

```
CREATE DATABASE DVF2
```

```
CREATE TABLE mutation (  
    IdMut int ,  
    NumDispo int,  
    DateMut datetime ,  
    NatMut varchar ,  
    ValeurFonc float,  
    primary key (IdMut)  
)
```

```
CREATE TABLE Bien  
(SurfCarr Decimal,  
CodeTypLoc INT,  
SurfReBati INT,  
NbPiePrinc INT,  
NatCult VARCHAR(6),  
NatCultSpe VARCHAR(3),  
SurfTerr INT,  
IdMut INT,  
FOREIGN KEY (IdMut) REFERENCES mutation (IdMut) ON DELETE CASCADE ON UPDATE CASCADE)
```

```
CREATE TABLE commune (  
    CodeIdCom int ,  
    Commune varchar ,  
    Cp varchar ,  
    CodeCom int,  
    PRIMARY KEY (CodeIdCom)  
)
```

```
CREATE TABLE adresse (  
    IdMut int,  
    NumVoie int ,  
    BTQ text ,  
    CodeTypeVoie int ,  
    CodeVoie varchar ,  
    Voie text ,  
    CodeIdCom int,  
    CodeDep int,  
    FOREIGN KEY (IdMut) REFERENCES mutation (IdMut) ON DELETE CASCADE ON UPDATE CASCADE ,  
    FOREIGN KEY (CodeIdCom) REFERENCES commune (CodeIdCom) ON DELETE CASCADE ON UPDATE  
CASCADE)
```

```
CREATE TABLE typelocal (  
    TypLoc text ,  
    CodeTypLoc int,  
    PRIMARY KEY (CodeTypLoc)  
)
```

```
CREATE TABLE typevoie (  
    CodeTypvoie int ,  
    Typvoie text ,  
    PRIMARY KEY (CodeTypvoie)  
)
```

1. Nombre total d'appartements vendus au 1er semestre 2020

```
SELECT count(*) FROM Mutation LEFT JOIN bien ON mutation.IdMut=bien.IdMut WHERE CodeTypLoc='2' and DateMut BETWEEN '2020-01-01T00:00:00' AND '2020-06-31T00:00:00'
```

2. Proportion des ventes d'appartements par le nombre de pièces

```
SELECT count(*)*100/( SELECT count(*) FROM Mutation LEFT JOIN bien ON mutation.IdMut=bien.IdMut WHERE CodeTypLoc='2') FROM Mutation LEFT JOIN bien ON mutation.IdMut=bien.IdMut WHERE CodeTypLoc='2' Group By bien.NbPiePrinc
```

3. Liste des 10 départements où le prix du mètre carré est le plus élevé

```
SELECT CodeDep, avg(ValeurFonc / SurfCarr) as price FROM Mutation LEFT JOIN bien ON mutation.IdMut=bien.IdMut left join adresse on mutation.IdMut = adresse.IdMut group by CodeDep ORDER BY price DESC LIMIT 10;
```

4. Prix moyen du mètre carré d'une maison en Île-de-France

```
SELECT avg(ValeurFonc / SurfCarr) as price FROM Mutation LEFT JOIN bien ON mutation.IdMut=bien.IdMut left join adresse on mutation.IdMut = adresse.IdMut where CodeTypLoc='1'and (CodeDep BETWEEN '91' and '95' or CodeDep = '75' or CodeDep BETWEEN '77' and '78')
```

5. Liste des 10 appartements les plus chers avec le département et le nombre de mètres carrés

```
SELECT ValeurFonc, CodeDep, SurfCarr FROM Mutation LEFT JOIN bien ON mutation.IdMut=bien.IdMut left join adresse on mutation.IdMut = adresse.IdMut WHERE CodeTypLoc='2' ORDER BY ValeurFonc DESC LIMIT 10
```

6. Taux d'évolution du nombre de ventes entre le premier et le second trimestre de 2020

```
Select ((SELECT count(*) - (SELECT count(*) FROM Mutation LEFT JOIN bien ON mutation.IdMut=bien.IdMut WHERE DateMut BETWEEN '2020-01-01T00:00:00' AND '2020-03-31T00:00:00')) FROM Mutation LEFT JOIN bien ON mutation.IdMut=bien.IdMut WHERE DateMut BETWEEN '2020-04-01T00:00:00' AND '2020-06-31T00:00:00') / ( SELECT count(*) FROM Mutation LEFT JOIN bien ON mutation.IdMut=bien.IdMut WHERE DateMut BETWEEN '2020-01-01T00:00:00' AND '2020-03-31T00:00:00'))*100
```

