CS 353 Fall 2022 Homework 3 Solutions

Q.1 (a) SELECT M.title, M.year FROM Movie M, Director D WHERE D.birthYear > 1982 AND D.country = "Turkey" AND D.name = M.directorName **(b)** SELECT MS.name FROM Movie M, StarIn S, MovieStar MS, Director D WHERE M.genre = "horror" AND M.year > 2012 AND M.m-id = S.m-id AND S.s-id = MS.s-id AND MS.gender = "female" AND M.directorName = D.name AND D.country = "Turkey" (c) SELECT MS.name, MS.country FROM Movie M, StarIn S, MovieStar MS WHERE MS.birthYear > 2002 AND MS.s-id = S.s-id AND S.m-id = M.m-id AND M.year BETWEEN 2000 AND 2020 AND M.directorName = "Quentin Tarantino" ORDER BY MS.country ASC (d) SELECT AVG(M.rating) FROM Movie M, StarIn S, MovieStar MS WHERE M.genre = "western" AND M.m-id = S.m-id AND S.s-id = MS.s-id AND MS.name = "John Wayne" **(e)** SELECT M.directorName FROM Movie M WHERE M.year = 2021 AND M.rating > 5.0 AND GROUP BY M.directorName HAVING COUNT(*) >= 3**(f)** WITH Temp AS (SELECT M.year, M.country, MAX(M.rating) as max_rating FROM Movie M, Director D WHERE M.directorName = D.name AND D.birthYear > 1992 AND D.country = M.countryGROUP BY M.year, M.country)

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SELECT M2.year, M2.country, M2.title
FROM Movie M2, Director D2, Temp T
WHERE M2.directorName = D2.name AND D2.birthYear > 1992 AND
       D2.country = M2.country AND
       M2.year = T. year AND M2.country = T. country AND M2.rating = T.max rating
(g)
SELECT M.directorName
FROM Movie M, Director D
WHERE M.directorName = D.name AND M.genre = "horror" AND
          M.year = 2021 AND D.country = "USA" AND
          M.rating > (SELECT AVG(M2.rating)
                    FROM Movie M2
                     WHERE M2.directorName = "Alfred Hitchcock".)
(h)
WITH Temp AS (
  SELECT M.country, M.genre, MAX(M.rating) AS max_rating
  FROM Movie M
  WHERE M.year = 2021
  GROUP BY M.country, M.genre)
SELECT M2.country, M2.genre, M2.title
FROM Movie M2, Temp T
WHERE M2.year = 2021 AND M2.country = T. country AND M2.genre = T. genre AND
        M2.rating = T.max\_rating
(i)
WITH Temp AS (
  SELECT M.directorName, COUNT(*) as cnt
  FROM Movie M
  GROUP BY M.directorName)
SELECT T.directorName
FROM temp T
WHERE T.cnt = (SELECT COUNT(*)
               FROM Movie M2
               WHERE M2.directorName = "Tarantino")
Alternative Solution:
SELECT M.directorName
FROM Movie M
GROUP BY M.directorName
HAVING COUNT(*) = (SELECT COUNT(*)
                     FROM Movie M2
                     WHERE M2.directorName = "Tarantino")
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WITH Temp AS (
    SELECT M.directorName, D.country, COUNT(*) cnt
    FROM Movie M, Director D
    WHERE M.directorName = D.name AND M.genre = "comedy" AND M.year = 2021
    GROUP BY M.directorName, D.country )
WITH Temp2 AS (
    SELECT T.country, MAX(T.cnt) AS max_cnt
    FROM Temp T
    GROUP BY T.country )
SELECT T.country, T.directorName
FROM Temp T, Temp2 T2
WHERE T.country = T2.country AND T.cnt = T2.max_cnt
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Q.2

(a)

StudentName	ClubName
John	ABC
John	XYZ
Dave	XYZ

(b)

StudentName	ClubName
John	XYZ

(c)

StudentName	ClubName
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(d)

StudentName	ClubName
John	XYZ
Dave	XYZ