Solució Problemes SQL ESPECTACLES

1. SELECT   Nom, Interpret
   FROM   Espectacles
   WHERE   Tipus = 'Musical' AND
               Data_Inicial = Data_Final
   ORDER BY Nom, Interpret;

2. SELECT   DISTINCT Codi_Espectacle, Data,DNI_Client
   FROM   Entrades
   WHERE   Data BETWEEN TO_DATE('01/03/2012','dd/mm/yyyy') AND
                     TO_DATE('31/03/2012','dd/mm/yyyy') AND
               Codi_Recinte IN (101, 103, 105)
   ORDER BY Codi_Espectacle, Data;

3. SELECT   Codi, Nom, Data_Final – Data_Inicial + 1 As Num_Dies
   FROM   Espectacles
   WHERE   Tipus='Teatre' And
               ((Data_Inicial Between TO_DATE('01/01/2011','dd/mm/yyyy') AND
                           TO_DATE('31/12/2011','dd/mm/yyyy') AND
                 Data_Final Between TO_DATE('01/01/2011', 'dd/mm/yyyy') AND
                           TO_DATE('31/12/2011', 'dd/mm/yyyy'))
               OR
               (Data_Inicial<TO_DATE('01/01/2012','dd/mm/yyyy') AND
               Data_Final>TO_DATE('31/12/2011','dd/mm/yyyy'))
)
   ORDER BY Num_Dies DESC;

MSACCESS:
   SELECT   Codi, Nom, Data_Final – Data_Inicial + 1 As Num_Dies
   FROM   Espectacles
   WHERE   Tipus = 'Teatre' AND
               ((Data_Inicial BETWEEN #1/1/2011# AND #31/12/2011# AND
                Data_Final BETWEEN #1/1/2011# AND #31/12/2011#) OR
               (Data_Inicial < #1/1/2011# AND
                Data_Final > #31/12/2011#)
)
   ORDER BY Num_Dies DESC;

4. SELECT   DISTINCT RP.Data, TO_CHAR(RP.Hora,'HH24:MI:SS') AS Hora
   FROM   Espectacles EC, Representacions RP
   WHERE   EC.Nom = 'La extraña pareja' AND
               EC.Codi = RP.Codi_Espectacle
   ORDER BY RP.Data;

5. SELECT   EC.Nom, EC.Tipus, EC.Interpret, RC.Nom, RC.Ciutat
   FROM   Espectacles EC, Recintes RC
   WHERE   RC.Ciutat <> 'Barcelona' AND
               RC.Codi = EC.Codi_Recinte
   ORDER BY RC.Ciutat, EC.Nom,EC.Tipus;

```
6.  SELECT      ZR.Zona, ZR.Capacitat, PE.Preu
    FROM        Espectacles EC, Preus_Espectacles PE, Zones_Recinte ZR
    WHERE       EC.Nom = 'La extraña pareja' AND
                EC.Codi = PE.Codi_Espectacle AND
                PE.Codi_Recinte = ZR.Codi_Recinte AND
                PE.Zona = ZR.Zona;


7.  SELECT      RC.Ciutat, EC.Nom, EC.Data_Inicial, EC.Data_Final
    FROM        Espectacles EC, Recintes RC
    WHERE       EC.Interpret = 'El Tricicle' AND
                EC.Codi_Recinte = RC.Codi;


8.  SELECT      DISTINCT ED.Nom, ED.Cognoms, ED.Adreça
    FROM        Espectadors ED, Entrades EN, Espectacles EC
    WHERE       EC.Nom='West Side Story' AND
                EC.Codi=EN.Codi_Espectacle AND
                EN.Data=TO_DATE('20/11/2011', 'dd/mm/yyyy') AND
                EN.Hora=TO_DATE( '30/12/1899 21:00:00', 'DD/MM/YYYY HH24:MI:SS')
                AND
                EN.DNI_Client=ED.DNI
    ORDER BY    ED.Cognoms, ED.Adreça;
```

MSACCESS:
```
    SELECT      ED.Nom,ED.Cognoms,ED.Adreça
    FROM        Espectadors ED, Entrades EN, Espectacles EC
    WHERE       EC.Nom = 'West Side Story' AND
                EC.Codi = EN.Codi_Espectacle AND
                EN.Data = #20/11/2011# AND
                EN.Hora = #21:00# AND
                EN.DNI_Client = ED.DNI
    ORDER BY    ED.Cognoms, ED.Adreça;


9.  SELECT      DISTINCT EC.Nom
    FROM        Entrades EN, Espectacles EC, Espectadors ED
    WHERE       ED.Ciutat = 'Cerdanyola' AND
                ED.DNI = EN.DNI_Client AND
                EN.Data=TO_DATE('23/02/2012', 'dd/mm/yyyy') AND
                EN.Codi_Espectacle = EC.Codi;


10. SELECT      S.Zona, S.Fila, S.Numero
    FROM        Espectacles EC, Seients S
    WHERE       EC.Nom = 'Hamlet' AND
                EC.Codi_Recinte = S.Codi_Recinte
    ORDER BY    S.Zona, S.Fila, S.Numero;


11. SELECT      EC.Nom, EN.Data, TO_CHAR(EN.Hora, 'HH24:MI:SS'),
                EN.Zona, EN.Fila, EN.Numero
    FROM        Entrades EN, Espectadors ED, Espectacles EC, Recintes RC
    WHERE       ED.Ciutat = 'Barcelona' AND
                EN.DNI_Client = ED.DNI AND
                EN.Data Between TO_DATE('01/02/2012', 'dd/mm/yyyy') AND
                                TO_DATE('28/02/2012', 'dd/mm/yyyy')AND
                RC.Codi = EN.Codi_Recinte AND
                RC.Nom = 'Romea' AND
                EC.Codi_Recinte = RC.Codi AND
                EN.Codi_Espectacle = EC.Codi;
```

```
12. SELECT      DISTINCT EC2.Nom
    FROM        Espectacles EC1, Espectacles EC2,
    WHERE       E1.Nom = 'L''auca del Senyor Esteve' AND
                EC1.Codi_Recinte = EC2.Codi_Recinte AND
                EC2.Nom <> 'L''auca del Senyor Esteve';


13. SELECT      EC2.Nom
    FROM        Espectacles EC1, Espectacles EC2
    WHERE       EC1.Nom = 'Cianur i puntes de coixí' AND
                EC1.Codi_Recinte = EC2.Codi_Recinte AND
                EC2.Data_Inicial > EC1.Data_Inicial;


14. SELECT      EC.Nom, RC.Nom, EN.Data, TO_CHAR(EN.Hora,'HH24:MI:SS') AS Hora,
                EN.Zona,EN.Fila, EN.Numero, PE.Preu, ED.Nom, ED.Cognoms
    FROM        Espectadors ED, Entrades EN, Recintes RC, Preus_Espectacles PE,
                Espectacles EC
    WHERE       ED.Ciutat<>'Barcelona' AND
                ED.DNI=EN.DNI_Client AND
                EN.Codi_Recinte=RC.Codi AND
                RC.Ciutat='Barcelona' AND
                EN.Codi_Espectacle=PE.Codi_Espectacle AND
                EN.Codi_Recinte=PE.Codi_Recinte AND
                EN.Zona=PE.Zona AND
                EC.Codi=PE.Codi_Espectacle AND
                RC.Codi=EC.Codi_Recinte AND
                EN.Codi_Espectacle=EC.Codi
    ORDER BY  RC.Nom, EC.Nom, PE.Preu;


15. SELECT      COUNT (*) AS Num_Espectacles
    FROM        Espectacles EC, Recintes RC
    WHERE       EC.Codi_Recinte=RC.Codi AND
                RC.Ciutat='Girona' AND
                ( EC.Data_Inicial Between TO_DATE('01/01/2011', 'dd/mm/yy') AND
                                        TO_DATE('31/12/2011', 'dd/mm/yy') OR
                  EC.Data_Final Between TO_DATE('01/01/2011','dd/mm/yyyy') AND
                                        TO_DATE('31/12/2011', 'dd/mm/yyyy')
                ) OR
                ( EC.Data_Inicial<TO_DATE('01/01/2011', 'dd/mm/yyyy') AND
                  EC.Data_Final>TO_DATE('31/12/2011', 'dd/mm/yyyy')
                );


16. SELECT      SUM (ZR.Capacitat) A Capacitat_Total
    FROM        Recintes RC, Zones_Recinte ZR
    WHERE       RC.Codi = ZR.Codi_Recinte AND
                RC.Nom = 'Romea';

    SELECT      COUNT(*) AS Cap_Total
    FROM        Recintes RC, Seients S
    WHERE       RC.Nom = 'Romea' AND
                RC.Codi=S.Codi_Recinte;
```

