Requêtes pour les besoins en analyse de données

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

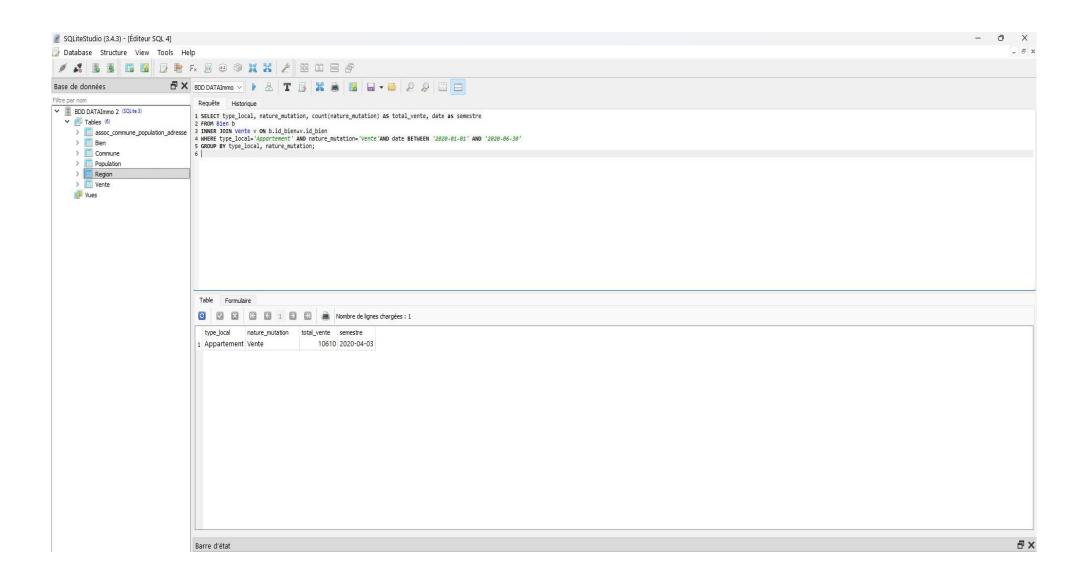
SELECT type_local, nature_mutation, count(nature_mutation) AS total_vente, date as semestre

FROM Bien b

INNER JOIN Vente v ON b.id_bien=v.id_bien

WHERE type_local='Appartement' AND nature_mutation='Vente'AND date BETWEEN '2020-01-01' AND '2020-06-30'

GROUP BY type_local, nature_mutation;



2. Le nombre de ventes d'appartement par région pour le 1er semestre 2020.

SELECT type_local, nature_mutation, count (nature_mutation) AS nbre_vente, r.region_code||' - '||r.region_nom AS region

