1. Course : EECS 495. Intro to Database Systems
2. Name : Sangrin Lee
3. Student ID : 2999428

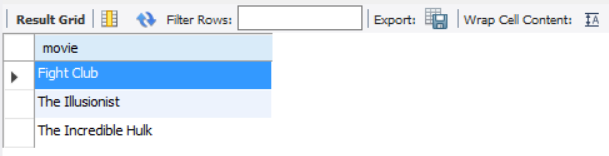
**Easy Questions**:

1. What movies has ‘Edward Norton' appeared in?

[SQL Query]

|  |
| --- |
| select movie  from appeared\_in  where star = 'Edward Norton'; |

[Output]



1. Who has starred along with 'Brad Pitt' in the some movie?

[SQL Query]

|  |
| --- |
| select star  from appeared\_in  where star != 'brad pitt' and movie in  (select movie  from appeared\_in  where star = 'brad pitt'); |

[Output]



1. How much money, in total, have movies earned in which 'Tom Hanks' and 'Rita Wilson' starred together?

[SQL Query]

|  |
| --- |
| select sum(how\_much) as total\_money  from made\_money c  where c.movie in  ( select a.movie  from appeared\_in a, appeared\_in b  where a.star = 'tom hanks' and b.star = 'rita wilson' and a.movie = b.movie); |

[Output]



1. Who has (have) divorced 'Ben Affleck'?

[SQL Query]

|  |
| --- |
| select b.star  from divorced a, in\_couple b  where b.star != 'ben affleck' and a.couple\_num = b.couple\_num and a.couple\_num in  ( select c.couple\_num  from in\_couple c  where c.star = 'ben affleck'); |

[Output]



1. Which stars were married and then divorced on the same day?

[SQL Query]

|  |
| --- |
| select c.star  from married a, divorced b, in\_couple c  where a.day = b.day and a.couple\_num = c.couple\_num |

[Output]



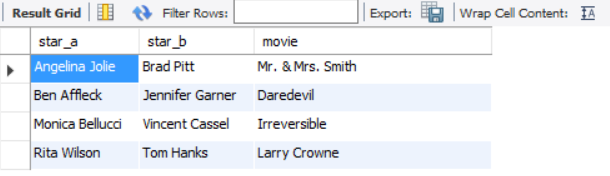
**Moderate Questions:**

1. What stars who married one another could possibly have met while working on the same movie?

[SQL Query]

|  |
| --- |
| create view v1 as  select a.star as astar, c.star as bstar, a.couple\_num as cnum  from in\_couple a, married b, in\_couple c, married d  where a.couple\_num = b.couple\_num and c.couple\_num = d.couple\_num and b.couple\_num = d.couple\_num  and a.star != c.star  order by a.couple\_num;  create view v2 as  select a.star astar2, b.star as bstar2, a.movie as mov  from appeared\_in a, appeared\_in b  where a.movie = b.movie and a.star != b.star;  create view v3 as  select b.couple\_num as cnum3  from made\_money a, married b  where a.day\_opened > b.day  order by b.couple\_num;  select v1.astar as star\_a, v2.bstar2 as star\_b, v2.mov as movie  from v1, v2, v3  where v1.astar = v2.astar2 and v1.bstar = v2.bstar2 and v1.cnum = v3.cnum3  group by v1.astar  having v1.astar < v2.bstar2;  drop view v1, v2, v3; |

[Output]

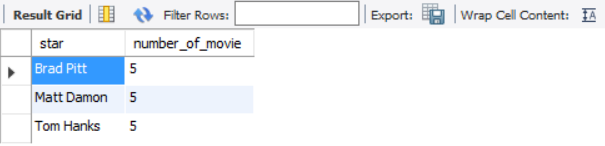


7. What star has appeared in the most movies?

[SQL Query]

|  |
| --- |
| select star, count(star) as number\_of\_movie  from appeared\_in  group by star  having count(\*) = (  select max(a.c)  from (select count(\*) as c from appeared\_in group by star) a); |

[Output]

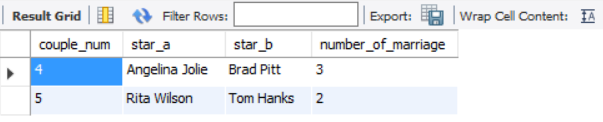


8. Which pairs of stars were married to each other more than once?

[SQL Query]

|  |
| --- |
| select a.couple\_num, a.star as star\_a, c.star as star\_b, count(a.star) as number\_of\_marriage  from in\_couple a, married b, in\_couple c  where a.couple\_num = b.couple\_num and c.couple\_num = b.couple\_num and c.star != a.star  group by a.star, c.star  having count(a.star) > 1 and a.star < c.star |

[Output]

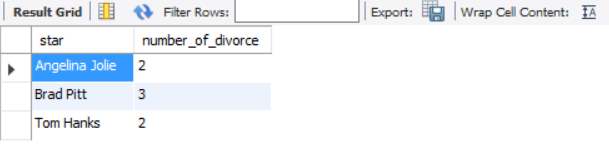


9. Which star or stars have been divorced at least two times?

[SQL Query]

|  |
| --- |
| select c.star as star, count(\*) as number\_of\_divorce  from in\_couple c, divorced d  where c.couple\_num = d.couple\_num  group by c.star  having count(\*) >= 2 |

[Output]

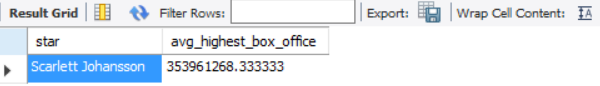


10. Which star has averaged the highest box office for all films appeared in?

[SQL Query]

|  |
| --- |
| select c.star, avg(d.how\_much) as avg\_highest\_box\_office  from appeared\_in c, made\_money d  where c.movie = d.movie  group by c.star  having round (avg(d.how\_much)) = (  select round (max(newt.maxim))  from (select avg(b.how\_much) as maxim from appeared\_in a, made\_money b where a.movie = b.movie group by star) newt); |

[Output]



**Hardest Question: (for extra credit +10)**

11. What couple averaged the most money per film *while they were married*?

[SQL Query]

|  |
| --- |
| create view vv1 as  select b.couple\_num as cnum, count(a.movie) as ccount, sum(d.how\_much) as total\_money  from appeared\_in a, in\_couple b, married c, made\_money d  where a.star = b.star and b.couple\_num = c.couple\_num and a.movie = d.movie  group by b.couple\_num;  create view vv2 as  select a.star as star\_a, a.couple\_num as couple\_n, c.star as star\_b  from in\_couple a, married b, in\_couple c  where a.couple\_num = b.couple\_num and c.couple\_num = b.couple\_num and c.star != a.star and a.star < c.star;  select vv1.cnum as couple\_number, vv2.star\_a, vv2.star\_b, max(vv1.total\_money / vv1.ccount) as most\_money\_per\_films  from vv1, vv2  where vv1.cnum = vv2.couple\_n;  drop view vv1, vv2; |

[Output]