17. SELECT   MAX (PE.Preu) AS Preu_Max, MIN (PE.Preu) AS Preu_Min
    FROM   Espectacles EC, Preus_Espectacles PE
    WHERE   EC.Codi = PE.Codi_Espectacle AND
    EC.Nom = 'Jazz a la tardor';

18. SELECT   SUM (PE.Preu) AS Preu_Total
    FROM   Espectacles EC, Preus_Espectacles PE, Entrades EN, Espectadors ED
    WHERE   ED.Compte = '1111-111-11-1234567890' AND
    EN.DNI_Client = ED.DNI AND
    EN.Codi_Espectacle = EC.Codi AND
    EC.Nom = 'Entre Tres' AND
    EC.Codi = PE.Codi_Espectacle AND
    EN.Zona = PE.Zona AND
    PE.Codi_Recinte = EN.Codi_Recinte;

19. SELECT   SUM (Preu) AS Recaptació
    FROM   Espectacles EC, Preus_Espectacles PE, Seients S
    WHERE   EC.Nom = 'Entre Tres' AND
    PE.Codi_Espectacle = EC.Codi AND
    S.Zona = PE.Zona AND
    S.Codi_Recinte = PE.Codi_Recinte AND
    S.Codi_Recinte = EC.Codi_Recinte;

    SELECT   SUM (ZR.Capacitat* PE.Preu) AS Recaptació
    FROM   Espectacles EC, Preus_Espectacles PE, Zones Recinte ZR
    WHERE   EC.Nom = 'Entre Tres' AND
    EC.Codi = PE.Codi_Espectacle AND
    PE.Codi_Recinte = ZR.Codi_Recinte AND
    PE.Zona = ZR.Zona;

20. SELECT   SUM (PE.Preu) AS Recaptació
    FROM   Espectacles EC, Preus_Espectacles PE, Entrades EN
    WHERE   EC.Nom = 'Hamlet' AND
    EN.Codi_Espectacle = EC.Codi AND
    EN.Data = TO_DATE('31/03/2012', 'dd/mm/yyyy')
    PE.Zona = EN.Zona AND
    PE.Codi_Recinte = EN.Codi_Recinte AND
    EC.Codi=PE.Codi_Espectacle;

21. SELECT   SUM (PE.Preu) / COUNT (*) AS Preu_Mig   [AVG(PE.Preu)]
    FROM   Espectacles EC, Preus_Espectacles PE
    WHERE   EC.Nom = 'La extraña pareja' AND
    PE.Codi_Espectacle = EC.Codi;

22. SELECT   COUNT (*) AS Num_Espectadors
    FROM   Entrades EN, Espectacles EC
    WHERE   EC.Nom = 'Mar i Cel' AND
    EN.Codi_Espectacle = EC.Codi;