FROM Vente v INNER JOIN Bien b

ON b.id_bien=v.id_bien

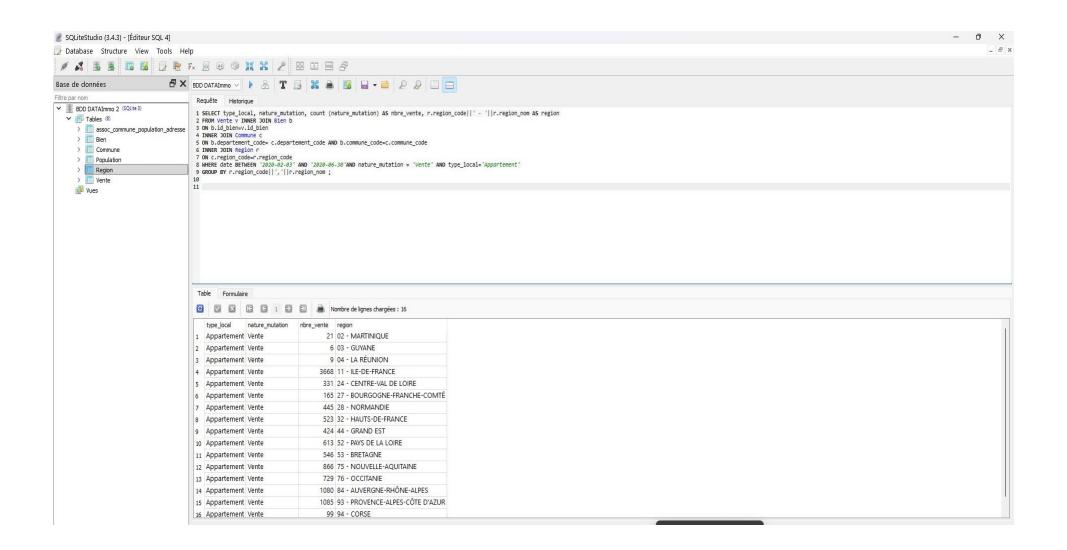
INNER JOIN Commune c

ON b.departement_code= c.departement_code AND b.commune_code=c.commune_code

INNER JOIN Region r

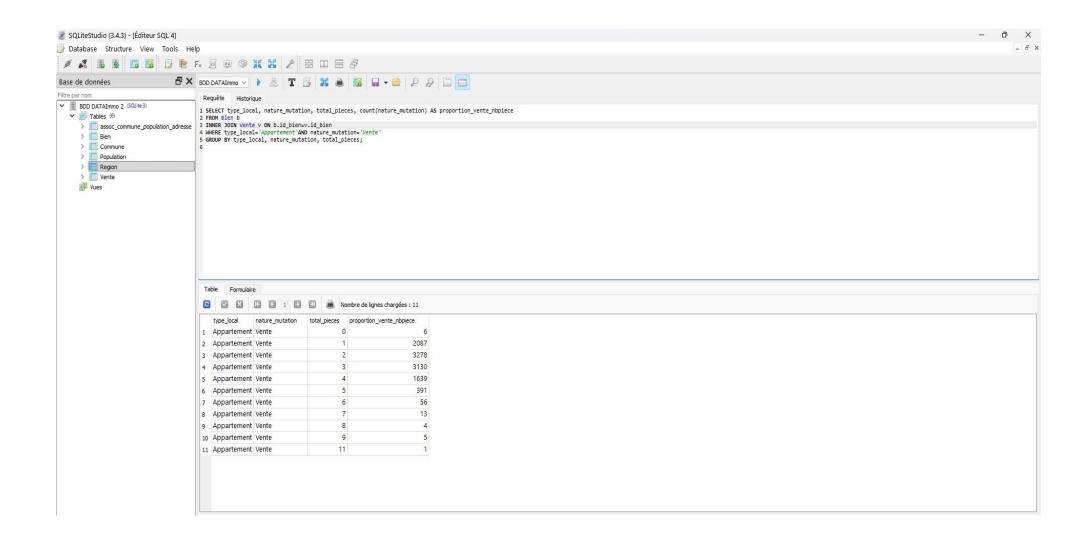
ON c.region_code=r.region_code

WHERE date BETWEEN '2020-02-03' AND '2020-06-30' AND nature_mutation = 'Vente' AND type_local='Appartement' GROUP BY r.region_code||','||r.region_nom;



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

SELECT type_local, nature_mutation, total_pieces, count(nature_mutation) AS proportion_vente_nbpiece
FROM Bien b
INNER JOIN Vente v ON b.id_bien=v.id_bien
WHERE type_local='Appartement'AND nature_mutation='Vente'
GROUP BY type_local, nature_mutation, total_pieces;



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

SELECT c.departement_code||'-'||c.departement_nom AS "Département",

AVG(valeur/surface_local) AS "Prix du mètre carré"

FROM commune c INNER JOIN Bien b

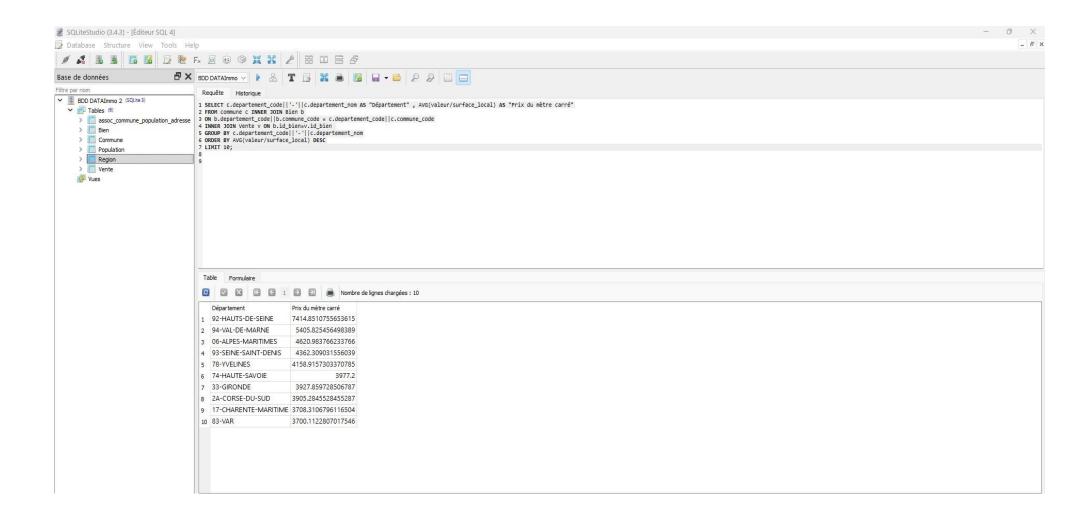
ON b.departement_code||b.commune_code = c.departement_code||c.commune_code

