROM bar
WHERE exists(
    SELECT *
    FROM amateur
    WHERE amateur.bar_favori = bar.num_b
)
ORDER BY bar.nom;

/* 2 */
SELECT biere.designation
FROM biere
JOIN sert on sert.code = biere.code
WHERE sert.num_b = 3;

/* 3 */
SELECT amateur.nom, COUNT(aime.*) as nb_aime
FROM amateur
JOIN aime on amateur.num_a = aime.num_a
GROUP BY amateur.nom;

/* 4 */
SELECT distinct bar.nom
FROM bar
JOIN sert on bar.num_b = sert.num_b
WHERE exists(
    SELECT *
    FROM amateur
    JOIN aime on amateur.num_a = aime.num_a
    WHERE
        amateur.nom = 'Simon' AND amateur.prenom = 'Paul'
        AND aime.code = sert.code
);

/* 5 */
SELECT AVG(sert.prix) as Prix_moyen
FROM sert
JOIN biere on sert.code = biere.code
WHERE biere.designation = 'Maredsous';

/* 6 */
SELECT amateur.nom, amateur.prenom
FROM amateur
WHERE not exists(
    SELECT *
    FROM biere
    WHERE not exists(
        SELECT *
        FROM aime
        WHERE
            aime.code = biere.code
            AND aime.num_a = amateur.num_a
    )
);

/* 7 */
WITH biere_servi as (
    SELECT count(*) as number, bar.num_b
    FROM bar
    JOIN sert on bar.num_b = sert.num_b
    GROUP BY bar.num_b
)

SELECT bar.num_b
FROM bar
JOIN biere_servi on biere_servi.num_b = bar.num_b
WHERE biere_servi.number > 3;

/* 8 */
SELECT biere.designation, AVG(aime.note) as moyenne_note
FROM biere
LEFT JOIN aime on biere.code = aime.code
GROUP BY biere.designation;

/* 9 */
SELECT biere.designation
FROM biere
JOIN aime on biere.code = aime.code
JOIN amateur on aime.num_a = amateur.num_a
WHERE amateur.nom = 'Springsteen' AND amateur.prenom = 'Bruce' AND exists(
    SELECT *
    FROM sert
    WHERE sert.code = biere.code AND amateur.bar_favori = sert.num_b
);

/* 10 */
UPDATE bar SET nom = 'Bar au mètre' WHERE nom = 'Baratin';
```