Tong Zhou tz13

(a)

1. Inner join

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Company.id | Company.name | state | Employee.id | Employee.name | company\_id |
| 1 | ThisCo | CA | 3 | Mary | 1 |
| 3 | ThatCo | TX | 2 | Joe | 3 |
| 5 | TheOtherCo | KS | 4 | Elizabeth | 5 |

1. Left Outer Join

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Company.id | Company.name | state | Employee.id | Employee.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 |

1. Right Outer

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Company.id | Company.name | state | Employee.id | Employee.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 |

1. Full Outer Join

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Company.id | Company.name | state | Employee.id | Employee.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 |
| 8 | AnotherCo | OK | null | null | null |

(b)

(1) Natural Inner Join

|  |  |  |  |
| --- | --- | --- | --- |
| id | name | state | Company\_id |
|  |  |  |  |

(2) Cross joins

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Company.id | Company.name | state | Employee.id | Employee.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 |