Inner Join: Returns all rows when there is at least one match in BOTH tables

SELECT Customers.CustomerName, Orders.OrderID  
FROM Customers  
INNER JOIN Orders  
ON Customers.CustomerID=Orders.CustomerID  
ORDER BY Customers.CustomerName;

Left outer join: Returns data if present in the left table.

Right outer join: Returns data if present in the right table

Group By : The GROUP BY statement is used along with the aggregate functions to group the result-set by one or more columns.

SELECT Shippers.ShipperName,COUNT(Orders.OrderID) AS NumberOfOrders FROM Orders  
LEFT JOIN Shippers  
ON Orders.ShipperID=Shippers.ShipperID  
GROUP BY ShipperName;

Having: The GROUP BY statement is used along with the aggregate functions to group the result-set by one or more columns.

SELECT Employees.LastName, COUNT(Orders.OrderID) AS NumberOfOrders FROM (Orders  
INNER JOIN Employees  
ON Orders.EmployeeID=Employees.EmployeeID)  
GROUP BY LastName  
HAVING COUNT(Orders.OrderID) > 10;

Avg: The AVG() function returns the average value of a numeric column.

SELECT AVG(Price) AS PriceAverage FROM Products;

Finding top rows: The SELECT TOP clause is used to specify the number of records to return.

SELECT TOP 2 \* FROM Customers;

Primay key : A primary key is a field in a table which uniquely identifies each row/record in a database table.

Primary keys must be unique values.

A primary key column cannot be a NULL value

Foreign key: A foreign key is a key used to link two tables together. This is sometimes called a referencing key.

Foreign Key is a column or a combination of columns whose values match a Primary Key in a different table.

Use cases:

Tables for employee management system

Tables for Library management system

Tables for Library management system