23. SELECT   COUNT (*) / COUNT (DISTINCT EN.Data) AS Mitjana
    FROM   Espectacles EC, Entrades EN
    WHERE   EC.Nom = 'West Side Story' AND
    EN.Codi_Espectacle = EC.Codi;

```
24. SELECT     COUNT (*) As Num_Rep, COUNT (DISTINCT EC.Codi) As Num_Esp,
               Num_Rep / Num_Esp As NMig
    FROM       Espectacles EC, Recintes RC, Representacions RP
    WHERE      RC.Nom = 'Municipal' AND
               RC.Ciutat = 'Girona' AND
               EC.Codi_Recinte = RC.Codi AND
               RP.Codi_Espectacle = EC.Codi AND
               RP.Data BETWEEN TO_DATE('1/1/2011','dd/mm/yyyy') AND
                               TO_DATE('31/12/2011','dd/mm/yyyy');


25. SELECT     COUNT (DISTINCT RC.Codi)
    FROM       Espectacles EC, Recintes RC
    WHERE      EC.Interpret = 'La Joventut de la Faràndula' AND
               RC.Codi = EC.Codi_Recinte;

    SELECT     COUNT(DISTINCT Codi_Recinte)
    FROM       Espectacles
    WHERE      Interpret = 'La Joventut de la Faràndula';


26. SELECT     EN.Data, TO_CHAR(EN.Hora,'HH24:MI:SS'),COUNT (*) As Num_Entrades
    FROM       Espectacles EC, Entrades EN
    WHERE      EC.Nom = 'El Màgic d''Oz' AND
               EN.Codi_Espectacle = EC.Codi
    GROUP BY   EN.Data, EN.Hora
    ORDER BY   Num_Entrades;


27. SELECT     EC.Nom, EC.Data_Inicial, EC.Data_Final, MAX (PE.Preu) AS Preu_Max,
               MIN (PE.Preu) AS Preu_Min
    FROM       Recintes RC, Espectacles EC, Preus_Espectacles PE
    WHERE      RC.Nom = 'Liceu' AND
               EC.Codi_Recinte = RC.Codi AND
               PE.Codi_Espectacle = EC.Codi AND
               PE.Codi_Recinte  = EC.Codi_Recinte
    GROUP BY   EC.Nom, EC.Data_Inicial, EC.Data_Final
    ORDER BY   EC.Data_Inicial;


28. SELECT     EC.Nom, EC.Data_Final - EC.Data_Inicial + 1, AS Num_Rep,
               COUNT (*) AS Num_Rep
    FROM       Recintes RC, Espectacles EC, Representacions RP
    WHERE      RC.Nom = 'Palau de la Música' AND
               RC.Codi = EC.Codi_Recinte AND
               EC.Codi = RP.Codi_Espectacle
    GROUP BY   EC.Nom, EC.Data_Inicial, EC.Data_Final
    ORDER BY   Num_Rep DESC;


29. SELECT     EN.Zona, COUNT (*) / COUNT (DISTINCT EN.Data) AS Promig
    FROM       Espectacle EC, Entrades EN
    WHERE      EC.Nom = 'La Ventafocs' AND
               EN.Codi_Espectacle = EC.Codi
    GROUP BY   EN.Zona;
```

```
30. SELECT      EC.Nom, COUNT (*) / COUNT (DISTINCT EN.Data) As Num_Mig
    FROM        Espectacles EC, Recintes RC, Entrades EN
    WHERE       RC.Ciutat = 'Barcelona' AND
                EC.Codi_Recinte = RC.Codi AND
                EN.Codi_Espectacle = EC.Codi AND
                (EC.Data_Inicial Between TO_DATE('01/01/2012','dd/mm/yyyy') AND
                                  TO_DATE('31/01/2012','dd/mm/yyyy') OR
                 EC.Data_Final Between TO_DATE('01/01/2012','dd/mm/yyyy') And
                                  TO_DATE('31/01/2012','dd/mm/yyyy')  )
    GROUP BY EC.Nom
    ORDER BY Num_Mig;


31. SELECT      DISTINCT EC.Nom
    FROM        Espectacles EC, Representacions RP
    WHERE       EC.Codi = RP.Codi_Espectacle
    GROUP BY EC.Nom, RP.Data
    HAVING      COUNT (*) > 1;

    SELECT      DISTINCT EC.Nom
    FROM        Espectacles EC, Representacions R1, Representacions R2
    WHERE       R1.Codi_Espectacle = R2.Codi_Espectacle AND
                R1.Data = R2.Data AND
                R1.Hora <> R2.Hora AND
                R1.Codi_Espectacle = EC.Codi;


32. SELECT      RC.Nom
    FROM        Recintes RC, Zones Recinte ZR
    WHERE       RC.Ciutat = 'Barcelona' AND
                ZR.Codi_Recinte = RC.Codi
    GROUP BY RC.Nom
    HAVING      SUM (ZR.Capacitat) >
                    ( SELECT    SUM (ZR2.Capacitat)
                      FROM      Recintes RC2, Zones Recinte ZR2
                      WHERE     RC2.Nom = 'Victòria' AND
                                ZR2.Codi_Recinte = RC2.Codi);

33. SELECT      EC.Nom
    FROM        Espectacles EC, Preus_Espectacles PE
    WHERE       EC.Codi = PE.Codi_Espectacle
    GROUP BY EC.Nom
    HAVING      MAX (PE.Preu) > 18
    ORDER BY EC.Nom;

    SELECT      DISTINCT EC.Nom
    FROM        Espectacles EC, Preus_Espectacles PE
    WHERE       EC.Codi = PE.Codi_Espectacle AND
                PE.Preu > 18;

34. SELECT      ED.DNI, ED.Nom, ED.Cognoms
    FROM        Espectacles EC, Espectadors ED, Entrades EN
    WHERE       EC.Nom = 'La extraña pareja' AND
                EN.Codi_Espectacle = EC.Codi AND
                ED.DNI = EN.DNI_Client
    GROUP BY ED.DNI, ED.Nom,ED.Cognoms
    HAVING      COUNT (*) = 1;
```

```
35. SELECT     DISTINCT E1.Interpret
    FROM       Espectacles E1, Espectacles E2, Recintes RC1, Recintes RC2
    WHERE      E1.Codi_Recinte = RC1.Codi AND
               E2.Codi_Recinte = RC2.Codi AND
               E1.Interpret = E2.Interpret AND
               RC1.Ciutat <> RC2.Ciutat


    SELECT     EC.Interpret
    FROM       Espectacles EC, Recintes RC
    WHERE      EC.Codi_Recinte = RC.Codi
    GROUP BY   EC.Interpret
    HAVING     COUNT(DISTINCT RC.Ciutat) > 1;




36. SELECT     ED.DNI, ED.Nom, ED.Cognoms
    FROM       Espectadors ED, Entrades EN
    WHERE      ED.DNI = EN.DNI_Client AND
               EN.Data BETWEEN TO_DATE('01/01/2011','dd/mm/yyyy') AND
                                TO_DATE('31/12/2011','dd/mm/yyyy')
    GROUP BY   ED.DNI, ED.Nom, ED.Cognoms
    HAVING     COUNT (DISTINCT EN.Codi_Espectacle) > 1
    ORDER BY   ED.DNI;

    SELECT     T.DNI, T.Nom, T.Cognoms
    FROM       (SELECT   DISTINCT ED.DNI,ED.Nom,ED.Cognoms,EN.Codi_Espectacle
                 FROM     Espectadors ED, Entrades EN
                 WHERE    ED.DNI = EN.DNI_Client AND
                          EN.Data BETWEEN #1/1/2011# AND #31/12/2011#) T
    GROUP BY   T.DNI, T.Nom, T.Cognoms
    HAVING     COUNT (*) > 1;




37. SELECT     EC.Nom, EN.Data, TO_CHAR(EN.Hora,'HH24:MI:SS') AS HORA
    FROM       Espectacles EC, Entrades EN
    WHERE      EC.Codi = EN.Codi_Espectacle
    GROUP BY   EC.Nom, EN.Data, EN.Hora,EC.Codi_Recinte
    HAVING     COUNT (*) > 0.5 *
                  ( SELECT     COUNT (*)
                    FROM       Seients
                    WHERE      EN.Codi_Recinte = S.Codi_Recinte )
    ORDER BY   EC.Nom;

    SELECT     EC.Nom, EN.Data, EN.Hora
    FROM       Espectacles EC, Entrades EN
    WHERE      EC.Codi = EN.Codi_Espectacle
    GROUP BY   EC.Nom, EN.Data, EN.Hora, EC.Codi_Recinte
    HAVING     COUNT (*) > 0.5 *
                  ( SELECT     SUM (Capacitat)
                    FROM       Zones Recinte
                    WHERE      EN.Codi_Recinte = Codi_Recinte );
```

```
38. SELECT    S.Zona, S.Fila, S.Numero
    FROM      Espectacles EC, Seients S
    WHERE     EC.Nom = 'El país de les Cent Paraules' AND
              EC.Codi_Recinte = S.Codi_Recinte AND
              NOT EXISTS
                  ( SELECT  *
                    FROM      Entrades EN
                    WHERE   EN.Codi_Espectacle = EC.Codi AND
                            EN.Codi_Recinte = S.Codi_Recinte AND
                            EN.Zona = S.Zona AND
                            EN.Fila = S.Fila AND
                            S.Numero = EN.Numero)
    ORDER BY  S.Zona,S.Fila,S.Numero;


39. SELECT    EC.Nom, RP.Data, TO_CHAR(RP.Hora,'HH24:MI:SS') AS HORA
    FROM      Espectacles EC, Representacions RP
    WHERE     EC.Codi = RP.Codi_Espectacle AND
              NOT EXISTS
                  ( SELECT  *
                    FROM      Seients S
                    WHERE   S.Codi_Recinte = EC.Codi_Recinte AND
                            NOT EXISTS
                                ( SELECT  *
                                  FROM      Entrades EN
                                  WHERE   EN.Codi_Espectacle = EC.Codi AND
                                          EN.Data = RP.Data AND
                                          EN.Hora = RP.Hora AND
                                          S.Codi_Recinte = EN.Codi_Recinte AND
                                          S.Zona = EN.Zona AND
                                          S.Fila = EN.Fila AND
                                          S.Numero = EN.Numero  )
                  );

    SELECT    EC.Nom, EN.Data, TO_CHAR(EN.Hora,'HH24:MI:SS') AS HORA
    FROM      Espectacles EC, Entrades EN
    WHERE     EC.Codi=EN.Codi_Espectacle AND
              EXISTS      ( SELECT        *
                            FROM          Seients
                            WHERE         EN.Zona = Zona AND
                                          EN.Fila=Fila AND
                                          EN.Numero=Numero   )
    ORDERBY EC.Nom, EN.Data;

40. SELECT    S.Zona, S.Fila, S.Numero
    FROM      Espectacles EC, Seients S
    WHERE     EC.Nom = 'Hamlet' AND
              S.Codi_Recinte = EC.Codi_Recinte AND
              NOT EXISTS
                  (SELECT *
                   FROM    Entrades EN
                   WHERE  EN.Codi_Espectacle = EC.Codi AND
                          EN.Codi_Recinte = S.Codi_Recinte AND
                          EN.Zona = S.Zona AND
                          EN.Fila = S.Fila AND
                          EN.Numero = S.Numero AND
                          EN.Data = TO_DATE('06/04/2012','dd/mm/yyyy')  )
    ORDER BY  S.Zona, S.Fila, S.Numero;
```

```
41.  SELECT      RC.Nom
     FROM        Recintes RC, Zones Recinte ZR
     WHERE       RC.Codi = ZR.Codi_Recinte
     GROUP BY RC.Nom
     HAVING      SUM (ZR.Capacitat) >= ALL  (  SELECT        SUM (ZR2.Capacitat)
                                               FROM          Zones_Recinte ZR2
                                               GROUP BY      ZR2.Codi_Recinte );


42.  SELECT    EC.Codi, EC.Nom, PE.Zona, PE.Preu
     FROM      Espectacles EC, Preus_Espectacles PE
     WHERE     EC.Codi = PE.Codi_Espectacle AND
               PE.Preu =  ( SELECT       MAX (PE2.Preu)
                            FROM         Espectacles EC2, Preus_Espectacles PE2
                            WHERE        EC2.Codi = PE2.Codi_Espectacle);


43. SELECT     ED.Nom, ED.Cognoms
    FROM       Espectadors ED
    WHERE      NOT EXISTS (   SELECT *
                             FROM      Espectacles EC, Recintes RC,
                             Representacions RP
                             WHERE   RC.Nom = 'Municipal' AND
                             RC.Ciutat = 'Girona' AND
                             RC.Codi = EC.Codi_Recinte AND
                             EC.Codi = RP.Codi_Espectacle AND
                             RP.Data BETWEEN
                                     TO_DATE('1/01/2011','dd/mm/yyyy')
                                     AND
                                     TO_DATE('31/12/2011','dd/mm/yyyy')
                             AND NOT EXISTS
                                     ( SELECT       *
                                       FROM         Entrades EN
                                       WHERE        EN.DNI_Client = ED.DNI
                                       AND
                                       EN.Codi_Espectacle = EC.Codi
                                     )
                           );
```