OU Bien

```
Select (SELECT count(*)*100/(SELECT count(*) FROM Mutation LEFT JOIN bien ON mutation.IdMut=bien.IdMut WHERE DateMut BETWEEN '2020-01-01T00:00:00' AND '2020-03-31T00:00:00')) FROM Mutation LEFT JOIN bien ON mutation.IdMut=bien.IdMut WHERE DateMut BETWEEN '2020-04-01T00:00:00' AND '2020-06-31T00:00:00') - 100
```

7. Liste des communes où le nombre de ventes a augmenté d'au moins 20% entre le premier et le second trimestre de 2020

```
WITH Tab1 AS (SELECT commune, count(*) AS T1 FROM Mutation LEFT JOIN adresse ON mutation.IdMut=adresse.IdMut LEFT JOIN Commune on adresse.CodeIdCom = commune.CodeIdCom WHERE DateMut BETWEEN '2020-01-01T00:00:00' AND '2020-03-31T00:00:00' group by commune), Tab2 AS (SELECT commune, count(*) AS T2 FROM Mutation LEFT JOIN adresse ON mutation.IdMut=adresse.IdMut LEFT JOIN Commune on adresse.CodeIdCom = commune.CodeIdCom WHERE DateMut BETWEEN '2020-04-01T00:00:00' AND '2020-06-31T00:00:00' group by commune)
```

```
SELECT Tab2.commune, T1, T2, round(100*(T2-T1)/T1,1) AS Augmentation FROM Tab2 LEFT JOIN Tab1 ON Tab2.commune=Tab1.commune GROUP BY Tab2.commune HAVING augmentation >=20;
```

8. Différence en pourcentage du prix au mètre carré entre un appartement de 2 pièces et un appartement de 3 pièces

```
WITH Tab1 AS ( SELECT round(avg(ValeurFonc/SurfCarr),2) AS F2 FROM mutation LEFT JOIN bien ON mutation.IdMut=bien.IdMut left join adresse on mutation.IdMut = adresse.IdMut WHERE NbPiePrinc=2 AND CodeTypLoc = 2), Tab2 AS ( SELECT round(avg(ValeurFonc/SurfCarr),2) AS F3 FROM mutation LEFT JOIN bien ON mutation.IdMut=bien.IdMut left join adresse on mutation.IdMut = adresse.IdMut WHERE NbPiePrinc=3 AND CodeTypLoc = 2) SELECT F2 AS 'Price F2', F3 AS 'Price F3', ROUND((F2-F3)*100.0/F2, 2) AS " AVG Price between F2 and F3 " FROM Tab1,Tab2;
```

9. Les moyennes de valeurs foncières pour le top 3 des communes des départements 6, 13, 33, 59 et 69

WITH

```
Tab1 AS (SELECT CodeDep, commune, round(avg(ValeurFonc),2) AS D6 FROM mutation left join adresse on mutation.IdMut = adresse.IdMut LEFT JOIN commune ON adresse.CodeIdCom=commune.CodeIdCom WHERE CodeDep=6 group by commune order by D6 DESC LIMIT 3),
```

```
Tab2 as (SELECT CodeDep,commune, round(avg(ValeurFonc),2) AS D13 FROM mutation left join adresse on mutation.IdMut = adresse.IdMut LEFT JOIN commune ON adresse.CodeIdCom=commune.CodeIdCom WHERE CodeDep=13 group by commune order by D13 DESC LIMIT 3),
```

```
Tab3 AS (SELECT CodeDep, commune, round(avg(ValeurFonc),2) AS D33 FROM mutation left join adresse on mutation.IdMut = adresse.IdMut LEFT JOIN commune ON adresse.CodeIdCom=commune.CodeIdCom WHERE CodeDep=33 group by commune order by D33 DESC LIMIT 3),
```

```
Tab4 as (SELECT CodeDep,commune, round(avg(ValeurFonc),2)AS D59 FROM mutation left join adresse on mutation.IdMut = adresse.IdMut LEFT JOIN commune ON adresse.CodeIdCom=commune.CodeIdCom WHERE CodeDep=59 group by commune order by D59 DESC LIMIT 3),
```

```
Tab5 as (SELECT CodeDep,commune, round(avg(ValeurFonc),2) AS D69 FROM mutation left join adresse on mutation.IdMut = adresse.IdMut LEFT JOIN commune ON adresse.CodeIdCom=commune.CodeIdCom WHERE CodeDep=69 group by commune order by D69 DESC LIMIT 3)
```

```
SELECT * from Tab1 Union SELECT * from Tab2 union SELECT * from Tab3 union SELECT * from Tab4 union SELECT * from Tab5
```