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 p.ProductID, p.Name, p.Color, p.ListPrice

FROM Production.Product p

* 1. 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 p.ProductID, p.Name, p.Color, p.ListPrice

FROM Production.Product p

WHERE ListPrice = 0

* 1. 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 p.ProductID, p.Name, p.Color, p.ListPrice

FROM Production.Product p

WHERE Color is NULL

* 1. 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 p.ProductID, p.Name, p.Color, p.ListPrice

FROM Production.Product p

WHERE Color is not NULL

* 1. 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 p.ProductID, p.Name, p.Color, p.ListPrice

FROM Production.Product p

WHEREColor is not NULL and ListPrice > 0

* 1. 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 p.Name, p.Color, p.Name + ' ' + p.Color as Report

FROM Production.Product p

WHERE Color is not NULL

* 1. 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

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SELECT p.Name, p.Color

FROM Production.Product p

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

* 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 p.ProductID, p.Name

FROM Production.Product p

WHERE ProductID between 400 and 500

* 1. 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 p.ProductID, p.Name, p.Color

FROM Production.Product p

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

* 1. Write a query to generate a report on products that begins with the letter S.

SELECT p.Name

FROM Production.Product p

WHERE Name like 'S%'

* 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.

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 p.Name, p.ListPrice

FROM Production.Product p

WHERE Name like 'S%'

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

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SELECT p.Name, p.ListPrice

FROM Production.Product p

WHERE Name like '[AS]%'

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 p.Name

FROM Production.Product p

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 p.Color

FROM Production.Product p

ORDER BY Color

DESC

* 1. 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 p.ProductSubcategoryID, p.Color

FROM Production.Product p

WHERE ProductSubcategoryID is not NULL and Color is not NULL

* 1. 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

EXCEPT

SELECT ProductSubCategoryID, LEFT([Name],35) AS [Name], Color, ListPrice

FROMProduction.Product

WHERE Color IN ('Red','Black') AND ProductSubCategoryID = 1 AND ListPrice NOT BETWEEN 1000 AND 2000

ORDER BY ProductSubCategoryID

* 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

SELECT p.ProductSubCategoryID, p.Name, p.Color, p.ListPrice

FROM Production.Product p

WHERE Name like 'HL Road Frame - Black, 58'

UNION ALL

SELECT p.ProductSubCategoryID, p.Name, p.Color, p.ListPrice

FROM Production.Product p

WHERE (ProductSubcategoryID is not NULL AND ProductSubCategoryID < 15 AND ListPrice between 500 AND 1800)

AND (Name like 'HL%' OR Name like 'Mountain-500 Black%' OR Name like 'Road-350%')

AND Name NOT like 'HL Road Frame - Black%'

ORDER BY ProductSubCategoryID

DESC