(Entrades x Espectadors) [DNI,Nom,Cognoms,Codi_Espectacle]
  DIVIDE BY
(Espectacles x (Recintes WHERE Nom='Municipal' AND Ciutat='Girona'))[Codi]

```
(SELECT    ES.DNI,ES.Nom,ES.Cognoms
 FROM      Entrades EN, Espectadors ES
 WHERE     ES.DNI=EN.DNI_Client)
 MINUS
 (SELECT   T.DNI,T.Nom,T.Cognoms
 FROM      ( (    SELECT        ES2.DNI,ES2.Nom,ES2.Cognoms,
                                EN2.Codi_Espectacle
                  FROM          Entrades EN2,Espectadors ES2,Recintes R
                  WHERE         ES2.DNI=EN2.DNI_Client AND
                                R.Nom = 'Municipal' AND
                                R.Ciutat = 'Girona' AND
                                EN2.Codi_Recinte=R.Codi AND
                                EN2.Data BETWEEN
                                      TO_DATE('01/01/2011','dd/mm/yyyy') AND
                                      TO_DATE('31/12/2011','dd/mm/yyyy') )
            MINUS
            (    SELECT         ES3.DNI,ES3.Nom,ES3.Cognoms,
                                EN3.Codi_Espectacle
                  FROM          Entrades EN3, Espectadors ES3
                  WHERE         ES3.DNI=EN3.DNI_Client) ) T );
```


```
44. SELECT    RC.Nom, RC.Adreça
    FROM      Recintes RC
    WHERE     RC.Ciutat = 'Barcelona' AND
              NOT EXISTS
                  ( SELECT  *
                    FROM    Representacions RP
                    WHERE   EC.Codi_Recinte = RC.Codi AND
                            RP.Data BETWEEN TO_DATE('01/01/2012','dd/mm/yyyy')
                                    AND TO_DATE('31/01/2012','dd/mm/yyyy') );
```

```
45. SELECT    S.Zona, S.Fila, S.Numero
    FROM      Espectacles EC, Seients S
    WHERE     EC.Nom = 'Els Pastorets' AND
              S.Codi_Recinte = EC.Codi_Recinte AND
              NOT EXISTS
                  ( SELECT  *
                    FROM    Representacions RP
                    WHERE   RP.Codi_Espectacle = EC.Codi AND
                            NOT EXISTS
                                (SELECT
                                FROM    Entrades EN
                                WHERE   EN.Codi_Espectacle = EC.Codi AND
                                        EN.Data = RP.Data AND
                                        EN.Hora = RP.Hora AND
                                        EN.Codi_Recinte = S.Codi_Recinte AND
                                        EN.Zona = S.Zona AND
                                        EN.Fila = S.Fila AND
                                        EN.Numero = S.Numero )  );
```

46. SELECT   EC.Nom, COUNT(*) AS Num_Representacions
    FROM   Espectacles EC, Representacions RP
    WHERE   EC.Codi = RP.Codi_Espectacle
    GROUP BY EC.Nom
    HAVING   COUNT (*) >= ALL
                    (SELECT   COUNT (*)
                      FROM   Representacions
                      GROUP BY Codi_Espectacle);

47. SELECT   ZR.Zona
    FROM   Espectacles EC, Zones_Recintes ZR
    WHERE   EC.Nom = 'Mar i Cel' AND
              ZR.Codi_Recinte = EC.Codi_Recinte AND
              NOT EXISTS
                  (SELECT *
                    FROM   Seients S
                    WHERE   S.Codi_Recinte = ZR.Codi_Recinte AND
                            S.Zona = ZR.Zona AND
                            NOT EXISTS
                                (SELECT *
                                  FROM   Entrades EN
                                  WHERE   EN.Codi_Espectacle = EC.Codi AND
                                          EN.Data = TO_DATE('02/03/2012','dd/mm/yyyy') AND
                                          EN.Zona = S.Zona AND
                                          EN.Fila = S.Fila AND
                                          EN.Numero = S.Numero)
                  );

48. SELECT   EC.Nom
    FROM   Espectacles EC, Recintes RP
    WHERE   RP.Ciutat = 'Barcelona' AND
              EC.Codi_Recinte = RP.Codi AND
              EXISTS
                  (SELECT   *
                    FROM   Entrades EN, Espectadors ED
                    WHERE   EN.Codi_Espectacle = EC.Codi AND
                              ED.DNI = EN.DNI_Client AND
                              ED.Ciutat <> 'Barcelona');
    SELECT   EC.Nom
    FROM   Espectacles EC, Recintes RP, Entrades EN, Espectadors EP
    WHERE   RP.Ciutat = 'Barcelona' AND
              EC.Codi_Recinte = RP.Codi AND
              EN.Codi_Espectacle = EC.Codi AND
              ED.DNI = EN.DNI_Client AND
              ED.Ciutat <> 'Barcelona');