INNER JOIN Vente v ON b.id_bien=v.id_bien

GROUP BY c.departement_code||'-'||c.departement_nom

ORDER BY AVG(valeur/surface_local) DESC

LIMIT 10;



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

SELECT type local, r.region code||'-'||r.region nom AS Region,

AVG(valeur/surface_local) AS "Prix moyen du mètre carré"

FROM Region r INNER JOIN commune c

ON r.region_code=c.region_code AND r.region_nom = 'ILE-DE-FRANCE'

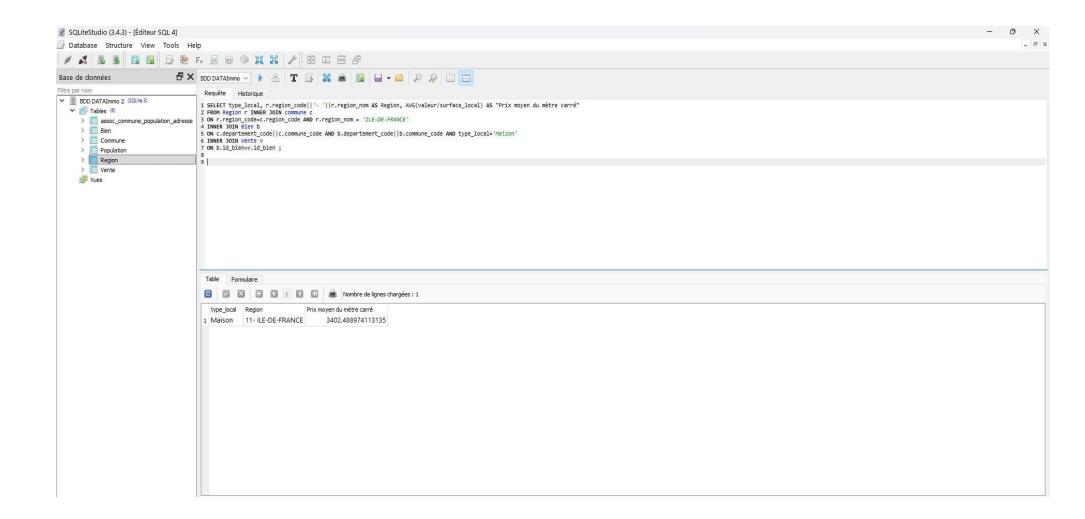
INNER JOIN Bien b

ON c.departement_code||c.commune_code AND b.departement_code||b.commune_code

AND type_local='Maison'

INNER JOIN Vente v

ON b.id_bien=v.id_bien;



6. Liste des 10 appartements les plus chers avec la région et le nombre de mètres carrés.

Solution 1

SELECT ROW_NUMBER() OVER (ORDER BY avg (valeur/surface_local) DESC) AS Liste, r.region_code||"-"||r.region_nom AS Region , AVG(valeur/surface_local) AS "Prix du mètre carré"

