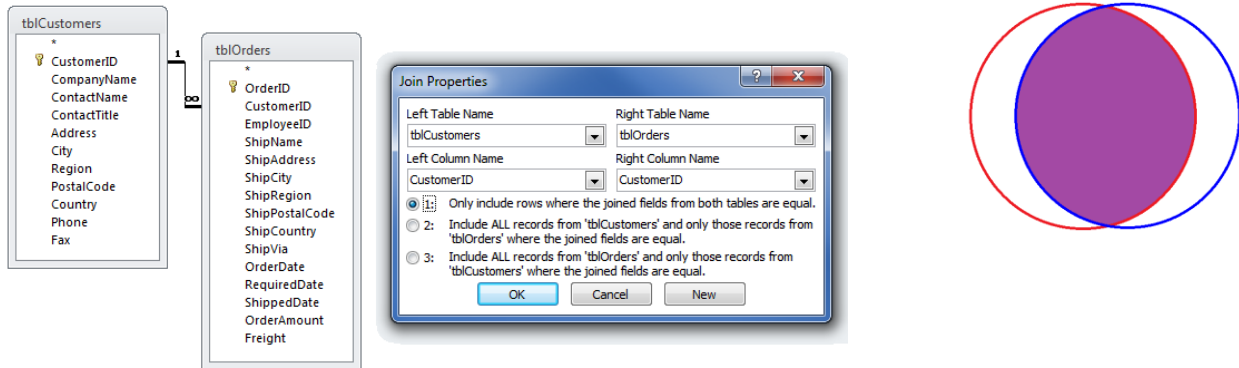


# Understanding Joins

## Inner Join

Selects only the records that have data from both tables.



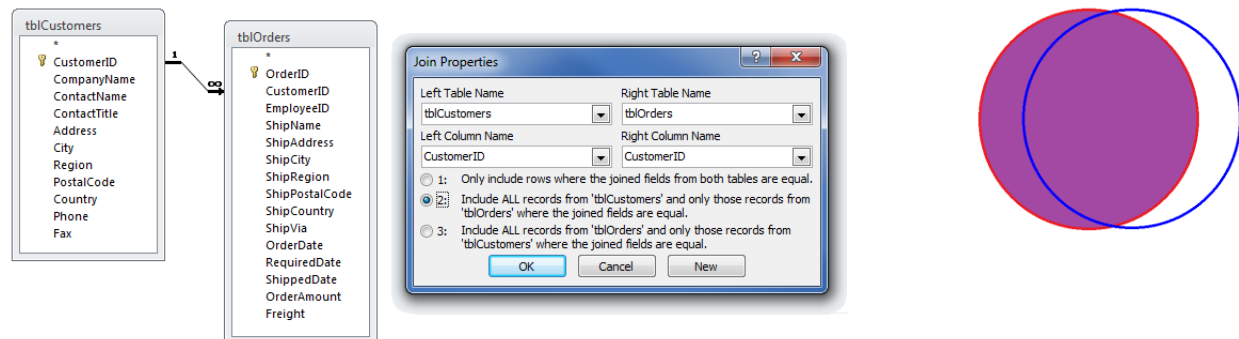
The diagram illustrates an inner join between `tblCustomers` and `tblOrders`. The `tblCustomers` table has fields: `CustomerID`, `CompanyName`, `ContactName`, `ContactTitle`, `Address`, `City`, `Region`, `PostalCode`, `Country`, `Phone`, and `Fax`. The `tblOrders` table has fields: `OrderID`, `CustomerID`, `EmployeeID`, `ShipName`, `ShipAddress`, `ShipCity`, `ShipRegion`, `ShipPostalCode`, `ShipCountry`, `ShipVia`, `OrderDate`, `RequiredDate`, `ShippedDate`, `OrderAmount`, and `Freight`. A relationship line connects the `CustomerID` field in `tblOrders` to the `CustomerID` field in `tblCustomers`. The `Join Properties` dialog box shows the following configuration:

- Left Table Name: `tblCustomers`
- Right Table Name: `tblOrders`
- Left Column Name: `CustomerID`
- Right Column Name: `CustomerID`
- Option 1 (selected): Only include rows where the joined fields from both tables are equal.

The Venn diagram shows two overlapping circles representing the tables. The intersection of the two circles is shaded purple, representing the records returned by an inner join.

## Left Outer Join

Selects only records from the left table and the corresponding records from the right table.



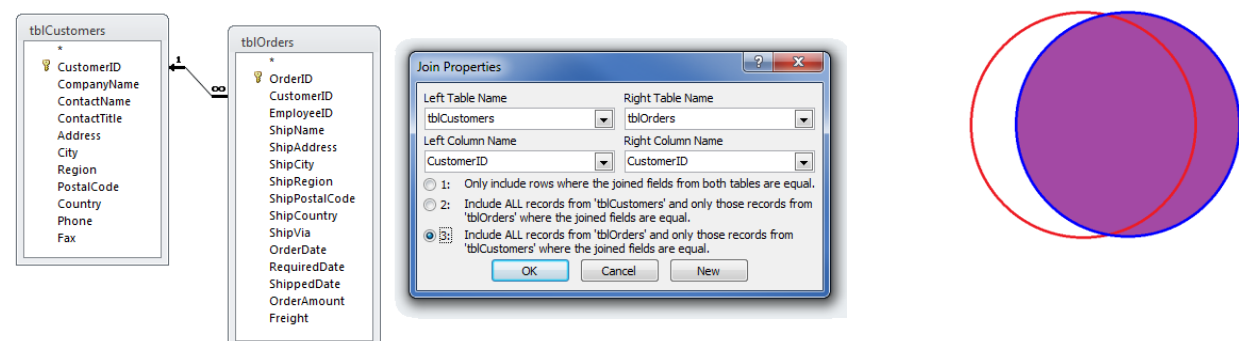
The diagram illustrates a left outer join between `tblCustomers` and `tblOrders`. The tables and their fields are the same as in the inner join diagram. The relationship line is the same. The `Join Properties` dialog box shows the following configuration:

- Left Table Name: `tblCustomers`
- Right Table Name: `tblOrders`
- Left Column Name: `CustomerID`
- Right Column Name: `CustomerID`
- Option 2 (selected): Include ALL records from 'tblCustomers' and only those records from 'tblOrders' where the joined fields are equal.

The Venn diagram shows two overlapping circles. The entire left circle (representing `tblCustomers`) and the intersection of the two circles are shaded purple, representing the records returned by a left outer join.

## Right Outer Join

Selects only records from the right table and the corresponding records from the left table.



The diagram illustrates a right outer join between `tblCustomers` and `tblOrders`. The tables and their fields are the same as in the inner join diagram. The relationship line is the same. The `Join Properties` dialog box shows the following configuration:

- Left Table Name: `tblCustomers`
- Right Table Name: `tblOrders`
- Left Column Name: `CustomerID`
- Right Column Name: `CustomerID`
- Option 3 (selected): Include ALL records from 'tblOrders' and only those records from 'tblCustomers' where the joined fields are equal.

The Venn diagram shows two overlapping circles. The entire right circle (representing `tblOrders`) and the intersection of the two circles are shaded purple, representing the records returned by a right outer join.