question 1
```
SELECT DISTINCT A.MOVIE
From appeared_in as A
where A.STAR='Edward Norton'
```

MOVIE
Fight Club
The Illusionist
The Incredible Hulk

explain:

we just use the select ,from and where to get the answer.

```
# question 2
SELECT DISTINCT A.STAR
From appeared_in as A
where A.movie in
          (SELECT DISTINCT A.movie
           From appeared_in as A
            where A.star='Brad Pitt')
having A.star <> 'Brad Pitt'
```

STAR
Edward Norton
Angelina Jolie
George Clooney
Matt Damon
Vincent Cassel

Explain:

We first select all the movie that Brad Pitt starred. Then we select all the star that starred in those movie we have selected. Finally ,we delete the Brad Pitt. Because the question is who has starred along with Brad Pitt.

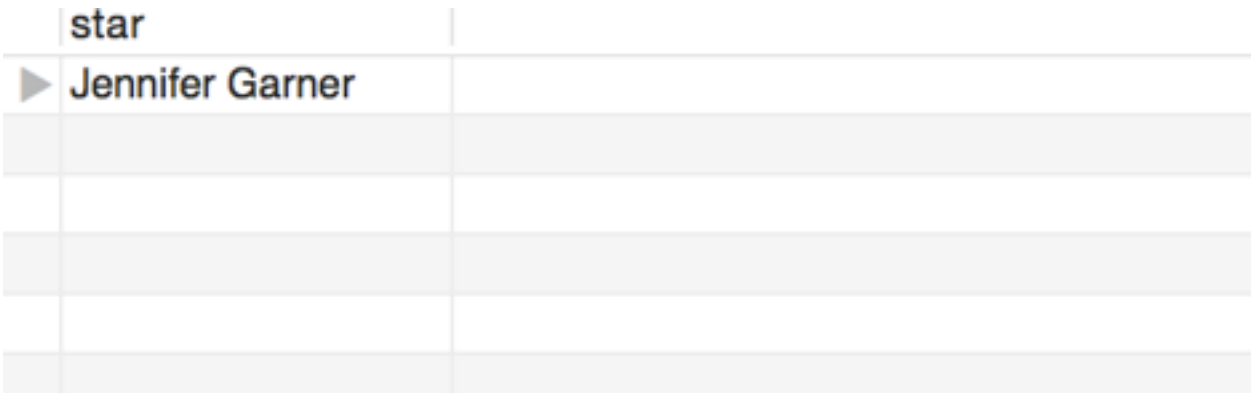
```
# question 3
SELECT SUM(M.HOW_MUCH)
FROM MADE_MONEY AS M
Where M.movie in
(select distinct A.movie
From Appeared_in as A
WHERE A.STAR='Tom Hanks' and a.movie in
                                    (select a.movie
                                    From Appeared_in as A
                                    WHERE A.STAR='Rita Wilson'))
```

SUM(M.HOW_MUCH)
51444736.00

Explain:

We first select the movie that Rita Wilson starred in. Then we select the movie Tom Hanks starred in from the result we get at first. So we get the movie that Rita Wilson and Tom Hanks together starred in. Finally we use sum function to get the total money.

```
# question 4
select I.star
from in_couple AS I
where I.couple_num in (select D.couple_num
                       from divorced as D
                       where D.couple_num in(select I.couple_num
                                             from in_couple AS I
                                        where I.star='Ben Affleck'))
having I.star <> 'Ben Affleck'
```



star
Jennifer Garner

Explain:
we fist select the couple_num which 'Ben Affleck' in. then we select the divorced couple_num from the result get before. At last, we select the star of those couple_num

```
#question 5
select I.star
from in_couple as I
where I.couple_num in(select d.couple_num
                      from divorced as D , married as M
                      where d.day=m.day)
```

star
Angelina Jolie
Brad Pitt

Explain:
we first select the couple_num that divorce day and marry day are same day. Then we select the star of those cuuple_num

```
# question 6
select distinct a.star,b.star
from appeared_in a , appeared_in b , in_couple e , in_couple f,married
where a.movie=b.movie and a.star<>b.star and e.star<>f.star and e.couple_num=f.couple_num
      and a.star=e.star and b.star=f.star
group by e.couple_num
having(select e.couple_num in (select couple_num from married))
```

star	star
Monica Bellucci	Vincent Cassel
Angelina Jolie	Brad Pitt
Rita Wilson	Tom Hanks
Ben Affleck	Jennifer Garner

