

Corrigé du TP Informatique 7

Problème

1. On saisit :

```
SELECT nom FROM station JOIN ligne  
on station.id=ligne.id_station  
WHERE ligne.id_ligne=6  
ORDER BY nom;
```

2. On saisit :

```
SELECT nom FROM station JOIN ligne  
on station.id=ligne.id_station  
WHERE ligne.id_ligne=6  
ORDER BY pos;
```

3. On saisit :

```
SELECT nom, COUNT(*) AS nb_lignes FROM station JOIN ligne  
ON id=id_station  
GROUP BY id_station  
ORDER BY nb_lignes DESC;
```

4. On saisit :

```
SELECT nom, COUNT(*) AS nb_lignes FROM station JOIN ligne  
ON id=id_station  
GROUP BY id_station  
ORDER BY nb_lignes DESC  
LIMIT 2;
```

5. On saisit :

```
SELECT id_ligne,COUNT(*) AS nb_stations  
FROM ligne GROUP BY id_ligne  
HAVING nb_stations>20  
ORDER BY nb_stations;
```

6. On saisit :

```
SELECT DISTINCT nom FROM station JOIN ligne  
ON id=id_station  
WHERE id_ligne IN  
(SELECT id_ligne FROM ligne JOIN station  
ON id_station=id WHERE nom="Nation");
```

Si on veut la ou les lignes permettant d'accéder aux stations concernées, on saisit :

```
SELECT nom, id_ligne FROM station JOIN ligne
ON id=id_station
WHERE id_ligne IN
(SELECT id_ligne FROM ligne JOIN station
ON id=id_station WHERE nom="Nation");
```

7. On saisit :

```
SELECT nom FROM station
WHERE id in(
SELECT id_station FROM ligne
WHERE id_ligne=4
INTERSECT
SELECT id_station FROM ligne
WHERE id_ligne=6);
```

ou :

```
SELECT nom FROM station JOIN ligne AS L1
ON id=L1.id_station
JOIN ligne as L2
ON L1.id_station=L2.id_station
WHERE L1.id_ligne=4 AND L2.id_ligne=6;
```

ou encore :

```
SELECT nom FROM station
WHERE id IN(
SELECT L1.id_station
FROM ligne AS L1 JOIN ligne as L2
ON L1.id_station=L2.id_station
WHERE L1.id_ligne=4 AND L2.id_ligne=6);
```

8. On saisit :

```
SELECT id_ligne FROM
ligne JOIN station
ON id_station=id
WHERE nom="Châtelet"
INTERSECT
SELECT id_ligne FROM
ligne JOIN station
ON id_station=id
WHERE nom="Gare de Lyon";
```

ou :

```

SELECT L1.id_ligne FROM
ligne as L1 JOIN ligne as L2
ON L1.id_ligne=L2.id_ligne
JOIN station AS S1 ON S1.id=L1.id_station
JOIN station AS S2 ON S2.id=L2.id_station
WHERE S1.nom="Châtelet" AND S2.nom="Gare de Lyon"

```

ou encore :

```

SELECT L1.id_ligne FROM
ligne as L1 JOIN ligne as L2
ON L1.id_ligne=L2.id_ligne
WHERE L1.id_station IN (SELECT id FROM station WHERE nom="Châtelet")
AND L2.id_station IN (SELECT id FROM station WHERE nom="Gare de Lyon");

```

9. On saisit :

```

SELECT L1.id_ligne,L2.id_ligne, COUNT(*) AS nb_stations
FROM ligne AS L1 JOIN ligne AS L2
ON L1.id_station=L2.id_station
WHERE L1.id_ligne<L2.id_ligne
GROUP BY L1.id_ligne,L2.id_ligne
HAVING nb_stations>1;

```

10. On saisit :

```

SELECT L1.id_ligne,L2.id_ligne,nom
FROM ligne AS L1 JOIN ligne AS L2
ON L1.id_station=L2.id_station
JOIN station
ON station.id=L1.id_station
WHERE (L1.id_ligne,L2.id_ligne) IN
(SELECT L1.id_ligne,L2.id_ligne
FROM ligne AS L1 JOIN ligne AS L2
ON L1.id_station=L2.id_station
WHERE L1.id_ligne<L2.id_ligne
GROUP BY L1.id_ligne,L2.id_ligne
HAVING COUNT(*)>1);

```