

requête 1

Nombre total d'appartements vendus au 1er semestre 2020

```
1 • select
2     count(*) as 'ventes appartements au 1er semestre 2020'
3
4 from transactions as t
5     inner join biens as b on t.id_bien = b.id_bien
6     inner join regions as r on r.id_region = b.id_region
7
8 where
9     date between "2020-01-01" and "2020-06-30"
10    and b.type_local = "appartement";
```

ventes appartements au 1er semestre 2020
31378

requête 2

Le nombre de ventes d'appartements par région, pour le 1er semestre 2020

```
SELECT
COUNT(t.id_transaction) as "nb_ventes" , nom_region AS "regions"
FROM transactions AS t
INNER JOIN biens AS b ON b.id_bien = t.id_bien
INNER JOIN communes AS c ON b.id_commune = c.id_commune
INNER JOIN regions AS r ON c.id_region = r.id_region
WHERE
date BETWEEN "2020-01-01" AND "2020-06-30"
AND b.type_local = "appartement"
GROUP BY r.nom_region
ORDER BY nb_ventes DESC;
```

nb_ventes	regions
13995	Île-de-France
3649	Provence-Alpes-Côte d'Azur
3253	Auvergne-Rhône-Alpes
1932	Nouvelle-Aquitaine
1640	Occitanie
1357	Pays de la Loire
1254	Hauts-de-France
984	Grand Est
983	Bretagne
862	Normandie
696	Centre-Val de Loire
376	Bourgogne-Franche-Comté
223	Corse
94	Martinique

requête 3

Proportion des ventes d'appartements par le nombre de pièces

```
SELECT
    ROUND(COUNT(t.id_transaction) / tmp_table.nb * 100,2) as 'proportion des ventes',
    b.nb_pieces as 'nombre de pièces'
from transactions as t
JOIN biens as b on b.id_bien = t.id_bien,
(SELECT COUNT(*) AS nb
FROM
    transactions AS t,
    biens AS b
WHERE
    t.id_bien = b.id_bien
    AND b.type_local = 'appartement') as tmp_table
where
    b.type_local = 'appartement'
GROUP BY b.nb_pieces
order by b.nb_pieces;
```

proportion des ventes	nombre de pièces
0.10	0
21.48	1
31.16	2
28.59	3
14.20	4
3.56	5
0.65	6
0.17	7
0.05	8
0.03	9
0.01	10
0.00	11

requête 4

Liste des 10 départements où le prix du m² est le plus élevé

```
SELECT
    round(AVG((t.valeur) / tmp_surf.nb)*100,2) as 'prixSurface',
    d.nom_departement as 'département'
FROM transactions as t
    INNER JOIN biens AS b ON b.id_bien = t.id_bien
    INNER JOIN communes AS c ON b.id_commune = c.id_commune
    INNER JOIN regions AS r ON c.id_region = r.id_region
    INNER JOIN departements AS d ON r.id_departement = d.id_departement,
    (SELECT
        count(surface_carrez) AS nb
        FROM
            biens as b
    ) as tmp_surf
GROUP BY d.nom_departement
ORDER BY prixSurface DESC LIMIT 10;
```

prixSurface	département
1797.12	Paris
1201.01	Hauts-de-Seine
814.30	Val-de-Marne
753.22	Yvelines
739.39	Rhône
721.37	Alpes-Maritimes
675.91	Ain
656.36	Haute-Savoie
650.46	Corse-du-Sud
627.57	Seine-Saint-Denis

requête 5

Prix moyen du m² d'une maison en île de france

```
SELECT
    ROUND(AVG((t.valeur) / tmp_surf.nb)*100,2) as "prix moyen €/m² Maison",
    r.nom_region as "île-de-France"
FROM transactions as t
    INNER JOIN biens AS b ON b.id_bien = t.id_bien
    INNER JOIN communes AS c ON b.id_commune = c.id_commune
    INNER JOIN regions AS r ON c.id_region = r.id_region, (
        SELECT
            count(surface_carrez) AS nb
        FROM
            biens as b
        ) as tmp_surf
WHERE
    b.type_local = "maison"
    AND r.nom_region = "île-de-France";
```

prix moyen €/m² Maison	île-de-France
1035.96	Île-de-France

requête 6

Liste des 10 appartements les plus chers, avec la région et le nombre de m²

```
SELECT
    b.id_bien as 'id_bien',
    r.nom_region as 'région',
    t.valeur as 'prix en €',
    b.surface_carrez as 'superficie en m²'
FROM biens AS b
    INNER JOIN communes AS c ON b.id_commune = c.id_commune
    INNER JOIN regions AS r ON c.id_region = r.id_region
    INNER JOIN transactions AS t ON b.id_bien = t.id_bien
WHERE
    b.type_local = 'appartement'
ORDER BY t.valeur DESC
LIMIT 10;
```

id bien	région	prix en €	superficie en m²
19452	Île-de-France	9000000	9.1
26882	Île-de-France	8600000	64
17051	Île-de-France	8577713	20.55
19802	Île-de-France	7620000	42.77
16885	Île-de-France	7600000	253.3
16193	Île-de-France	7535000	139.9
19159	Île-de-France	7420000	360.95
19403	Île-de-France	7200000	595
16240	Île-de-France	7050000	122.56
16241	Île-de-France	6600000	79.38

requête 7

Taux d'évolution du nb de ventes entre le premier et le second trimestre 2020

```
SELECT
  t1 as "trimestre 1",
  t2 as "trimestre 2", ROUND(( (t2 - t1) / t1) * 100,2) as "taux d'évolution des ventes"
FROM (
  SELECT COUNT(*) as t2
  FROM transactions
  WHERE
    date BETWEEN "2020-04-01" AND "2020-06-30"
) t2
JOIN (
  SELECT COUNT(*) as t1
  FROM transactions
  WHERE
    date BETWEEN "2020-01-01" AND "2020-03-31"
) t1;
```

