Carnegie Mellon University

15-415 Database Applications

Spring 2012, Faloutsos

Assignment 2: SQL

Due: 2/07, 1:30 pm, in class – hard copy

Solution (Please recall that the solutions may not be unique)

Q1
SELECT COUNT(DISTINCT name) FROM play_in;

Q2
SELECT mid, title, rating FROM movies
WHERE num_ratings >= 10000
ORDER BY rating DESC LIMIT 10;

Q3
CREATE VIEW freq
AS
    SELECT mid FROM play_in
    GROUP BY mid
    HAVING COUNT(*) >= ALL (SELECT COUNT(*)
    FROM play_in GROUP BY mid);

SELECT freq.mid, title FROM freq, movies WHERE freq.mid = movies.mid ORDER BY mid DESC;

Q4
CREATE VIEW latest
AS
    SELECT name, max(year) FROM play_in, movies
    WHERE play_in.mid = movies.mid
    GROUP BY name
    HAVING max(year) > 2006;

```
SELECT COUNT(*) FROM latest;
```

Q5
```
CREATE VIEW cruise_list
AS
    SELECT a1.name, COUNT(*) as C FROM play_in AS a1, play_in AS a2
    WHERE a1.mid = a2.mid
        AND a2.name = 'Tom Cruise'
        AND a1.name <> 'Tom Cruise'
    GROUP BY a1.name;

SELECT name FROM cruise_list where C >= ALL(SELECT C FROM cruise_list) ORDER BY name;
```

Q6
```
SELECT a1.name FROM play_in AS a1, play_in AS a2
WHERE a1.mid = a2.mid AND a2.name = 'Tom Cruise' AND a1.name <> 'Tom Cruise'
INTERSECT
SELECT a1.name FROM play_in AS a1, play_in AS a2
WHERE a1.mid = a2.mid AND a2.name = 'Katie Holmes' AND a1.name <> 'Katie Holmes'
ORDER BY name;
```

Q7
```
SELECT play_in.name, SUM(num_ratings) FROM play_in, movies
WHERE play_in.mid = movies.mid
GROUP BY name HAVING MAX(year) > 2006
ORDER BY SUM(num_ratings)
DESC LIMIT 10;
```

Q8
```
SELECT play_in.name, AVG(movies.rating) FROM play_in, movies
WHERE cast_position<3 AND play_in.mid = movies.mid
GROUP BY play_in.name
HAVING count(*) >= 5
ORDER BY avg(movies.rating)
DESC LIMIT 10;
```

Q9

In courtesy of Ang Xu

CREATE VIEW helptable(name, year, num_movies) AS
   SELECT name, year, count(*) FROM movies AS m, play_in AS p
   WHERE m.mid = p.mid
   GROUP BY name, year;
SELECT COUNT(t1.name) FROM helptable
   WHERE t1.year = 2008 AND t1.num_movies > ALL (
     SELECT num_movies, FROM helptable AS t2
     WHERE t1.name = t2.name AND t2.year <> 2008);

Q10

SELECT title, num_ratings, rating FROM movies
WHERE mid NOT IN
   (SELECT a2.mid FROM movies AS a1, movies AS a2
    WHERE a1.mid<>a2.mid
      AND a1.num_ratings > a2.num_ratings
      AND a1.rating > a2.rating)
ORDER BY title;