49. SELECT   RC.Ciutat
    FROM   Espectacles EC, Recintes RC
    WHERE   RC.Ciutat <> 'Barcelona' AND
              EC.Codi_Recinte = RC.Codi
    GROUP BY RC.Ciutat
    HAVING   COUNT (*) >= ALL
                    (SELECT   COUNT (*)
                      FROM   Recintes RC2, Espectacles EC2
                      WHERE   RC2.Codi = EC2.Codi_Recinte AND
                                RC2.Ciutat <> 'Barcelona'
                      GROUP BY RC2.Ciutat);

```
50. SELECT     DISTINCT EC.Interpret
    FROM       Espectacles EC, Representacions RP
    WHERE      EC.Codi = RP.Codi_Espectacle AND
               RP.Data BETWEEN TO_DATE('01/01/2011', 'dd/mm/yyyy') AND
                                 TO_DATE('31/12/2011','dd/mm/yyyy')   AND
               NOT EXISTS
                    (SELECT   *
                     FROM     Espectacles EC2, Representacions RP2
                     WHERE    EC2.Codi = RP2.Codi_Espectacle AND
                              EC2.Interpret = EC.Interpret AND
                              RP2.Data > TO_DATE('01/01/2012','dd/mm/yyyy'));


51. SELECT     ED.DNI, ED.Nom, ED.Cognoms,
    FROM       Espectadors  ED, Entrades EN, Preus_Espectacles PE
    WHERE      ED.DNI = EN.DNI_Client AND
               EN.Codi_Espectacle = PE.Codi_Espectacle AND
               EN.Zona = PE.Zona
    GROUP BY ED.DNI, ED.Nom, ED.Cognoms
    HAVING     SUM(PE.Preu) > 500
    ORDER BY ED.DNI;


52. SELECT     RC.Nom, RC.Adreça, RC.Ciutat
    FROM       Recintes RC, Zones_Recinte ZR
    WHERE      RC.Codi = ZR.Codi_Recinte
    GROUP BY RC.Codi, RC.Nom,RC.Adreça, RC.Ciutat
    HAVING   SUM(ZR.Capacitat) > 60;

    SELECT     RC.Nom, RC.Adreça, RC.Ciutat
    FROM       Recintes RC,
    WHERE      60 < (          SELECT      SUM(ZR.Capacitat)
                               FROM        Zones_Recinte ZR
                               WHERE       ZR.Codi_Recinte = RC.Codi);


53. SELECT   Interpret
    FROM     Espectacles
    GROUP BY Interpret
    HAVING   COUNT(*) = 1
    ORDER BY Interpret;


54. SELECT     ES.Nom, ES.Tipus
    FROM       Espectacles ES, Representacions RP
    WHERE      ES.Codi = RP.Codi_Espectacle
    GROUPBY ES.Nom, ES.Tipus
    HAVING   COUNT(*) = 1
    ORDER BY ES.Nom;


55. SELECT     RC.Nom, RC.Adreça, RC.Ciutat
    FROM       Espectacles ES, Recintes RC
    WHERE      RC.Codi = ES.Codi_Recinte
    GROUP BY RC.Nom, RC.Adreça, RC.Ciutat
    HAVING   COUNT(*) = 1;
```

```
56. SELECT    ES.Nom, COUNT(*) AS Num_Espect
    FROM      Espectacles ES, Entrades EN, Recintes RC
    WHERE     RC.Nom = 'La Faràndula' AND
              ES.Codi_Recinte = RC.Codi AND
              EN.Codi_Espectacle = ES.Codi
    GROUP BY ES.Nom
    ORDER BY Num_Espect DESC;


57. SELECT    ED.DNI, ED.Nom, ED.Cognoms,EN.Codi_Espectacle
    FROM      Espectadors ED, Entrades EN
    WHERE     ED.DNI = EN.DNI_Client
    GROUPBY ED.DNI, ED.Nom, ED.Cognoms,EN.Codi_Espectacle
    HAVING    COUNT(*) = 1
    ORDER BY ED.Cognoms,EN.Codi_Espectacle;


58. SELECT    ED.DNI, ED.Nom, ED.Cognoms
    FROM      Espectadors ED, Entrades EN
    WHERE     ED.DNI = EN.DNI_Client
    GROUP BY      ED.DNI, EN.Nom, EN.Cognoms
    HAVING    COUNT(*) >=  ALL  (    SELECT  COUNT(*)
                                     FROM    Espectadors ED2, Entrades EN2
                                     WHERE   ED2.DNI = EN2.DNI_Client
                                     GROUP BY ED2.DNI
                        );

    SELECT    ED.DNI, ED.Nom, ED.Cognoms
    FROM      Espectadors ED, Entrades EN
    WHERE     ED.DNI = EN.DNI_Client
    GROUP BY      ED.DNI, EN.Nom, EN.Cognoms
    HAVING    COUNT(*)        >= (   SELECT  MAX(T1.Total)
                                     FROM    ( SELECT  ED2.DNI,
                                                       COUNT(*) AS Total
                                               FROM    Espectadors ED2,
                                                       Entrades EN2
                                               WHERE   ED2.DNI = EN2.DNI_Client
                                               GROUP BY ED2.DNI
                                               ) T1
                        );

59. SELECT    ES.Nom, ES.Tipus, R.Data, TO_CHAR(R.Hora,'HH24:MI:SS')
    FROM      Espectacles ES, Representacions R, Entrades EN
    WHERE     R.Codi_Espectacle = ES.Codi AND
              EN.Codi_Espectacle = R.Codi_Espectacle AND
              EN.Data = R.Data AND
              EN.Hora=R.Hora
    GROUPBY ES.Nom, ES.Tipus, R.Data, R.Hora
    HAVING    SUM(EN.Numero) >=  ALL
                  ( SELECT    SUM(EN2.Numero)
                    FROM      Representacions R2, Entrades EN2
                    WHERE     R2.Codi_Espectacle=EN2.Codi_Espectacle AND
                              R2.Data=EN2.Data AND
                              R2.Hora=EN2.Hora
.                   GROUPBY R2.Codi_Espectacle, R2.Data, R2.Hora
                  );
```

```
SELECT      ES.Nom, ES.Tipus, R.Data, TO_CHAR(R.Hora,'HH24:MI:SS')
FROM        Espectacles ES, Representacions R, Entrades EN
WHERE       R.Codi_Espectacle = ES.Codi AND
            EN.Codi_Espectacle = R.Codi_Espectacle AND
            EN.Data = R.Data AND
            EN.Hora=R.Hora
GROUPBY ES.Nom, ES.Tipus, R.Data, R.Hora
HAVING      SUM(EN.Numero) >=
                ( SELECT    MAX(T1.Total)
                  FROM (    SELECT   R2.Codi_Espectacle, R2.Data, R2.Hora,
                                     SUM(EN2.Numero) AS Total
                            FROM     Representacions R2, Entrades EN2
                            WHERE    R2.Codi_Espectacle=EN2.Codi_Espectacle AND
                                     R2.Data=EN2.Data AND
                                     R2.Hora=EN2.Hora
.                           GROUPBY R2.Codi_Espectacle, R2.Data, R2.Hora
                        ) T1    );


60. SELECT     ES.Nom, ES.Tipus
    FROM       Espectacles ES, Entrades EN
    WHERE      EN.Codi_Espectacle = ES.Codi AND
    GROUPBY ES.Nom, ES.Tipus
    HAVING     SUM(EN.Numero) >=  ALL
                ( SELECT       SUM(EN2.Numero)
                  FROM         Representacions R2, Entrades EN2
                  WHERE        R2.Codi_Espectacle= EN2.Codi_Espectacle AND
                               R2.Data = EN2.Data AND
                               R2.Hora=EN2.Hora
.                 GROUP BY     R2.Codi_Espectacle
                );


SELECT      ES.Nom, ES.Tipus
FROM        Espectacles ES, Entrades EN
WHERE       EN.Codi_Espectacle = ES.Codi AND
GROUPBY ES.Nom, ES.Tipus
HAVING      SUM(EN.Numero) >=
                ( SELECT    MAX(T1.Total)
                  FROM (    SELECT   R2.Codi_Espectacle,
                                     SUM(EN2.Numero) AS Total
                            FROM     Representacions R2, Entrades EN2
                            WHERE    R2.Codi_Espectacle= EN2.Codi_Espectacle AND
                                     R2.Data = EN2.Data AND
                                     R2.Hora=EN2.Hora
.                          GROUP BY R2.Codi_Espectacle
                        ) T1  );
```

```
61. SELECT    RC.Nom, RC.Ciutat, SUM(ZR.Capacitat) AS Cap_Total
    FROM      Recintes RC, Zones_Recinte ZR
    WHERE     ZR.Codi_Recinte = RC.Codi
    GROUPBY RC.Nom, RC.Ciutat
    HAVING    SUM(ZR.Capacitat) >= ALL (  SELECT          SUM(Capacitat)
                                          FROM            Zones_Recinte
                                          GROUPBY         Codi_Recinte
                                        );


    SELECT    RC.Nom, RC.Ciutat, SUM(ZR.Capacitat) AS Cap_Total
    FROM      Recintes RC, Zones_Recinte ZR
    WHERE     ZR.Codi_Recinte = RC.Codi
    GROUPBY RC.Nom, RC.Ciutat
    HAVING    SUM(ZR.Capacitat) >=     ( SELECT  MAX(T1.Total)
                                         FROM   ( SELECT  Codi_Recinte,
                                                          SUM(Capacitat) AS Total
                                             FROM       Zones_Recinte
                                             GROUPBY  Codi_Recinte
                                         ) T1  );


62. SELECT    RC.Nom, RC.Ciutat, SUM(ZR.Capacitat) AS Cap_Total
    FROM      Recintes RC, Zones_Recinte ZR
    WHERE     ZR.Codi_Recinte = RC.Codi
    GROUPBY RC.Nom, RC.Ciutat
    HAVING    SUM(ZR.Capacitat) <= ALL  (SELECT          SUM(Capacitat)
                                         FROM            Zones_Recinte
                                         GROUP BY        Codi_Recinte
                                         );


    SELECT    RC.Nom, RC.Ciutat, SUM(ZR.Capacitat) AS Cap_Total
    FROM      Recintes RC, Zones_Recinte ZR
    WHERE     ZR.Codi_Recinte = RC.Codi
    GROUPBY RC.Nom, RC.Ciutat
    HAVING    SUM(ZR.Capacitat) <=     ( SELECT  MIN(T1.Total)
                                         FROM   ( SELECT  Codi_Recinte,
                                                          SUM(Capacitat) AS Total
