Vence de los Heros
Valenzuela 5-10-2010

1.)

```
create table users (nick char(20) primary key, nombre char(20),
   email char(20));
create table follow (follow_id int primary key,
   user1 char(20) references users(nick),
   user2 char(20) references users(nick));

insert into users values('luis', 'luis', 'luis@uam');
insert into users values('nuria', 'nuria', 'nuria@uam');
insert into users values ('maria', 'maria', 'maria@uam');
insert into users values('alba', 'alba', 'alba@uam');
insert into users values ('pedro', 'pedro', 'pedro@uam');
insert into users values(' juan', 'juan', 'juan@uam');
insert into users values('nicola', 'nicola', 'nicola@uam');

insert into follow values (1, 'luis', 'nicola');
insert into follow values(2, 'juan', 'luis');
insert into follow values ( 3, 'maria', 'luis');
insert into follow values ( 4, 'nuria', 'luis');
insert into follow values(5, 'nuria', 'juan');
insert into follow values(6, 'nuria', 'maria');
insert into follow values (7, 'juan', 'maria');
insert into follow values( 8, 'maria', 'alba ~~juan~~');
insert into follow values( 9, 'alba', 'nicola');
insert into follow values (10, 'pedro', 'alba');
insert into follow values(11, 'pedro', 'juan');
insert into follow values
```

2.) a)

```
select f1.user2
from follow f1, follow f2
where f1.user1 = 'luis'
   and f2.user1 = 'maria'
   and f1.user2 = f2.user2;
```

b)

```
select f2.user2
from follow f1, follow f2
where f1.user1 = 'nicola'
   and f2.user1 = f1.user2;
```

Junco de los Heros
Valenzuela 5-10-2019

```
c) ((select f.user 2
    from follow f
    where f. user 1 = 'luis')
    union
    (select f. user 1
      from follow f
     where f.user2= 'luis'))
    intersects
   ((select f. user2
      from follow f
      where f. user1='maria')
      union
     (select f.user 1
       from follow f
       where f. user 2 ='maria));
-- selecciono los seguidores de luis y los intersecto con los de maria
 create view grado_uno as
(select f.user2 as amigo
  from follow f
   where f.user 1 = 'nicolo')
   union
   (select f.user 1 as amigo
    from follow f
   where f.user 2 ='nicolo);


  select f. user 2
   from follow f, grado_uno g
    where f. user 1 = g. amigo
   union
   select f.user 1
    from follow f, grado_uno g
    where f. user2 = g. amigo;
  create table city (city-id int primary key, city_name char (20));
3.) create table aeropuerto (codigo char(3) primary key,
                         city-id references city(city-id));
  *
  create table vuelos (vuelos_numero int primary key,
                         origen references aeropuerto (codigo),
                         destino references aeropuerto(codigo),
                         h_salida ~~timestamp~~,
                          n_plazas int
                         linea_aerea_id int references linea_aerea(linea_aerea_id));

   create table linea_aerea(linea_aerea_id int primary key,
                              nombre char(20));

   create table pasajeros (DNI int primary key,
                            nombre char (20));

   create table reservas (usuario_DNI int references pasajeros (DNI),
                          vuelo_num int references vuelos(vuelos_numero),
                          fecha timestamp,
                          precio float,
                          primary key (usuario_DNI, vuelo_num));
```