FROM Region r

INNER JOIN Bien b

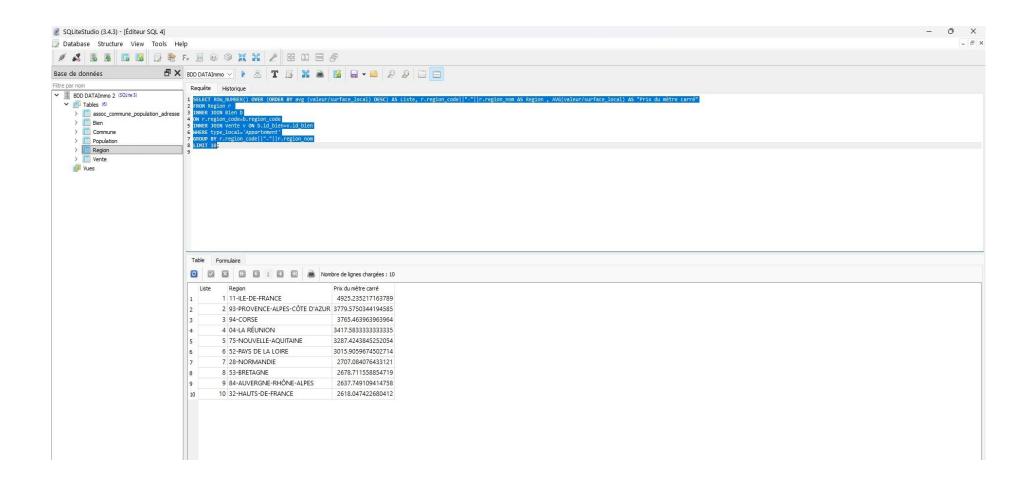
ON r.region_code=b.region_code

INNER JOIN Vente v ON b.id_bien=v.id_bien

WHERE type_local='Appartement'

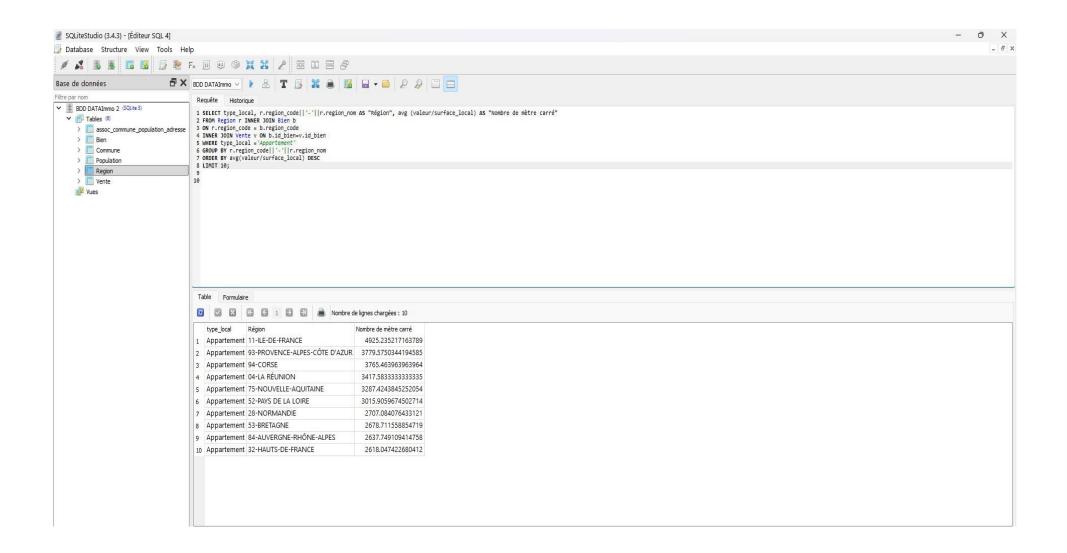
GROUP BY r.region_code||"-"||r.region_nom

LIMIT 10;



Solution 2

SELECT type_local, r.region_code||'-'||r.region_nom AS "Région", avg
(valeur/surface_local) AS "Nombre de mètre carré"
FROM Region r INNER JOIN Bien b
ON r.region_code = b.region_code
INNER JOIN Vente v ON b.id_bien=v.id_bien
WHERE type_local ='Appartement'
GROUP BY r.region_code||'-'||r.region_nom
ORDER BY avg(valeur/surface_local) DESC
LIMIT 10;