                                             FROM     Zones_Recinte
                                            GROUP BYCodi_Recinte
                                         ) T1  );


63. SELECT    ES.Nom, COUNT(*) AS Num_Espectadors
    FROM      Espectacles ES, Entrades EN
    WHERE     ES.Tipus = 'Teatre' AND
              EN.Codi_Espectacle = ES.Codi
    GROUPBY ES.Nom
    HAVING    COUNT(*)    >= ALL   (  SELECT  COUNT(*)
                                     FROM     Espectacles ES2, Entrades EN2
                                     WHERE   ES2.Tipus = 'Teatre' AND
                                             EN2.Codi_Espectacle=ES2.Codi
                                     GROUPBY ES2.Codi);
```

```
64. SELECT      ES.Nom, COUNT(*) AS Num_Espectadors
    FROM        Espectacles ES, Entrades EN
    WHERE       ES.Tipus = 'Musical' AND
                EN.Codi_Espectacle = ES.Codi
    GROUP BY ES.Nom
    HAVING    COUNT(*)    <= ALL     (   SELECT  COUNT(*)
                                         FROM     Espectacles ES2, Entrades EN2
                                         WHERE    ES2.Tipus = 'Musical' AND
                                                  EN2.Codi_Espectacle=ES2.Codi
                                         GROUPBY ES2.Codi );


65. SELECT      R.Codi, R.Nom, R.Ciutat, COUNT(*) AS Num_Representacions
    FROM        Recintes R, Espectacles ES, Representacions RE
    WHERE       ES.Codi_Recinte = R.Codi AND
                RE.Codi_Espectacle=ES.Codi
    GROUPBY R.Codi, R.Nom, R.Ciutat
    HAVING    COUNT(*)  >= ALL  (        SELECT      COUNT(*)
                                         FROM        Representacions RE2,
                                                     Espectacles ES2
                                         WHERE       RE2.Codi_Espectacle=ES2.Codi
                                         GROUPBY ES2.Codi_Recinte
                             );


66. SELECT      R.Codi, R.Nom, R.Ciutat, COUNT(*) AS Num_Espectadors
    FROM        Recintes R, Entrades EN
    WHERE       EN.Codi_Recinte = R.Codi
    GROUPBY R.Codi, R.Nom, R.Ciutat
    HAVING    COUNT(*) >= ALL  (SELECT    COUNT(*)
                                FROM     Entrades EN2
                                GROUP BY EN2.Codi_Recinte
                                );


67. SELECT      ES.Nom, COUNT(*) AS Num_Representacions
    FROM        Representacions RE, Espectacles ES
    WHERE       ES.Nom = 'Otelo' AND
                RE.Codi_Espectacle = ES.Codi
    GROUP BY ES.Nom;


68. (SELECT      ED.Nom, ED.Cognoms, ED.Ciutat
    FROM        Espectadors ED)
    MINUS (EXCEPT)
    (SELECT   DISTINCT ED.Nom, ED.Cognoms, ED.Ciutat
    FROM        Espectadors ED, Entrades EN
    WHERE       EN.DNI_Client = ED.DNI);

    AMB LEFT JOIN:
    SELECT    ED.Nom, ED.Cognoms, ED.Ciutat
    FROM        Espectadors ED, Entrades EN
    WHERE       EN.DNI_Client (+) = ED.DNI AND
                EN.Codi_Espectacle IS NULL;
```

```
    SELECT    ED.Nom, ED.Cognoms, ED.Ciutat
    FROM      Espectadors ED
    WHERE     ED.DNI NOT IN (SELECT    DISTINCT EN.DNI_Client
                             FROM      Entrades EN);


69. SELECT    Codi_Espectacle, COUNT(*) AS Num_Rep
    FROM      Representacions
    WHERE     Data = TO_DATE('20/10/2011','dd/mm/yyyy')
    GROUPBY   EN.Codi_Espectacle;


70. SELECT    DISTINCT ES.Nom
    FROM      Espectacles ES, Representacions RE
    WHERE     Interpret = 'La Joventut de la Faràndula' AND
              RE.Codi_Espectacle=ES.Codi;


71. SELECT    R.Nom, SUM(ZR.Capacitat) AS Num_Places
    FROM      Recintes R, Zones_Recinte ZR
    WHERE     Ciutat = 'Barcelona' AND
              ZR.Codi_Recinte=R.Codi
    GROUP BY R.Nom
    ORDER BY R.Nom;


72. SELECT    SUM(ZR.Capacitat) AS Aforo_Total
    FROM      Recintes R, Zones_Recinte ZR
    WHERE     R.Ciutat='Barcelona' AND
              ZR.Codi_Recinte=R.Codi;


73. SELECT    SUM(ZR.Capacitat) AS Aforo_Total
    FROM      Recintes R, Zones_Recinte ZR
    WHERE     ZR.Codi_Recinte=R.Codi;


74. SELECT    R.Nom, ZR.Zona, ZR.Capacitat AS Capacitat
    FROM      Recintes R, Zones_Recinte ZR
    WHERE     R.Codi = ZR.Codi_Recinte AND
              ZR.Capacitat  >= ( SELECT  MAX (ZR2.Capacitat)
                                 FROM    Zones_Recinte ZR2);


75. SELECT    ES.Nom, PE.Preu As Preu
    FROM      Espectacles ES, Preus_Espectacles PE
    WHERE     ES.Codi = PE.Codi_Espectacle AND
              PE.Preu  >= (  SELECT    MAX (PE2.Preu)
                             FROM      Preus_Espectacles PE2);


76. SELECT    DISTINCT ES.Nom, PE.Preu As Preu
    FROM      Espectacles ES, Preus_Espectacles PE
    WHERE     ES.Codi = PE.Codi_Espectacle AND
              PE.Preu  <= (  SELECT    MIN (PE2.Preu)
                             FROM      Preus_Espectacles PE2);
```

```
77. SELECT    T3.Total_Preus/T2.Total_Espectacles AS Promig
    FROM     (     SELECT    COUNT(*) AS Total_Espectacles
                   FROM      (  SELECT  DISTINCT Codi_Espectacle
                                FROM     Preus_Espectacles
                             ) T1
             ) T2,
             (     SELECT    SUM(Preu) AS Total_Preus
                   FROM      Preus_Espectacles
             ) T3;


78. SELECT    T3.Total_Preus/T2.Total_Espectacles AS Promig
    FROM     (     SELECT    COUNT(*) AS Total_Espectacles
                   FROM      (  SELECT  DISTINCT Codi_Espectacle
                                FROM     Representacions
                             ) T1
             ) T2,
             (     SELECT    SUM(Preu) AS Total_Preus
                   FROM      Preus_Espectacles
             ) T3;


79. SELECT    T1.Aforo_Venut / T2.Total_Aforo AS Promig
    FROM     (     SELECT    COUNT(*) AS Aforo_Venut
                   FROM      Recintes R, Entrades EN
                   WHERE     R.Ciutat = 'Barcelona' AND
                             R.Codi = EN.Codi_Recinte) T1,
             (     SELECT    COUNT(*) AS Total_Aforo
                   FROM      Recintes R, Seients S
                   WHERE     R.Ciutat = 'Barcelona' AND
                             R.Codi = S.Codi_Recinte) T2;


80. SELECT    T1.Aforo_Venut / T2.Total_Aforo AS Promig
    FROM     (     SELECT    COUNT(*) AS Aforo_Venut
                   FROM      Entrades EN) T1,
             (     SELECT    COUNT(*) AS Total_Aforo
                   FROM      Seients S) T2;


81. SELECT    T1.Total_Espect / T2.Tot_Espect AS Promig
    FROM     (     SELECT    COUNT(*) AS Total_Espect
                   FROM      Entrades) T1,
             (     SELECT    COUNT(*) AS Tot_Espect
                   FROM      Espectacles) T2;


82. SELECT    T1.Tot_Espect / T2.Tot_Repres AS Promig
    FROM     (     SELECT    COUNT(*) AS Tot_Espect
                   FROM      Entrades) T1,
             (     SELECT    COUNT(*) AS Total_Repres
                   FROM      Representacions) T2;
```

```
83.  SELECT    EN.DNI_Client
     FROM      Entrades EN, Espectacles ES
     WHERE     ES.Interpret='El Tricicle' AND
               EN.Codi_Espectacle=ES.Codi
     GROUP BY EN.DNI_Client
     HAVING    COUNT(DISTINCT ES.Codi) =  ( SELECT      COUNT(*)
                                            FROM        Espectacles
                                            WHERE       Interpret='El Tricicle');


     SELECT    EN.DNI_Client
     FROM      Entrades
     WHERE   ( SELECT       COUNT(DISTINCT ES.Codi)
               FROM         Entrades EN2, Espectacles ES
               WHERE        EN2.DNI_Client=EN.DNI_Client AND
                            ES.Codi=EN2.Codi_Espectacle AND
                            ES.Interpret='El Tricicle')
             =
             ( SELECT       COUNT(*)
               FROM         Espectacles
               WHERE        Interpret='El Tricicle');



     ENTRADES[Codi_Espectacle,DNI_Client]
     DIV
     ESPECTACLES WHERE Interpret='Tricicle')[Codi]

     (SELECT   EN.DNI_Client
       FROM    Entrades EN)
       MINUS
     (SELECT   T.DNI_Client
       FROM    ( (    SELECT        EN2.DNI_Client,ES.Codi
                      FROM          Entrades EN2, Espectacles ES
                      WHERE         ES.Interpret='El Tricicle')
                MINUS
                (     SELECT        EN3.DNI_Client, EN3.Codi_Espectacle
                      FROM          Entrades EN3)
               ) T );



84.  SELECT    EN.Zona, EN.Fila, EN.Numero, COUNT(*) AS Num_Entrades_Venudes
     FROM      Entrades EN, Recintes R
     WHERE     R.Nom = 'Victòria' AND
               EN.Codi_Recinte = R.Codi
     GROUP BY EN.Zona, En.Fila, En.Numero
     HAVING    COUNT(*) >= ALL ( SELECT        COUNT(*)
                                 FROM          Entrades EN2, Recintes R2
                                 WHERE         R2.Nom = 'Victòria' AND
                                               EN2.Codi_Recinte=R2.Codi
                                 GROUP BY      EN2.Zona, EN2.Fila, EN2.Numero);
```

