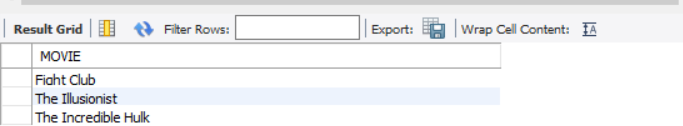
**EECS-495 Introduction to Database Systems**

Submitted By: Ruma Anand

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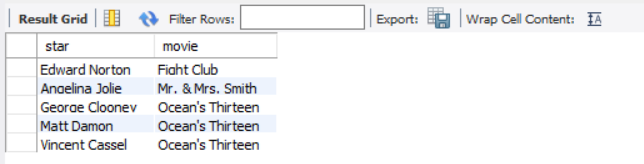
**Ques 1. What movies has ‘Edward Norton' appeared in?**

Ans 1. Select distinct MOVIE from appeared\_in WHERE STAR="Edward Norton";



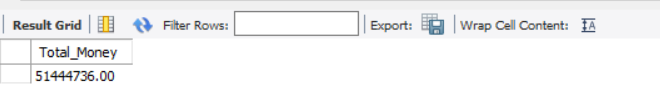
**Ques 2.Who has starred along with 'Brad Pitt' in the some movie?**

Ans 2. select star,movie from appeared\_in where Movie in(select Movie from appeared\_in where star="Brad Pitt") and (star !="Brad Pitt");



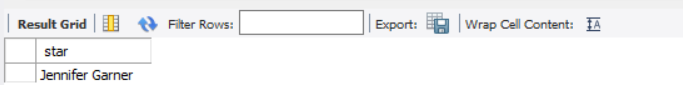
**Ques 3. How much money, in total, have movies earned in which 'Tom Hanks' and 'Rita Wilson' starred together?**

**Ans 3.** select sum(how\_much) from made\_money where movie in(select Movie from appeared\_in where Movie in (select Movie from appeared\_in WHERE star ="Rita Wilson") and star="Tom Hanks");



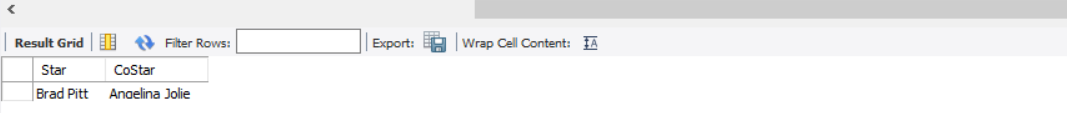
**Ques 4. Who has (have) divorced 'Ben Affleck'?**

**Ans 4.** select star from in\_couple where couple\_num in (select couple\_num from in\_couple where star="Ben Affleck" and exists(select COUPLE\_NUM from divorced where divorced.COUPLE\_NUM=in\_couple.COUPLE\_NUM)) AND star!="Ben Affleck";



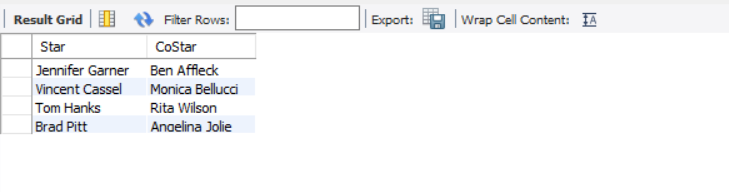
**Ques 5. Which stars were married and then divorced on the same day?**

Ans 5. select c.star as Star,d.star as CoStar from in\_couple c,in\_couple d where c.couple\_num in(Select couple\_num from Divorced d natural join Married m where d.day=m.Day) and c.star!=d.star and c.COUPLE\_NUM=d.COUPLE\_NUM group by c.couple\_num;



**Ques 6 What stars who married one another could possibly have met while working on the same movie?**

Ans 6. select distinct y.star as Star, y.MarriedToStar as CoStar from(select A.star, B.Movie, B.Star as costar from appeared\_in a left outer join appeared\_in b on b.Movie = a.Movie and a.STAR != b.STAR and a.star > b.star where b.Movie is not null and b.STAR is not null ) x left outer join (select c.STAR, c.COUPLE\_NUM, d.Star as MarriedToStar from in\_couple c left outer join in\_couple d on c.COUPLE\_NUM = d.COUPLE\_NUM and c.STAR != d.STAR and c.STAR > d.STAR where c.COUPLE\_NUM in (select M.COUPLE\_NUM from married M, made\_money Mov where c.COUPLE\_NUM = M.COUPLE\_NUM and M.DAY > Mov.DAY\_OPENED))y on (((x.star = y.star) or (x.star = y.marriedtostar)) and ((x.costar = y.marriedtostar)or(x.costar = y.star))) group by x.movie having (y.star is not null and y.marriedtostar is not null);

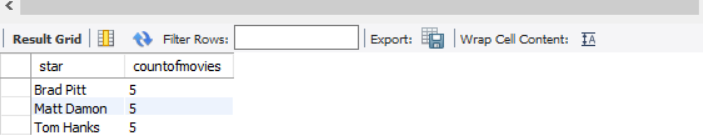


**Ques 7 What star has appeared in the most movies?**

**Ans 7.** Select star,count(\*) as countofmovies from appeared\_in group by star

having countofmovies= ((Select max(countofmovies) from (select star,count(\*) as countofmovies from appeared\_in