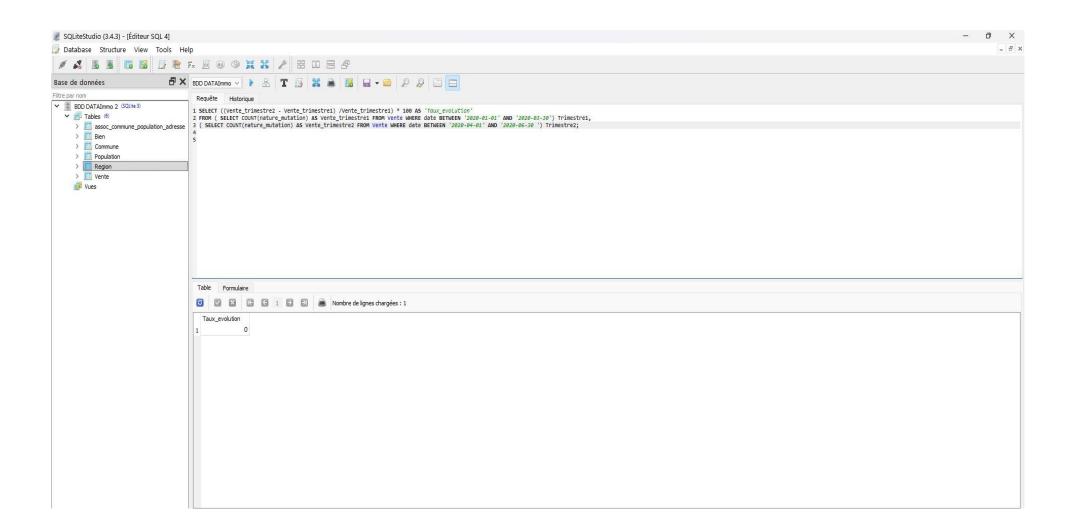


7. Taux d'évolution du nombre de ventes entre le premier et le second trimestre de 2020.

SELECT ((Vente_trimestre2 - Vente_trimestre1) / Vente_trimestre1) * 100 AS 'Taux_evolution'

FROM (SELECT COUNT(nature_mutation) AS Vente_trimestre1 FROM Vente WHERE date BETWEEN '2020-01-01' AND '2020-03-30') Trimestre1,

(SELECT COUNT(nature_mutation) AS Vente_trimestre2 FROM Vente WHERE date BETWEEN '2020-04-01' AND '2020-06-30 ') Trimestre2;



8. Le classement des régions par rapport au prix au mètre carré des appartements de plus de 4 pièces.

SELECT r.region_code||r.region_nom AS Region , AVG(valeur/surface_local) AS "Prix du mètre carré"

FROM Region r

INNER JOIN Bien b

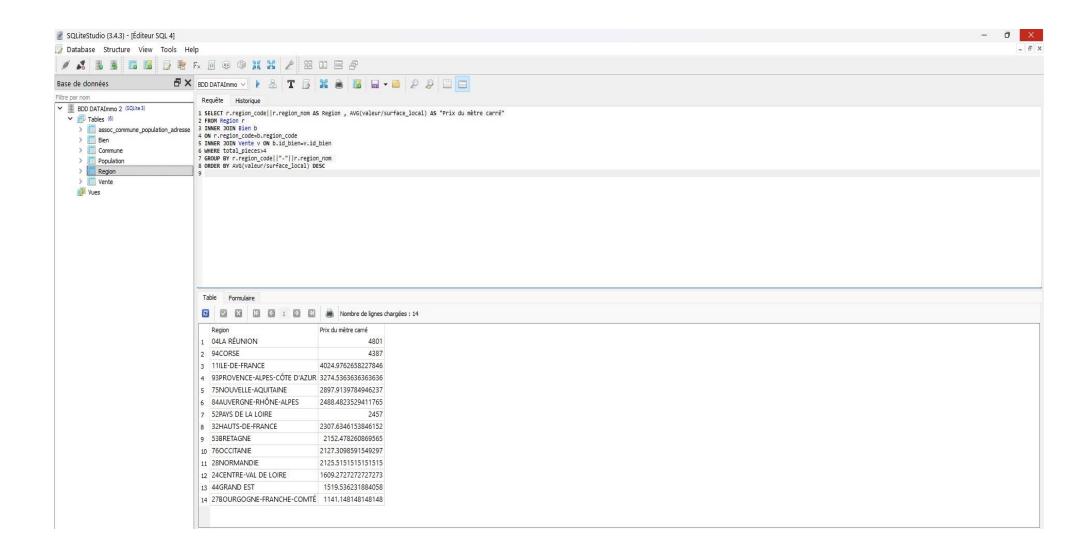
ON r.region_code=b.region_code

INNER JOIN Vente v ON b.id_bien=v.id_bien

WHERE total_pieces>4

GROUP BY r.region_code||"-"||r.region_nom

ORDER BY AVG(valeur/surface_local) DESC



9. Liste des communes ayant eu au moins 50 ventes au 1er trimestre.

 $SELECT\ c.commune_code||'\ -\ '||c.commune_nom\ AS\ "Commune"\ ,\ count(nature_mutation)$ $AS\ total_vente$