85. (SELECT   DNI,Nom, Cognoms
    FROM   Espectadors)
    MINUS
    (SELECT   ES.DNI,ES.Nom,ES.Cognoms
    FROM   Espectadors ES,Entrades EN, Espectacles ET
    WHERE   ET.Interpret='El Tricicle' AND
              EN.Codi_Espectacle=ET.Codi AND
              ES.DNI=EN.DNI_Client);

Espectadors[DNI,Nom,Cognoms]
MINUS
((Espectadors x Entrades)[Codi_Espectacle, DNI, Nom, Cognoms]
  DIVIDE BY
  (Espectadors WHERE Interpret='Tricicle')[Codi]
);

(SELECT DNI, Nom, Cognoms
 FROM   Espectadors)
 MINUS
 ((SELECT   ES.DNI,ES.Nom,ES.Cognoms
    FROM   Espectadors ES,Entrades EN)
  MINUS
  (SELECT   T.DNI,T.Nom,T.Cognoms
    FROM   ((SELECT   ES.DNI, ES.Nom, ES.Cognoms, ET.Codi
                        FROM   Espectadors ES, Entrades EN, Espectacles ET
                        WHERE   ET.Interpret='El Tricicle')
                  MINUS
                   (SELECT   ES.DNI,ES.Nom,ES.Cognoms,
                                    EN.Codi_Espectacle
                      FROM   Espectadors ES, Entrades EN)
) T)
 );

86. **(Espectadors x Entrades)[Codi_Espectacle,DNI,Nom,Cognoms]**
    DIVIDE BY
    ((Espectadors x Recintes) WHERE R.Codi='Victòria')[ES.Codi]