Explain:
we combine those tables and select the stars who are in a same couple and starred in a same movie. then we choose the married ones from the formal result.

```
#question 7
select A.star ,count(a.star) as appearedintime
from appeared_in as A
group by A.star
having count(A.star)= (select max(appearedintime)
                       from (select A.star,count(a.star) as appearedintime
                             from appeared_in as A
                             group by A.star)abc)
```

star	appearedintime
Brad Pitt	5
Matt Damon	5
Tom Hanks	5

Explain:
we first select the max appeardintime. then we select the people whos' appeared in time is the max appeared in time

#question 8

```
select x.star,y.star
    from (select *
                from  in_couple natural join married group by couple_num)x , in_couple y
          where x.couple_num =y.couple_num and x.star<>y.star
group by x.star
having  count(x.star)>1 and count(y.star)>1
```

star	star
Angelina Jolie	Brad Pitt
Rita Wilson	Tom Hanks

Explain:
we first select the stars who married. (if a star married two times, then he will show two times in the table).then we select the stars who appeared more than once and his spouse appeared more than once.

#question 9
select star
from (in_couple natural join divorced)
group by star
having count(star)>1

star
Angelina Jolie
Brad Pitt
Tom Hanks

we select the stars who appeared more than once in the in_couple natural join divorced. then we get the answer.

#question 10

```
select x.star
from
(select star , avg(how_much) as avgmoney
from made_money natural join appeared_in
group by star)x
order by x.avgmoney desc
limit 1
```

star
Scarlett Johansson

Explain:
we first select the average money of every star. then we select the highest one.

```
#question 11
select xstar, ystar
from
(select couplenum , xstar, ystar,max(average)
from
(select couplenum,xstar,ystar,avg(how_much) as average
from
(select *
from
(select couplenum ,STAR as xstar, ystar ,DAY as endday, startday, Movie
from
(select couple_num as couplenum , xstar as STAR , ystar,startday,DAY
from
(select x.couple_num as couple_num , x.star as xstar , y.star as ystar , x.day as startday
    from (select *
                from  in_couple natural join married group by couple_num)x , in_couple y
          where x.couple_num =y.couple_num and x.star<>y.star)aa natural join divorced)bb
natural join appeared_in)cc natural join made_money
where day_opened<endday and day_opened>startday

union

select Movie ,couplenum ,xstar ,ystar,endday,startday,HOW_MUCH,DAY_OPENED
from
(select couplenum ,STAR as ystar, xstar ,DAY as endday, startday, Movie
from
(select couple_num as couplenum , xstar, ystar as STAR,startday,DAY
from
(select x.couple_num as couple_num , x.star as xstar , y.star as ystar , x.day as startday
    from (select *
                from  in_couple natural join married group by couple_num)x , in_couple y
          where x.couple_num =y.couple_num and x.star<>y.star)aa natural join divorced)bb
natural join appeared_in)cc natural join made_money
where day_opened<endday and day_opened>startday )ee
group by couplenum
order by avg(how_much) desc)ff)gg
```

couplenum	xstar	ystar	average
2	Ryan Reynolds	Scarlett Johansson	164018612.333333
4	Angelina Jolie	Brad Pitt	149037599.000000
7	Brad Pitt	Jennifer Aniston	85734045.000000
5	Rita Wilson	Tom Hanks	50675466.200000
3	Monica Bellucci	Vincent Cassel	37527130.500000
6	Ben Affleck	Jennifer Garner	15867788.500000
8	Samantha Lewes	Tom Hanks	168785.000000

Explain: the fist half of the answer is to get the money that one of the spouse made. the other half of the answer is to get the money that another spouse made. then we union those two table . and we avervage the money every spouse made. then we select the hightest.
the table above is one of the step the shows all the couple and the average money they made while they married. the table below is the final answer.

xstar	ystar
Ryan Reynolds	Scarlett Johansson