FROM Commune c INNER JOIN Bien b

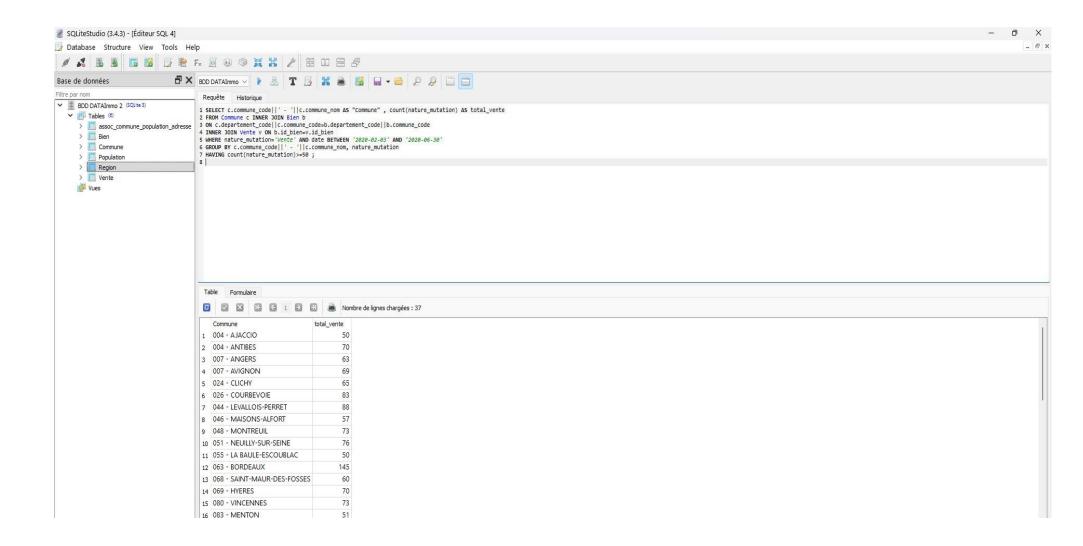
 $ON\ c.departement_code || c.commune_code = b.departement_code || b.commune_code$

INNER JOIN Vente v ON b.id_bien=v.id_bien

WHERE nature_mutation='Vente' AND date BETWEEN '2020-02-03' AND '2020-06-30'

GROUP BY c.commune_code||' - '||c.commune_nom, nature_mutation

HAVING count(nature_mutation)>=50;



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

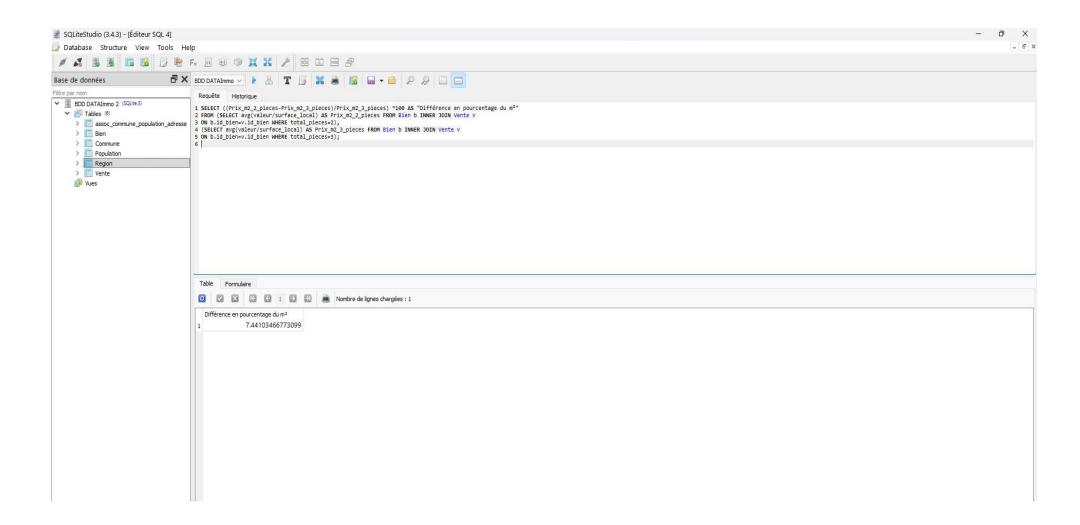
SELECT ((Prix_m2_2_pieces-Prix_m2_3_pieces)/Prix_m2_3_pieces) *100 AS "Différence en pourcentage du m²"