(SELECT ES.DNI, ES.Nom, ES.Cognoms
 FROM   Espectadors ES, Entrades EN
 WHERE   ES.DNI=EN.DNI_Client)
MINUS
(SELECT   T.DNI, T.Nom, T.Cognoms
  FROM   ((SELECT   ES2.DNI,ES2.Nom,ES2.Cognoms,ET.Codi
              FROM Espectadors ES2,Entrades EN2, Espectacles ET,Recintes R
              WHERE ES2.DNI=EN2.DNI_Client AND
              R.Nom='Victòria' AND
              ET.Codi_Recinte=R.Codi)
            MINUS
             (SELECT   ES3.DNI,ES3.Nom,ES3.Cognoms,
                             EN3.Codi_Espectacle
               FROM   Espectadors ES3, Entrades EN3
               WHERE   ES3.DNI=EN3.DNI_Client)
) T);

```
87. SELECT     ZR.Zona
    FROM       Zones_Recinte ZR
    WHERE      ( SELECT          COUNT(DISTINCT ZR2.Codi_recinte)
                 FROM            Zones_Recinte ZR2
                 WHERE           ZR2.Zona=ZR.Zona)
               =
               ( SELECT          COUNT(*)
                 FROM            Recintes);


    Zones_Recinte[Zona,Codi_Recinte]
    DIVIDE BY
    Zones_Recinte[Codi_Recinte]

    (  SELECT       ZR.Zona
       FROM         Zones_Recinte ZR)
    MINUS
    (  SELECT       T.Zona
       FROM         ( (   SELECT       ZR.Zona, ZR2.Codi_Recinte
                          FROM         Zones_Recinte ZR, Zones_Recinte ZR2)
                      MINUS
                       (  SELECT       ZR3.ZONA,ZR3.Codi_Recinte
                          FROM Zones_Recinte ZR3)
                      ) T );

88. SELECT    Codi_Recinte, Capacitat
    FROM      Zones_Recinte
    WHERE     Zona = 'Platea;

89. SELECT    R.Codi, R.Nom, COUNT(*) As Num_Entrades
    FROM      Recintes R, Entrades EN
    WHERE     R.Codi = EN.Codi_Recinte
    GROUP BY R.Codi, R.Nom
    HAVING    COUNT(*) >=ALL ( SELECT        COUNT(*)
                               FROM          Entrades EN2
                               GROUP BY      EN2.Codi_Recinte);

90. SELECT    ES.Interpret, COUNT(*) AS Num_Representacions
    FROM      Espectacles ES, Representacions RE
    WHERE     ES.Codi = RE.Codi_Espectacle
    GROUP BY ES.Interpret
    HAVING COUNT(*)  >= ALL  (  SELECT        COUNT(*)
                                FROM          Espectacles ES2, Representacions RE2
                                WHERE         ES2.Codi = RE2.Codi_Espectacle
                                GROUP BY      ES2.Interpret);

91. SELECT    R.Codi, R.Nom, COUNT(*) AS Num_Representacions
    FROM      Recintes R, Representacions RE, Espectacles ET
    WHERE     ET.Codi=RE.Codi_Espectacle AND R.Codi = ET.Codi_Recinte
    GROUP BY R.Codi, R.Nom
    HAVING    COUNT(*)  >= ALL (   SELECT    COUNT(*)
                                   FROM      Representacions RE2, Espectacles ET2
                                   WHERE     ET2.Codi=RE2.Codi_Espectacle
                                 GROUP BY ET2.Codi_Recinte)
    ORDER BY R.Codi;
```

```
92. SELECT     EN.Codi_Espectacle,EN.Data,
               TO_CHAR(EN.Hora,'HH24:MI:SS') AS Hora,ES.Interpret,EN.Codi_Recinte
    FROM       Espectacles ES, Entrades EN
    WHERE      EN.Codi_Espectacle = ES.Codi
    GROUP BY EN.Codi_Espectacle, En.Data, EN.Hora, EN.Codi_Recinte, ES.Interpret
    HAVING     COUNT(*) >= ALL  (   SELECT    COUNT(*)
                                    FROM      Entrades
                                    GROUP BY Codi_Espectacle,Data,Hora,
                                             Codi_Recinte);



93. SELECT     MAX(T2.Total) AS Recaptació_Màxima
    FROM       (SELECT     SUM(T1.T_Venut * T1.PreuZ) AS Total
                FROM       (SELECT      EN.Codi_Espectacle,PE.Zona,
                                        PE.Preu AS PreuZ,COUNT(*) AS T_Venut
                            FROM        Entrades EN, Preus_Espectacles PE
                            WHERE       PE.Codi_Espectacle=EN.Codi_Espectacle AND
                                        PE.Zona=EN.Zona
                            GROUP BY  EN.Codi_Espectacle,PE.Zona,PE.Preu) T1
                GROUP BY T1.Codi_Espectacle) T2;



94. SELECT     ES.Nom, ES.Interpret, T1.T_Recaptat
    FROM           Espectacles ES,
               (SELECT     EN.Codi_Espectacle AS CE, PE.Zona,
                           (PE.Preu * COUNT(*)) AS T_Recaptat
                FROM       Entrades EN, Preus_Espectacles PE
                WHERE      PE.Codi_Espectacle=EN.Codi_Espectacle AND
                           PE.Zona=EN.Zona
                GROUP BY  EN.Codi_Espectacle,PE.Zona,PE.Preu) T1
    WHERE      T1.CE=ES.Codi
    GROUP BY ES.Nom, ES.Interpret,T1.T_Recaptat
    HAVING     T1.T_Recaptat >=ALL     ( SELECT        (PE2.Preu * COUNT(*))
                                         FROM          Entrades EN2,
                                                       Preus_Espectacles PE2
                                         WHERE PE2.Codi_Espectacle=EN2.Codi_Espectacle
                                         AND
                                         PE2.Zona=EN2.Zona
                                      GROUP BY EN2.Codi_Espectacle,PE2.Zona,PE2.Preu);


95. SELECT     MAX(T2.Total) AS Total_Recaptacio
    FROM       (SELECT     SUM(T1.T_Recaptat_Zona) AS Total
                FROM       (SELECT      EN.Codi_Espectacle AS CE, EN.Data AS Dat,
                                        EN.Hora As Hor,EN.Zona,
                                        (PE.Preu *COUNT(*)) AS T_Recaptat_Zona
                            FROM        Entrades EN, Preus_Espectacles PE
                            WHERE       PE.Codi_Espectacle=EN.Codi_Espectacle AND
                                        PE.Zona=EN.Zona
                            GROUP BY  EN.Codi_Espectacle,EN.Data,EN.Hora,EN.Zona,
                                        PE.Preu
                            ) T1
                GROUP BY T1.CE,T1.Dat,T1.Hor
                ) T2 ;
```

```
96.  SELECT        T1.CE AS Codi_Espectacle, T1.Dat AS Data,
                   TO_CHAR(T1.Hor'HH24:MI:SS') As Hora,ES.Interpret,
                   R.Nom AS Nom_Recinte,
                   SUM(T1.T_Recaptat_Zona) AS Total_Recaptat
     FROM          Recintes R,Espectacles ES,
                   (SELECT     EN2.Codi_Espectacle AS CE,
                               EN2.Data AS Dat,EN2.Hora AS Hor,EN2.Zona,
                               (PE.Preu * COUNT(*)) AS T_Recaptat_Zona
                    FROM       Entrades EN2, Preus_Espectacles PE
                   WHERE       PE.Codi_Espectacle=EN2.Codi_Espectacle AND
                               PE.Zona=EN2.Zona
                    GROUP BY   EN2.Codi_Espectacle,EN2.Data,EN2.Hora,EN2.Zona,
                               PE.Preu) T1,
                   (SELECT     DISTINCT Codi_Espectacle,Data,Hora,
                               Codi_Recinte AS Cod_Rec
                    FROM       Entrades) CR
     WHERE         T1.CE=ES.Codi AND
                   T1.CE=CR.Codi_Espectacle AND
                   T1.Dat=CR.Data AND
                   T1.Hor=CR.Hora AND
                   CR.Cod_Rec = R.Codi
     GROUP BY      T1.CE,T1.Dat,T1.Hor,ES.Interpret,R.Nom
     HAVING        SUM(T1.T_Recaptat_Zona) >=ALL
                   (SELECT     SUM(T2.T_Recaptat_Zona2)
                    FROM       (SELECT     EN3.Codi_Espectacle AS CE2,
                                           EN3.Data AS Dat,
                                           EN3.Hora AS Hor,EN3.Zona,
                                           (PE2.Preu * COUNT(*)) AS
                                                        T_Recaptat_Zona2
                               FROM        Entrades EN3, Preus_Espectacles PE2
                               WHERE    PE2.Codi_Espectacle=EN3.Codi_Espectacle
                                           AND  PE2.Zona=EN3.Zona
                                GROUP BY   EN3.Codi_Espectacle,EN3.Data,
                                           EN3.Hora,EN3.Zona,PE2.Preu
                               ) T2
                     GROUP BY  T2.CE2,T2.Dat,T2.Hor);


97.  SELECT        R.Codi, R.Nom, R.Ciutat
     FROM          Recintes R,Zones_Recinte ZR
     WHERE         R.Codi=ZR.Codi_Recinte
     GROUP BY      R.Codi,R.Nom, R.Ciutat
     HAVING        COUNT(*)>1
     ORDER BY      R.Codi;


98.  SELECT    R.Codi, R.Nom, R.Ciutat
     FROM      Recintes R,Zones_Recinte ZR
     WHERE     R.Codi=ZR.Codi_Recinte
     GROUP BY R.Codi,R.Nom, R.Ciutat
     HAVING    COUNT(*)=1
     ORDER BY R.Codi;
```

```
99.  SELECT    ES.DNI, ES.Nom, ES.Cognoms, COUNT(*) AS Num_Entrades
     FROM      Entrades EN, Espectadors ES, Recintes R
     WHERE     R.Nom='La Faràndula' AND
               EN.Codi_Recinte=R.Codi AND
               ES.DNI=EN.DNI_Client
     GROUP BY ES.DNI,ES.Nom,ES.Cognoms
     HAVING    COUNT(*) >= ALL ( SELECT      COUNT(*)
                                 FROM        Entrades EN2,Recintes R2
                                 WHERE       R2.Nom='La Faràndula' AND
                                             EN2.Codi_Recinte=R2.Codi
                                 GROUP BY    EN2.DNI_Client)
     ORDER BY ES.DNI;


100. SELECT    ES.DNI, ES.Nom, ES.Cognoms, COUNT(*) AS Num_Entrades
     FROM      Entrades EN, Espectadors ES, Recintes R
     WHERE     R.Ciutat='Barcelona' AND
               EN.Codi_Recinte=R.Codi AND
               ES.DNI=EN.DNI_Client
     GROUP BY ES.DNI,ES.Nom,ES.Cognoms
     HAVING    COUNT(*) >= ALL ( SELECT      COUNT(*)
                                 FROM        Entrades EN2,Recintes R2
                                 WHERE       R2.Ciutat='Barcelona' AND
                                             EN2.Codi_Recinte=R2.Codi
                                 GROUP BY    EN2.DNI_Client);


101. SELECT    ES.DNI, ES.Nom, ES.Cognoms, COUNT(*) AS Num_Entrades
     FROM      Entrades EN, Espectadors ES, Recintes R
     WHERE     R.Ciutat='Barcelona' AND
               EN.Codi_Recinte=R.Codi AND
               ES.DNI=EN.DNI_Client
     GROUP BY ES.DNI,ES.Nom,ES.Cognoms
     ORDER BY Num_Entrades DESC;


102. SELECT    ES.DNI, ES.Nom, ES.Cognoms, COUNT(*) AS Num_Entrades
     FROM      Entrades EN, Espectadors ES
     WHERE     ES.DNI=EN.DNI_Client
     GROUP BY ES.DNI,ES.Nom,ES.Cognoms
     ORDER BY Num_Entrades DESC;


103. SELECT    ES.DNI, ES.Nom, ES.Cognoms, COUNT(*) AS Num_Entrades
     FROM      Entrades EN, Espectadors ES
     WHERE     ES.DNI=EN.DNI_Client
     GROUP BY ES.DNI,ES.Nom,ES.Cognoms
     HAVING    COUNT(*) >= ALL ( SELECT      COUNT(*)
                                 FROM        Entrades EN2
                                 GROUP BY    EN2.DNI_Client);
```

Enric Martí

Bellaterra, Setembre del 2011.