Foundations of Information Management  
WS 16/17

(Partial) Solution to Exercise 5

Solution 1 (SQL queries). Solution to the remaining subtasks of Ex. 4.1/Ex. 5.2:  
Formulate SQL queries answering the following questions using the schema about films.

film: {[ID, title, year, genre]}
person: {[ID, name, firstname]}
cinema: {[ID, name, city]}
participation: {[film, person, function]}
show: {[film, date, cinema]}

c) List all shows of “Alice in Wonderland”.

SELECT date, name
FROM (film JOIN show ON ID = film)
    JOIN cinema ON cinema.ID = cinema
WHERE title = 'Alice in Wonderland'

d) Who acted in his/her own film?

SELECT name, firstname
FROM (person JOIN participation AS p1 ON ID = p1.person)
    JOIN participation AS p2 ON ID = p2.person
WHERE p1.film = p2.film
    AND p1.function = 'actor' AND p2.function = 'director'

e) Which cinemas show films with Kate Winslet?

SELECT cinema.name, city
FROM (cinema JOIN show ON cinema.ID = cinema)
    JOIN participation ON cinema.film = show.film
    JOIN person ON person.ID = person
WHERE person.name = 'Winslet' AND person.firstname = 'Kate'
f) Which films have more than one director?

```sql
SELECT title
FROM (film JOIN participation AS p1 ON ID = p1.film)
    JOIN participation AS p2 ON ID = p2.film
WHERE p1.function = 'director' AND p2.function = 'director'
    AND p1.person <> p2.person
```

i) Who directed at least two different films in the same year?

```sql
SELECT name, firstname
FROM (person AS p JOIN participation AS p1 ON p.ID = p1.person)
    JOIN film AS f1 ON p1.film = f1.ID
    JOIN participation AS p2 ON p.ID = p2.person
    JOIN film AS f2 ON p2.film = f2.ID
WHERE f1.year = f2.year AND p1.film <> p2.film
    AND p1.function = 'director' AND p2.function = 'director'
```

k) Are there persons having the same name (name and first name)?

```sql
SELECT p1.name, p1.firstname
FROM person AS p1, person AS p2
WHERE p1.name = p2.name AND p1.firstname = p2.firstname
    AND p1.ID <> p2.ID
```