FROM (SELECT avg(valeur/surface_local) AS Prix_m2_2_pieces FROM Bien b INNER JOIN Vente v

ON b.id_bien=v.id_bien WHERE total_pieces=2),

(SELECT avg(valeur/surface_local) AS Prix_m2_3_pieces FROM Bien b INNER JOIN Vente v

ON b.id_bien=v.id_bien WHERE total_pieces=3);



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

SELECT c.departement_code||'-'||c.departement_nom AS Departement, AVG (v.valeur) AS Moyenne_valeur_fonciere

FROM Commune c

INNER JOIN Bien b

ON c.commune_code=b.commune_code

AND c.departement_code=b.departement_code

INNER JOIN vente v

ON b.id_bien=v.id_bien

WHERE c.departement_code IN (6, 13, 33, 59, 69)

AND c.commune_code||'-'||c.commune_nom IN (

SELECT c.commune_code||'-'||c.commune_nom AS Commune

FROM Commune c

INNER JOIN Bien b

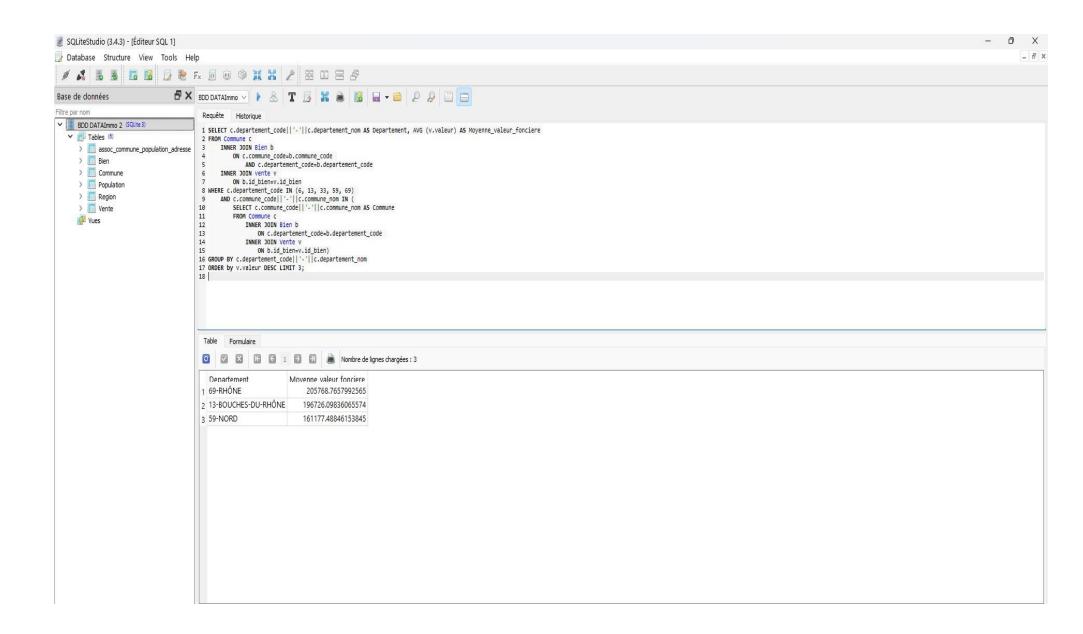
ON c.departement_code=b.departement_code

INNER JOIN Vente v

ON b.id_bien=v.id_bien)

 $GROUP\ BY\ c.departement_code \|'-'\| c.departement_nom$

ORDER by v.valeur DESC LIMIT 3;



12. Les 20 communes avec le plus de transactions pour 1000 habitants pour les communes qui dépassent les 10 000 habitants.

SELECT a.commune_code||' - '||a.commune_nom AS "Commune", count(nature_mutation) *1000 /ptot AS total_vente
FROM assoc_commune_population_adresse a INNER JOIN Bien b
ON a.commune_code=v.commune_code
INNER JOIN Vente v ON b.id_bien=v.id_bien
WHERE nature_mutation='Vente' AND ptot>=10000
GROUP BY a.commune_code||' - '||a.commune_nom
ORDER BY count(nature_mutation) DESC LIMIT 20;

