SQL

```
(1) select * from U

(2) select * from U
    where Ville = 'Londres'

(3) select NF from PUF
    where NU = 1 and NP = 1

(4)  (a) select distinct NomP, Couleur
         from P, PUF
         where PUF.NP = P.NP and NF = 1

     (b) select NomP, Couleur
         from P
         where NP in
           ( select NP
             from PUF where NF = 1 )

(5)  (a) select distinct NF
         from PUF, P
         where Couleur = 'Rouge' and PUF.NP = P.NP and NU = 1

     (b) select distinct NF from PUF
         where NU = 1
         and NP in
           ( select NP
             from P where Couleur = 'Rouge' )

(6)  (a) select distinct NomF
         from PUF, P, F, U
         where Couleur = 'Rouge'
         and PUF.NP = P.NP and PUF.NF = F.NF and PUF.NU = U.NU
         and ( U.Ville = 'Londres' or U.Ville = 'Paris' )

     (b) select NomF
         from F
         where NF in
           ( select NF
             from PUF
             where NP in
               ( select NP from P
                 where Couleur = 'Rouge')
             and NU in
               ( select NU from U
                 where Ville = 'Londres' or Ville = 'Paris' ) )
```

1

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(7) select distinct NP
    from PUF, F, U
    where PUF.NF = F.NF and PUF.NU = U.NU and U.Ville = F.Ville

(8) (a) select distinct NP
        from PUF, F, U
        where PUF.NF = F.NF and PUF.NU = U.NU
        and F.Ville = 'Londres' and U.Ville = 'Londres'
    (b) select distinct NP
        from PUF
        where NF in
          ( select NF
            from F
            where Ville = 'Londres' )
        and NU in
          ( select NU
            from U
            where Ville = 'Londres' )

(9) select distinct PUF.NU
    from PUF, F, U
    where PUF.NF = F.NF and PUF.NU = U.NU and U.Ville <> F.Ville

(10) (a) select distinct first.NF
         from PUF first, PUF second
         where first.NF = second.NF and first.NU = 1 and second.NU = 2
     (b) select distinct NF
         from PUF
         where NU = 2
         and NF in
           ( select NF from PUF where NU = 1 )
     (c) ( select NF from PUF where NU = 1 )
                intersect
         ( select NF from PUF where NU = 2 )

(11) select distinct NU from PUF
     where NP in
       ( select NP from PUF
         where NF = 3 )

(12) (a) select NP
         from P
         where Poids in
           ( select min(Poids) from P )
```

```
(b) select NP
    from P p1
    where not exists
      ( select *
        from P
        where p1.Poids > Poids )
(c) select NP
    from P
    where Poids <= all ( select Poids from P )

(13) select NU from U
     where NU not in
       ( select NU
         from PUF, P, F
         where PUF.NP = P.NP and PUF.NF = F.NF
         and Couleur = 'Rouge' and Ville = 'Londres' )

(14) (a) select distinct puf.NF
         from PUF puf, PUF puf1, PUF puf2, P
         where couleur = 'Rouge'
         and P.NP = puf2.NP and puf2.NF = puf1.NF and puf1.NP = puf.NP
     (b) select distinct NF from PUF
         where NP in
           ( select NP
             from PUF
             where NF in
             ( select NF
               from PUF
               where NP in
               ( select NP
                 from P
                 where Couleur = 'Rouge' ) ) )

(15) select distinct F.Ville, NP, U.Ville
     from PUF, U, F
     where PUF.NF = F.NF and PUF.NU = U.NU

(16) select distinct F.Ville, NP, U.Ville
     from PUF, U, F
     where F.Ville <> U.Ville and PUF.NF = F.NF and PUF.NU = U.NU

(17) (a) select NP from P
         where not exists
           ( select NU
             from U
```

3

```
               where Ville = 'Londres'
               and not exists
               ( select * from PUF
                 where P.NP = PUF.NP and U.NU = PUF.NU ) )
```
Note : Pour tout NP sélectionné, il n'existe pas d'usine à Londres pour laquelle
il n'existe pas de produit NP livré.

(b)
```
     select distinct P.NP from P, PUF, U
     where P.NP = PUF.NP and PUF.NU = U.NU
     and U.Ville = 'Londres'
     group by P.NP
     having count(distinct PUF.NU) =
        (select count(NU) from U where Ville = 'Londres')
```

(18)
```
     select NF from F
     where exists
       ( select NP
         from P
         where not exists
           ( select NU
             from U
             where not exists
             ( select *
               from PUF
               where F.NF = PUF.NF and U.NU = PUF.NU
               and P.NP = PUF.NP) ) )
```
Note : Pour tout fournisseur sélectionné, il n'existe pas d'usine qui ne soit pas livrée
en produit NP du fournisseur NF.

(19)
```
     select NU from U
     where not exists
       ( select * from PUF L1
         where L1.NF = 4 and not exists
           ( select * from PUF L2
             where U.NU=L2.NU and L1.NP=L2.NP and L2.NF=4 ) )
```
Note : pour toute usine selectionnée, il n'existe pas de produit du fournisseur 4 qui
ne soit pas livré à l'usine par le fournisseur 4.

(20)
```
     select NU from U
     where NU not in
       ( select NU
         from PUF
         where NF <> 3 )
```

(21)
```
     insert into F values (45, 'Alfred', 'sous-traitant', 'Chalon')
```

```
(22) delete P where NP >= 100 and NP <= 199 and couleur = 'Noir'

(23) update F
     set Ville = 'Nice'
     where NF = 1

(24) update F
     set statut = 'sous-traitant'
     where Ville = 'Paris' or Ville = 'Lyon'

(25) select count(distinct NU)
     from PUF
     where NF =1

(26) select NP, NU, sum(Quantite)
     from PUF
     group by NP, NU

(27) select distrinct NF
     from PUF L1, PUF L2
     where L1.NP=5 and L2.NP=9 and L1.NF=L2.NF
```