

**CS 353 Fall 2022**

**Homework 3**

**Due:** October 19, Wednesday till midnight

**You will use the Moodle course page for submission of this assignment**

**Q.1 [80 pts, 8 pts each]** Given the following relational schema for a movie database:

Movie(m-id, title, year, genre, directorName, country, rating) directorName is a  
foreign key to Director(name)

MovieStar(s-id, name, country, gender, birthYear)

StarIn(m-id, s-id) m-id is a foreign key to Movie, s-id is a foreign key to MovieStar

Director(name, birthYear, country)

For each of the following queries, give an expression in **SQL**.

- (a) Find the title and year of the movies directed by the directors younger than 40 from Turkey.
- (b) Find the name of the female stars who appeared in the “horror” movies of the last 10 years directed by Turkish directors.
- (c) Find the name and country of the stars who are younger than 20 and appeared in the movies of the director “Quentin Tarantino” between 2000 – 2020. Order the result by country of stars ascending.
- (d) Find the average rating of the “western” movies featured “John Wayne”.
- (e) Find the directors who directed at least 3 movies last year (2021) with a rating higher than 5.0.
- (f) For each year, find the highest rated movie from each country whose director is from the same country and is younger than 30.
- (g) Find the name of the directors from USA who directed “horror” movies in the last year, that received a rating value higher than the average rating value of the movies directed by “Alfred Hitchcock”.
- (h) Find the title of the highest rated movie for each genre in each country for the last year.
- (i) Find the name of the directors who have the same number of movies as “Tarantino”.
- (j) For each country, find the name of the directors from that country who directed the highest number of “comedy” movies in the last year.

**Q.2 [20 pts, 5 pts each]** Consider the following instances of a club membership database:

Student		
sid	sname	dept
s1	Jonh	CS
s2	Dave	null

Membership		
sid	cid	status
s1	c1	null
s1	c2	active
s2	c2	null

Club		
cid	cname	fee
c1	ABC	null
c2	XYZ	45

For each query below indicate what result is returned:

**(a)**

```
SELECT S.sname as StudentName, C.cname as ClubName
FROM Student S, Membership M, Club C
WHERE S.sid = M.sid AND M.cid = C.cid AND (dept = "CS" OR fee = 45)
```

**(b)**

```
SELECT S.sname as StudentName, C.cname as ClubName
FROM Student S, Membership M, Club C
WHERE S.sid = M.sid AND M.cid = C.cid AND (status = "active" OR status <> "active")
```

**(c)**

```
SELECT S.sname as StudentName, C.cname as ClubName
FROM Student S, Membership M, Club C
WHERE S.sid = M.sid AND M.cid = C.cid AND
      ((dept = "CS" OR status = "active") AND NOT(fee = 45))
```

**(d)**

```
SELECT S.sname as StudentName, C.cname as ClubName
FROM Student S, Membership M, Club C
WHERE S.sid = M.sid AND M.cid = C.cid AND
      ((dept = "CS" AND status = "active") OR fee = 45)
```