

COMP 430 Assignment 3 (Part 1)

Complete the problems in this document. Submit a PDF document with your answers.

These problems are not in a Jupyter Notebook because we want you to solve the problems without using SQL.

- 1) (30 points – 5 points each join) We have two tables below: Company (left) and Employee (right). For the pair, show each of the following.
 - a) Inner, left outer, right outer, and full outer joins ON Company.id = company_id
 - b) Natural inner and cross joins

Employee

Id	name	company_id
2	Joe	3
3	Mary	1
4	Elizabeth	5
5	John	7

Company

id	name	state
1	ThisCo	CA
3	ThatCo	TX
5	TheOtherCo	KS
8	AnotherCo	OK

inner

id	Name	state	id	name	company_id
1	ThisCo	CA	3	Mary	1
3	ThatCo	TX	2	Joe	3
5	TheOtherCo	KS	4	Elizabeth	5

left outer,

id	Name	state	id	name	company_id
1	ThisCo	CA	3	Mary	1
3	ThatCo	TX	2	Joe	3
5	TheOtherCo	KS	4	Elizabeth	5
8	AnotherCo	OK	null	null	Null

right outer

id	Name	state	id	name	company_id
1	ThisCo	CA	3	Mary	1
3	ThatCo	TX	2	Joe	3
5	TheOtherCo	KS	4	Elizabeth	5
Null	Null	null	5	John	7

full outer joins

id	Name	state	id	name	company_id
1	ThisCo	CA	3	Mary	1
3	ThatCo	TX	2	Joe	3
5	TheOtherCo	KS	4	Elizabeth	5
8	AnotherCo	OK	null	null	Null
Null	Null	null	5	John	7

Natural inner

id	name	state	company_id
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Cross join

id	Name	state	id	name	company_id
1	ThisCo	CA	2	Joe	3
1	ThisCo	CA	3	Mary	1
1	ThisCo	CA	4	Elizabeth	5
1	ThisCo	CA	5	John	7
3	ThatCo	TX	2	Joe	3
3	ThatCo	TX	3	Mary	1
3	ThatCo	TX	4	Elizabeth	5
3	ThatCo	TX	5	John	7
5	TheOtherCo	KS	2	Joe	3
5	TheOtherCo	KS	3	Mary	1
5	TheOtherCo	KS	4	Elizabeth	5
5	TheOtherCo	KS	5	John	7
8	AnotherCo	OK	2	Joe	3
8	AnotherCo	OK	3	Mary	1
8	AnotherCo	OK	4	Elizabeth	5
8	AnotherCo	OK	5	John	7