Assignment Day1 –SQL: Comprehensive practice

# Write queries for following scenarios

**Using AdventureWorks Database**

* 1. Write a query that retrieves the columns ProductID, Name, Color and ListPrice from the Production.Product table, with no filter.   
       
     - SELECT ProductID, Name, Color, ListPrice   
     FROM Production.Product;
  2. Write a query that retrieves the columns ProductID, Name, Color and ListPrice from the Production.Product table, the rows that are 0 for the column ListPrice  
       
     - SELECT ProductID, Name, Color, ListPrice  
     FROM Production.Product  
     WHERE ListPrice = 0;
  3. Write a query that retrieves the columns ProductID, Name, Color and ListPrice from the Production.Product table, the rows that are rows that are NULL for the Color column.  
       
     - SELECT ProductID, Name, Color, ListPrice  
     FROM Production.Product  
     WHERE Color IS NULL;
  4. Write a query that retrieves the columns ProductID, Name, Color and ListPrice from the Production.Product table, the rows that are not NULL for the Color column.  
       
     - SELECT ProductID, Name, Color, ListPrice  
     FROM Production.Product  
     WHERE Color IS NOT NULL;
  5. Write a query that retrieves the columns ProductID, Name, Color and ListPrice from the Production.Product table, the rows that *are not* NULL for the column Color, and the column ListPrice has a value greater than zero.  
       
     - SELECT ProductID, Name, Color, ListPrice  
     FROM Production.Product   
     WHERE Color IS NOT NULL AND ListPrice > 0;
  6. Generate a report that concatenates the columns Name and Color from the Production.Product table by excluding the rows that are null for color.  
       
     - SELECT Name+':'+color   
     FROM Production.Product   
     WHERE color IS NOT NULL
  7. Write a query that generates the following result set from Production.Product:

Name And Color

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NAME: LL Crankarm -- COLOR: Black

NAME: ML Crankarm -- COLOR: Black

NAME: HL Crankarm -- COLOR: Black

NAME: Chainring Bolts -- COLOR: Silver

NAME: Chainring Nut -- COLOR: Silver

NAME: Chainring -- COLOR: Black

………  
  
- SELECT 'NAME: '+ name+' -- COLOR: '+ color   
 FROM Production.Product  
 WHERE color IS NOT NULL

* 1. Write a query to retrieve the to the columns ProductID and Name from the Production.Product table filtered by ProductID from 400 to 500  
       
     - SELECT ProductID, Name  
     FROM Production.Product  
     WHERE ProductID BETWEEN 400 AND 500;
  2. Write a query to retrieve the to the columns ProductID, Name and color from the Production.Product table restricted to the colors black and blue  
       
     - SELECT ProductID, Name, Color  
     FROM Production.Product  
     WHERE Color IN (‘black’, ‘blue’);
  3. Write a query to generate a report on products that begins with the letter S.   
       
     - SELECT \* FROM Production.Product  
     WHERE Name LIKE ‘S%’;
  4. Write a query that retrieves the columns Name and ListPrice from the Production.Product table. Your result set should look something like the following. Order the result set by the Name column.

Name ListPrice

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Seat Lug 0,00

Seat Post 0,00

Seat Stays 0,00

Seat Tube 0,00

Short-Sleeve Classic Jersey, L 53,99

Short-Sleeve Classic Jersey, M 53,99  
  
- SELECT Name, ListPrice   
FROM Production.Product  
ORDER BY Name;

* 1. Write a query that retrieves the columns Name and ListPrice from the Production.Product table. Your result set should look something like the following. Order the result set by the Name column. The products name should start with either 'A' or 'S'

Name ListPrice

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Adjustable Race 0,00

All-Purpose Bike Stand 159,00

AWC Logo Cap 8,99

Seat Lug 0,00

Seat Post 0,00

………

* SELECT Name, ListPrice  
  FROM Production.Product  
  WHERE Name LIKE ‘[A S] %’

ORDER BY Name;

* 1. Write a query so you retrieve rows that have a Name that begins with the letters SPO, but is then *not* followed by the letter K. After this zero or more letters can exists. Order the result set by the *Name* column.

- SELECT \* FROM Production.Product  
WHERE NAME LIKE ‘SPO[^K]%’  
ORDER BY Name;  
 

* 1. Write a query that retrieves *unique* colors from the table Production.Product. Order the results in descending manner  
       
     - SELECT DISTINCT color  
     FROM Production.Product  
     ORDER BY color DESC;
  2. Write a query that retrieves the unique combination of columns ProductSubcategoryID and Color from the Production.Product table. Format and sort so the result set accordingly to the following. We do not want any rows that are NULL.in any of the two columns in the result.  
       
     - SELECT DISTINCT ProductSubcategoryID, Color  
     FROM Production.Product  
     WHERE ProductSubcategoryID IS NOT NULL AND Color IS NOT NULL  
     ORDER BY ProductSubcategoryID, Color;
  3. Something is “wrong” with the WHERE clause in the following query.

We do not want any Red or Black products from any SubCategory than those with the value of 1 in column ProductSubCategoryID, unless they cost between 1000 and 2000.

Note:

The LEFT() function will be covered in a forthcoming module.

SELECT ProductSubCategoryID

, LEFT([Name],35) AS [Name]

, Color, ListPrice

FROM Production.Product

WHERE Color IN ('Red','Black')

OR ListPrice BETWEEN 1000 AND 2000

AND ProductSubCategoryID = 1

ORDER BY ProductID

- SELECT ProductSubCategoryID

, LEFT([Name],35) AS [Name]

, Color, ListPrice

FROM Production.Product

WHERE Color NOT IN ('Red','Black')

OR ListPrice BETWEEN 1000 AND 2000

AND ProductSubCategoryID = 1

ORDER BY ProductID

* 1. Write the query in the editor and execute it. Take a look at the result set and then adjust the query so it delivers the following result set.

ProductSubCategoryID Name Color ListPrice

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14 HL Road Frame - Black, 58 Black 1431,50

14 HL Road Frame - Red, 58 Red 1431,50

14 HL Road Frame - Red, 62 Red 1431,50

14 HL Road Frame - Red, 44 Red 1431,50

14 HL Road Frame - Red, 48 Red 1431,50

14 HL Road Frame - Red, 52 Red 1431,50

14 HL Road Frame - Red, 56 Red 1431,50

12 HL Mountain Frame - Silver, 42 Silver 1364,50

12 HL Mountain Frame - Silver, 44 Silver 1364,50

12 HL Mountain Frame - Silver, 48 Silver 1364,50

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2 Road-350-W Yellow, 44 Yellow 1700,99

2 Road-350-W Yellow, 48 Yellow 1700,99

1 Mountain-500 Black, 40 Black 539,99

1 Mountain-500 Black, 42 Black 539,99

1 Mountain-500 Black, 44 Black 539,99

1 Mountain-500 Black, 48 Black 539,99

1 Mountain-500 Black, 52 Black 539,99

GOOD LUCK.