Junco de los Heros
Valenzuela 5-10-2019

```
insert into city values(12, 'teruel');
insert into city values(24, 'alcañiz');

insert into aeropuerto( 123 , 1 );
 insert into  aeropuerto ( 112 , 2 );
insert into linea _ aerea ( 1 , 'ryanair' );
 insert into vuelos (1 , 123 , 112 , ~~now()~~ 11:2:3 , 5 , 1 );
  insert into pasajeros (12345678 , 'Junco');
   insert into reservas( 12345678, 1 , now() , 137.5 );

5.) a) select vuelos_numero
   from vuelos, aeropuerto, city
   where vuelos.origen = aeropuerto.codigo
      and aeropuerto.city_id = city.city_id
      and city.city_name = 'Paris'

 b) select vuelos_numero
   from vuelos, aeropuerto a1, aeropuerto a2, city c1, city c2
   where vuelos.origen = ~~aeropuerto~~.codigo
      and ~~oo~~ a1.city_id = c1.city_id
      and   c1.city_name = 'Madrid'
      and vuelos.destino = a2.codigo
      and a2.city_id = c2.city_id
      and c2.city_name = 'paris'
      and vuelos.h_salida < '12:00:00';

 create view Londres_paris as
 select vuelos_numero, h_salida
 from vuelos, aeropuerto a1, aeropuerto a2, city c1, city c2
 where vuelos.origen = a1.codigo
     and a1.city_id = c1.city_id
     and c1.city_name = 'Londres'
     and vuelos.destino = a2.codigo
     and a2.city_id = c2.city_id
     and c2.city_name = 'Paris';
     and

 c) select DNI, ~~reservas.vuelos_num~~ Londres_paris.h_salida
    from  reservas natural Join Londres_paris;

 d) ~~select DNI~~
    sería otra vista igual que Londres_paris pero Paris_Londres
    y luego:
    select DNI, Londres_paris.h_salida
    from reservas natural Join Londres_paris
    union
    select DNI, Paris_Londres.h_salida
    from reservas natural Join Paris_Londres.
```

```
e)  select usuario_DNI
    ~~from reservas, vuelos v1, vuelos v2~~
    ~~where~~
    from (reservas r1 natural join vuelos v1), (reservas r2 natural join vuelos v2)
     where V1.origen = V2.destino
       and V1.destino = V1.origen


6.) a) select linea_aerea_id
       from linea_aerea
       where linea_aerea_id not in (
             select linea_aerea_id
             from linea_aerea natural join vuelos natural join
                  aeropuerto natural join city
             where city.city_name = 'Londres');

    b) select vuelos_numero, n_salida
       from vuelos
       where n_plazas not in (
             select count(~~DNI~~ usuario_DNI)
             from reservas
             where vuelos.vuelo_numero = reservas.vuelo_numero
             group by usuario_DNI) ;

    c) select vuelos_numero
       from vuelos
       where ~~vuelos~~ not exist (
             select 1
             from reservas
             where vuelos.vuelo_numero = reservas.vuelo_numero
             and reservas.fecha = '2018-01-01') ;

    d) select linea_aerea_id
       from linea_aerea
       where linea_aerea_id not in (
             ~~vuelos~~ V1.
             select linea_aerea_id
             ~~from (vuelos v1 natural join city c1)~~
                 ~~(vuelos v2 natural join city c2)~~
             ~~where v1.linea_aerea_id = v2.linea_aerea_id~~
              ~~and~~
              from vuelos v1, (city c1, natural join aeropuerto a1),
                  (aeropuerto a2 natural join city c2)
              where v1.destino = a1.codigo
                and V1.origen = a2.codigo
                and (c1.city_name <> 'Madrid' and c2.city_name <> 'Madrid'
         );
-- La subquery devuelve aquellos linea_aerea_id que
-- tengan al menos un vuelo con ningún end-point en Madrid.
```

Junco de los Heros
Valenzuela 5-10-2019

```
7.) a) select nick
       from users
       where nick not in (
              select u.nick
              from users u, follow f
              where u.nick = f.user1
                and f.user2 = 'Nuria'
       );

    b) select nick
       from users
       where nick not in (
              select u.nick
              from users u, follow f
              where u.nick = f.user2
       );

    c) select u1.nick
       from users u1 ~~users u2~~
       where not exists (
              select 1
              from users u2
              where not exists (
                     select 1
                     from follow f
                     where f1.user1 = u2.nick
                       and f2.user2 = u1.nick
              )
       );

8.) a) create view aeropuertos1 as
       select origen as a
       from aeropuerto
       union
       select destino as a
       from aeropuerto.

       create view frecuencia as
       select a, cont(a) as cont_a
       from aeropuertos1
       group by cont_a;

       select ~~aeropuerto~~ a
       from frecuencia
       where cont_a = (select max(cont_a)
                       from frecuencia);
```

Junco de los Heros
Valenzuela 5-10-2019

```
b) select linea_aerea_id
   from vuelos
   group by linea_aerea_id
   order by count(linea_aerea_id) desc;

c) select c.city_name
   from (city c natural join aeropuerto a), vuelos v
   where a.codigo = v.origen
     and v.h_salida = (
             select min(h_salida)
             from vuelos
             group by h_salida
     );

d) select avg(precio)
   from reservas
   group by usuario_DNI;

e) select sum(precio)
   from reservas natural join vuelos
   group by linea_aerea_id, origen;
```