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/*
1. Find the genres that have an ampersand "&" in the name. (3 rows)
   Use the Genre table. Display 2 columns, Name and NewName.
   NewName is derived from Name, but it will have some of the ampersands removed.
   If the ampersand has a space before and after it then Replace the ampersand with
the word "and", otherwise the name stays the same.
   Only display those records with an ampersand in the Name column.

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*/
SELECT
    Name
    ,REPLACE(Name, ' & ', ' and ') NewName
FROM Genre
WHERE Name LIKE '%&%'

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/*
2. Display Employee names and Birthdates. (8 rows)
   Use the Employee table.
   Concatenate the first and last name into new column called FullName.
   Display the Birthdate in 3 different columns called Day, Month and Year.
   The Month column value should be the full name of the month.

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*/
SELECT
    CONCAT(FirstName, ' ', LastName) AS FullName
    ,DAY(BirthDate) AS [Day]
    ,DATENAME(MONTH,BirthDate) AS [Month]
    ,YEAR(BirthDate) AS [Year]
FROM Employee

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/*
3. Run a query with the following modifications to the Album Title column: (347 rows)
   Display Title with all the spaces removed. Name it TitleNoSpaces.
   Display Title in all upper-case letters. Name it TitleUpperCase.
   Display Title in reverse order. Name it TitleReverse.
   Display the character length of the Title column Name it TitleLength.
   Display the starting position of the first space in the Title column. Name it
SpaceLocation.

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*/
SELECT
    REPLACE(Title, ' ', '') AS TitleNoSpaces
    ,UPPER(Title) AS TitleUpperCase
    ,REVERSE(Title) AS TitleReverse
    ,LEN(Title) AS TitleLength
    ,PATINDEX('% %',Title) AS SpaceLocation
FROM Album

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/*
4.    Display the current age in years of Employees. (8 rows)
      Display FirstName, LastName, BirthDate, and Age.
      Age is a column you will have to build from birthdate and the current date.
      Note: This question is tougher than it looks. I will accept a close answer.

*/
SELECT
    FirstName
    ,LastName
    ,BirthDate
    ,DATEDIFF(YEAR,BirthDate,getdate()) Age --Acceptable answer but not exact.
    ,DATEDIFF(HOUR,BirthDate,GETDATE())/8766 AS Age2 --8766 is the number of hours in
a year.
FROM Employee

/*
5.    Display Title and ShortTitle for Employees. (8 rows)
      Use the Employee table.
      Short title is derived from the Title column but has the first word in the title
removed.
      (e.g. "General Manager" becomes "Manager".)
      Remove any leading spaces.

*/
SELECT
    Title
    ,LTRIM(SUBSTRING(Title,PATINDEX('% %',Title),LEN(Title))) AS ShortTitle
FROM Employee

/*
6.    Display Customer names and initials. (59 rows)
      Display FirstName, LastName, Initials.
      Initials is the customer's initials from his or her first and last name.
      Order the records by Initials.

*/
SELECT
    FirstName
    ,LastName
    ,LEFT(FirstName,1)+LEFT(LastName,1) AS Initials
FROM Customer
ORDER BY Initials

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/*
7.    Display the Name, Phone and Fax numbers for USA customers. (13 Rows)
      Use the FirstName, LastName, Phone and Fax columns.
      For Phone and Fax remove the international code "+1" and replace the dash "-" with
a space.
      If the Fax number is NULL replace it with the value "Unknown".
      Order by LastName

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*/
SELECT
    FirstName
    ,LastName
    ,SUBSTRING(REPLACE(PHONE, '-', ' '),4,LEN(Phone)) AS Phone
    ,ISNULL(SUBSTRING(REPLACE(FAX, '-', ' '),4,LEN(Phone)), 'unknown') AS Fax
FROM Customer
WHERE Country = 'USA'
ORDER BY LastName

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/*
8.    Display customer names and their company. (35 rows)
      Use the Customer table.
      Create a new column called CustomerName that has LastName followed by a comma then
FirstName.
      CustomerName must be all upper case.
      If the company value is NULL, replace it with "N/A".
      Only display customers whose last name starts with A through M.

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*/
SELECT
    UPPER(CONCAT(LastName, ', ', FirstName)) AS CustomerName
    ,ISNULL(Company, 'N/A') Company
--, *
FROM Customer
WHERE LastName LIKE '[A-M]%'
ORDER BY CustomerName

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/*
9.    Display the fiscal year an invoice record was recorded in the Invoice table. (412
rows)
      Your result set will have InvoiceId, CustomerId, Total, InvoiceDate and FiscalYear
columns.
      The FiscalYear is 6 months ahead of the calendar year
      (e.g. fiscal year 2010 contains dates from July 2009 through June 2010)
      Display the FiscalYear in the following format (FY2009, FY2010, FY2011, etc...)
      Change the InvoiceDate column datatype from datetime to date (i.e. don't display
the time which is all zeros anyway.)
      Order by InvoiceDate in descending order.

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*/
SELECT
    InvoiceId
    ,CustomerId
    ,Total
    ,CAST(InvoiceDate AS date) AS InvoiceDate
    ,CONCAT('FY', YEAR(DATEADD(MONTH,6,InvoiceDate))) AS FiscalYear
FROM Invoice
ORDER BY InvoiceDate DESC

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/*
10.    Group the customers into Customer Type buckets. (59 rows)
       Use the Customer table.
       Display the following columns: CustomerType, FirstName, LastName and Country
       CustomerType is a derived column. If the customer is from "USA" or "Canada" then
       display "Domestic" otherwise display "International".
       Order by CustomerType then LastName in ascending order.
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*/
SELECT
    IIF(Country IN('USA', 'Canada'), 'Domestic', 'International') AS CustomerType
    ,FirstName
    ,LastName
    ,Country
FROM Customer
ORDER BY CustomerType, LastName
```