trimestre 1	trimestre 2	taux d'évolution des ventes
16776	17393	3.68

requête 8

Le classement des régions par rapport au prix /m² des appartements de plus de 4 pièces

```
SELECT
    ROUND(AVG(t.valeur) / tmp_surf.nb,2) as 'prixSurface',
    r.nom_region as 'région'
FROM transactions as t
    INNER JOIN biens AS b ON b.id_bien = t.id_bien
    INNER JOIN communes AS c ON b.id_commune = c.id_commune
    INNER JOIN regions AS r ON c.id_region = r.id_region
    INNER JOIN departements AS d ON r.id_departement = d.id_departement,
    (SELECT
        count(surface_carrez) AS nb
    FROM
        biens as b) as tmp_surf
WHERE b.nb_pieces > 4
GROUP BY r.nom_region
ORDER BY prixSurface DESC;
```

prixSurface	région
24.66	Île-de-France
19.11	Corse
12.29	La Réunion
11.18	Provence-Alpes-Côte d'Azur
10.69	Martinique
10.51	Auvergne-Rhône-Alpes
9.25	Nouvelle-Aquitaine
8.06	Pays de la Loire
7.78	Hauts-de-France
6.99	Occitanie
6.98	Bretagne
6.73	Normandie
4.97	Centre-Val de Loire
4.88	Grand Est
3.67	Bourgogne-Franche-Comté

requête 9

Liste de communes ayant eu au moins 50 ventes au 1er trimestre

```
SELECT
    COUNT(t.id_transaction) as ventes,c.nom_commune
FROM communes as c
    INNER JOIN biens AS b ON b.id_commune = c.id_commune
    INNER JOIN transactions AS t ON b.id_bien = t.id_bien
WHERE
    t.date BETWEEN "2020-01-01" AND "2020-03-31"
GROUP BY c.nom_commune
HAVING (count(t.id_transaction) > 50)
ORDER BY
    COUNT(t.id_transaction) DESC;
```

ventes	nom_commune
228	Paris 17e Arrondissement
215	Paris 15e Arrondissement
209	Paris 18e Arrondissement
173	Nice
169	Paris 11e Arrondissement
165	Paris 16e Arrondissement
157	Bordeaux
146	Paris 14e Arrondissement
127	Paris 20e Arrondissement
119	Nantes
116	Paris 19e Arrondissement
110	Paris 12e Arrondissement
109	Paris 10e Arrondissement
106	Grenoble
106	Paris 9e Arrondissement

requête 10

Différence en % du prix au m² entre un appartement de 2 pièces et un appartement de 3 pièces

```
SELECT
    round(p2) as "2pièces",
    round(p3) as "3 pieces", round(((p3 / p2)-1) * 100,2) as "différence de prix en %"
FROM (SELECT
    AVG(valeur)/tmp_surf2.nb2 as p2
    FROM transactions AS t
        INNER JOIN biens as b ON b.id_bien = t.id_bien,
        (SELECT
            AVG(surface_carrez) as nb2
            FROM biens as b)as tmp_surf2
    WHERE
        b.nb_pieces = 2) p2
JOIN (SELECT
    AVG(valeur)/tmp_surf3.nb3 as p3
    FROM transactions AS t
        INNER JOIN biens as b ON b.id_bien = t.id_bien,
        (SELECT
            AVG(surface_carrez) as nb3
            FROM biens as b)as tmp_surf3
    WHERE
        b.nb_pieces = 3) p3;
```

2pièces	3 pieces	différence de prix en %
3497	4642	32.74

requête 11

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

```
SELECT *
FROM (
  SELECT
    RANK() OVER (PARTITION BY code_departement ORDER BY moyenne_commune DESC) AS Rang,
    id_commune,
    nom_commune,
    moyenne_commune,
    code_departement
  FROM (
    SELECT c.id_commune,
           c.nom_commune,
           d.code_departement,
           ROUND(AVG(t.valeur), 2) AS moyenne_commune

    FROM communes AS c
      INNER JOIN biens AS b
        ON b.id_commune = c.id_commune
      INNER JOIN transactions AS t
        ON t.id_bien = b.id_bien
      INNER JOIN regions AS r
        ON c.id_region = r.id_region
      INNER JOIN departements AS d
        ON r.id_departement = d.id_departement

    WHERE d.code_departement IN ("06", "13", "33", "59", "69")
    GROUP BY c.nom_commune
    ORDER BY c.id_commune)
  AS sub)
AS sub2
```

Rang	id_commune	nom_commune	moyenne_commune	code_departement
1	1991	Saint-Jean-Cap-Ferrat	968750.00	06
2	1929	Èze	655000.00	06
3	1954	Mouans-Sartoux	476898.00	06
1	4336	Gignac-la-Nerthe	330000.00	13
2	4393	Saint-Savournin	Gignac-la-Nerthe	13
3	4315	Cassis	313416.88	13
1	12555	Lège-Cap-Ferret	549500.64	33
2	12844	Vayres	335000.00	33
3	12334	Arcachon	307435.93	33
1	21888	Bersée	433202.00	59
2	21983	Cysoing	408550.00	59
3	22091	Halluin	322250.00	59
1	27240	Ville-sur-Jarnioux	485300.00	69
2	27275	Lyon 2e Arrondissement	455217.26	69
3	27279	Lyon 6e Arrondissement	426968.25	69