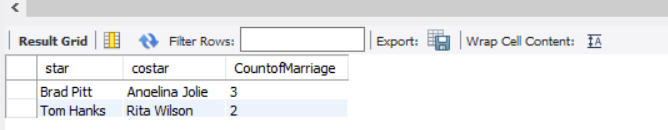
group by star order by countofmovies desc) as a1));



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

Ans 8. Select star,costar, count(\*) as CountofMarriage from (Select c.star as star,d.star as costar from in\_couple c inner join in\_couple d on c.COUPLE\_NUM =d.couple\_num and c.star!=d.star inner join married m on m.couple\_num=c.COUPLE\_NUM group by c.couple\_num) as tbl

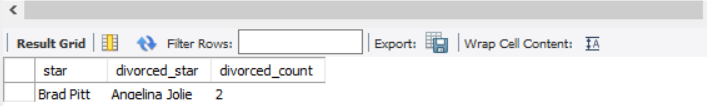
group by star,costar having count(\*)>1;



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

Select star,divorced\_star,count(\*) as divorced\_count from (select c.star as Star,d.star as divorced\_star from in\_couple c inner join in\_couple d on c.COUPLE\_NUM=d.couple\_num and c.star!=d.star

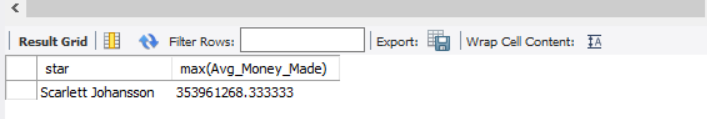
inner join divorced on divorced.couple\_num=c.couple\_num group by c.couple\_num) as newTable group by star,divorced\_star having count(\*)>=2



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

Ans 10.

select tbl2.star,max(Avg\_Money\_Made) from(select appeared\_in.star,avg(made\_money.HOW\_MUCH) as Avg\_Money\_Made from appeared\_in inner join made\_money on appeared\_in.Movie=made\_money.MOVIE group by star order by avg(made\_money.HOW\_MUCH) desc) as tbl2



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

Ans 11. Explanation : Union of two nested queries which join couple who got married, costarred in a movie but later divorced and couple who married, costarred in movie but were still married when movie opened.

select q.star as star, q.costar as costar, q.movie, q.COUPLE\_NUM, avg(mm.HOW\_MUCH) as AverageMoney from ((select j.star, j.costar, j.movie, y.COUPLE\_NUM, y.star as couplestar, y.MarriedToStar, y.MarriedDate, y.DivorcedDate from ((select c.STAR, c.couple\_num, d.Star as MarriedToStar, m.DAY as MarriedDate,g.DAY as DivorcedDate from in\_couple c, in\_couple d, married m, divorced g where c.COUPLE\_NUM = d.COUPLE\_NUM and c.STAR != d.STAR and c.COUPLE\_NUM = m.COUPLE\_NUM and c.COUPLE\_NUM = g.COUPLE\_NUM group by c.couple\_num) y) **inner join** (select A.star, B.Movie, B.Star as costar from appeared\_in a inner join appeared\_in b on b.Movie = a.Movie and a.STAR != b.STAR group by b.Movie) j on (((j.star = y.star) or (j.star = y.marriedtostar)) and ((j.costar = y.marriedtostar)or(j.costar = y.star))) group by j.movie having (y.star is not null and y.marriedtostar is not null)) **union** ((select x.star, x.costar, x.movie, y.COUPLE\_NUM, y.star, y.MarriedToStar, y.MarriedDate,'DivorcedDate' from ((select c.STAR, c.couple\_num, d.Star as MarriedToStar, m.DAY as MarriedDate, h.DAY as DivorcedDate from in\_couple c, in\_couple d, married m, divorced h where c.COUPLE\_NUM = d.COUPLE\_NUM and c.STAR != d.STAR and c.COUPLE\_NUM = m.COUPLE\_NUM and c.COUPLE\_NUM not in (select COUPLE\_NUM from divorced) group by c.couple\_num) y) **inner join** (select A.star, B.Movie, B.Star as costar from appeared\_in a **inner join** appeared\_in b on b.Movie = a.Movie and a.STAR != b.STAR group by b.Movie ) x on (((x.star = y.star) or (x.star = y.marriedtostar)) and ((x.costar = y.marriedtostar)or(x.costar = y.star))) group by x.movie having (y.star is not null and y.marriedtostar is not null)))) q **left outer join** made\_money mm on q.movie = mm.movie where ((q.divorceddate != 'DivorcedDate' and mm.DAY\_OPENED between q.marriedDate and q.divorceddate) or (q.divorceddate = 'DivorcedDate' and mm.DAY\_OPENED > q.marriedDate)) group by star, costar order by AverageMoney desc LIMIT 1;

