

CMPT-354 D1 Fall 2008
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Solution Extra Assignment

Introduction

This is an extra practical assignment using SQL Server 2005 Management Studio to give you more practical experience. Please, do NOT submit your solution, since it will not be marked.

In this assignment, you will work on the Movie database, consisting of the following tables:

MovieList(title:string, year:int)

Note that the year of the release is also added as suffix to the title.

Actors(actorName:string, actedIn:string)

actedIn is FK to MovieList, actorName has the format "lastName,firstName".

Actresses(actressName:string, actedIn:string)

actedIn is FK to MovieList, actressName has the format "lastName,firstName".

Genres(title:string, genre:string)

title is a FK to MovieList

Keywords(keyword:string, movieTitle:string)

movieTitle is a FK to MovieList

TopMovies(distribution:char(10), votes: int, rank: float, title:string)

title is a FK to MovieList

WorstMovies(distribution:char(10), votes: int, rank: float, title:string)

title is a FK to MovieList

Formulate the following queries in SQL. Where applicable, make sure that you return only distinct results, and name the resulting attributes properly.

a) For each Genre, find the name and the number of Movies of that Genre.

```
select G.genre, count(*) as numberMovies
from Genres G, MovieList M
where G.title = M.title
group by G.genre
order by genre;
```

b) Find the Movies that do not have any Keyword associated.

```
select title from MovieList M where not exists
(select * from keywords K where K.movieTitle = M.title);
```

c) Find the names of all Actors and Actresses who have acted in the 1977 Star Wars Movie but not in the 1980 Star Wars Movie.

```
((SELECT actorName as name from Actors where actedIn like '%star wars%' and
actedIn like '%1977%')
UNION
```

```
(SELECT actressName as name from Actresses where actedIn like '%star wars%' and
actedIn like '%1977%'))
EXCEPT
((SELECT actorName as name from Actors where actedIn like '%star wars%' and
actedIn like '%1980%'))
UNION
(SELECT actressName as name from Actresses where actedIn like '%star wars%' and
actedIn like '%1980%'));
```

d) Find the Actors that have acted in Movies of all Genres.

```
select A.actorName
from Actors A
where not exists
    (select * from Genres G where not exists
        (select *
         from Genres G1
         where G1.genre = G.genre and G1.title = A.actedIn));
```

e) Find the Actors that have acted in Movies of more than ten different Genres.

```
select distinct A.actorName
from Actors A
where 10 <
    (select count(distinct G.genre)
     from Genres G, Actors A1
     where G.title = A1.actedIn and A.actorName = A1.actorName
     group by A1.actorName);
```

f) Find the Keywords that have been associated with TopMovies and with WorstMovies.

```
select distinct K.keyword
from Keywords K
where K.keyword in
    ((select K1.keyword from TopMovies T, Keywords K1 where T.title =
     K1.movieTitle)
     intersect
     (select K2.keyword from WorstMovies W, Keywords K2 where W.title =
     K2.movieTitle));
```

g) Find the title of the Movies that belong to the 'action' Genre and to the 'thriller' Genre, but have no Keyword that contains 'war'.

```
select M.title
from MovieList M, Genres G1, Genres G2
where M.title = G1.title and M.title = G2.title
and G1.genre = 'action' and G2.genre = 'thriller'
and not exists
    (select * from Keywords where keyword like '%war%' and movieTitle = M.title);
```

h) Find the TopMovies that had a higher percentage of votes of 10 than of votes of 9 and votes of 8 together.

```
select title from TopMovies M
where substring(distribution,10,1) >
    (substring(distribution,9,1) + substring(distribution,8,1));
```

i) Find the Actors and Actresses that have acted in a WorstMovie, but not in a TopMovie.

```

((SELECT A.actorName as name from Actors A, WorstMovies W where A.actedIn =
W.title)
except
(SELECT A.actorName as name from Actors A, TopMovies T where A.actedIn =
T.title))
union
((SELECT A.actressName as name from Actresses A, WorstMovies W where A.actedIn =
W.title)
except
(SELECT A.actressName as name from Actresses A, TopMovies T where A.actedIn =
T.title));

```

j) For the Genre with the most Movies released before 1940, find the name and the number of these Movies.

```

with GenresAndNumberMovies (genre, numberMovies) as
(select G.genre, count(*) as numberMovies
from Genres G, MovieList M
where M.year < 1940 and G.title = M.title
group by G.genre)
select genre, numberMovies
from GenresAndNumberMovies
where numberMovies = (select max(numberMovies) from GenresAndNumberMovies);

```