

```

SELECT P.Names, P.Salary
FROM Payroll P, (
  SELECT UserID
  FROM Payroll
  EXCEPT
  SELECT UserID
  FROM Regist) E
WHERE P.UserID
= E.UserID

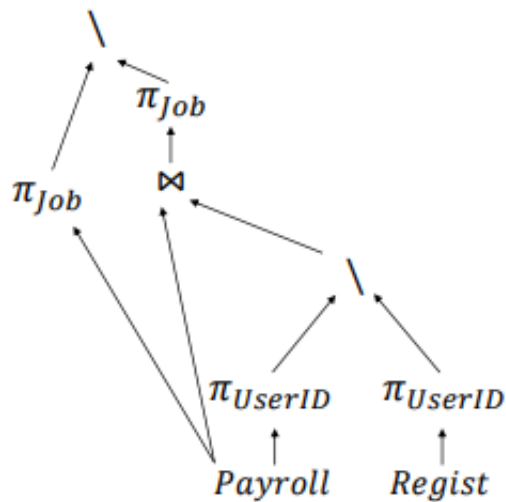
```

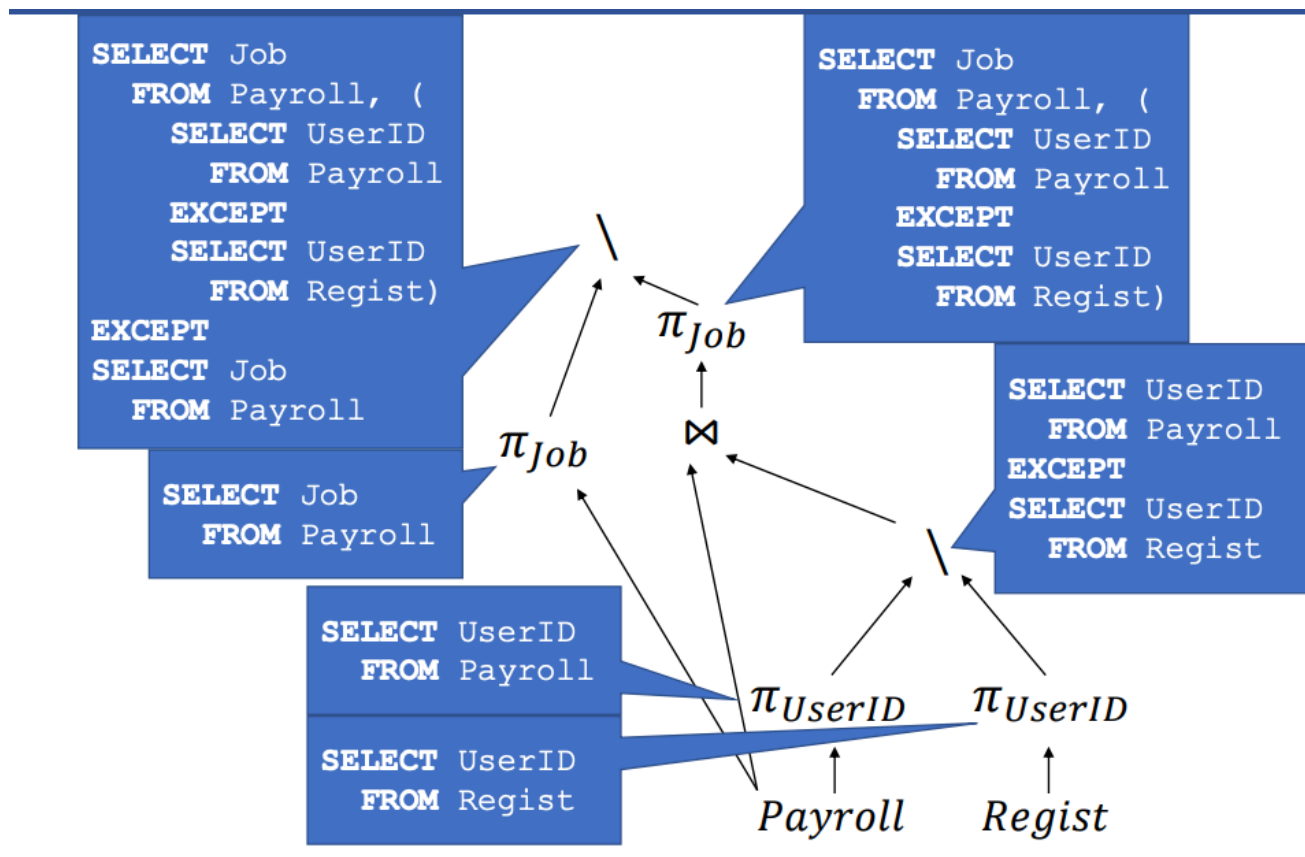
Universal Quantifiers

- Watch out for universal quantifiers
 - Require more complex answer
- Double negation pattern often works
 - aka the “not not rule”

$$\forall = \neg \exists \neg$$

RA to SQL:





```

WITH Part1 AS (
  SELECT P.UserID, P.Job,
  COUNT(R.Car) AS CC
  FROM Payroll P
  LEFT OUTER JOIN Regist R
  ON P.UserID = R.UserID
  GROUP BY P.Job, P.UserID
)
SELECT COUNT(*) AS PartnerCount
FROM
  (SELECT CC AS CC1 FROM Part1
   WHERE Job='TA') A,
  (SELECT CC AS CC2 FROM Part1
   WHERE Job='Prof') B
WHERE A.CC1+B.CC2 >= 1

```