-Task 8: Changing data types

--Task 8 **ROUGH WORK[DOUBLE CHECK FOR ERRORS]** - **work [ REMOVE UOP.DBO. AND THE $ SIGN AND THEN EXECUTE THE QUERIES.]**

for example the query

**SELECT \* FROM uop.dbo.FactSales$;**

Should be typed as

**SELECT \* FROM FactSales;**

--Try the following queries and have a look at the results. What are the differences between them? Do they do what you expect?

--You can’t add an Int (EmployeeID) to a String (EmployeeLastName) so convert EmployeeID to a Char

SELECT CONVERT(CHAR, EmployeeID ) + EmployeeLastName as [Employee Profile] from uop.dbo.DimEmployee$;

--It creates a combined string of each employee's ID and last name and labels it as "Employee Profile" in the results.

SELECT CAST(EmployeeID as CHAR) + EmployeeLastName as [Employee Profile] from uop.dbo.DimEmployee$;

--Fetches employee IDs and last names, Joins them into one string,Labels the result as Employee Profile.

--1. List each employee’s first name with the year of their birth in one column.

SELECT EmployeeFirstName + ' ' + CAST(YEAR(EmployeeDOB) AS VARCHAR) AS EmployeeNameWithBirthYear

FROM uop.dbo.DimEmployee$;

--error and difference

DECLARE @string VARCHAR(10);

SET @string = 1;

SELECT @string + ' is a string.'

--Error:

--In this query, the assignment SET @string = 1; assigns an integer value (1) to a variable (@string) that is declared as VARCHAR(10).

--In SQL Server, implicit type conversion occurs when an integer is assigned to a VARCHAR variable. The integer 1 will be automatically converted to the string '1' without an error.

--Result:

--The query runs successfully, and it will concatenate the string ' is a string.' to '1' (which is implicitly converted to a string), resulting in the output:

DECLARE @notastring INT; --Int is the issue

SET @notastring = '1';

SELECT @notastring + ' is not a string.'

--Error:

--In this query, you're trying to assign the string value '1' to a variable @notastring declared as INT. SQL Server does not implicitly convert a string to an integer in this case.

--The error occurs because the string '1' cannot be implicitly converted to an integer when assigning it to the INT variable.

--The query will throw the conversion error mentioned above and will not run successfully.

--no error

DECLARE @string VARCHAR(10);

SET @string = '1'; -- Assign a string value

SELECT @string + ' is a string.'

DECLARE @notastring INT; -- Declare as INT (no comment on the same line)

SET @notastring = 1; -- Assign an integer value

SELECT CAST(@notastring AS VARCHAR) + ' is not a string.' -- Cast INT to VARCHAR for concatenation

--1. List each employee’s first name with the year of their birth in one column.

SELECT EmployeeFirstName + ' ' + CAST(YEAR(EmployeeDOB) AS VARCHAR) AS EmployeeNameWithBirthYear

FROM uop.dbo.DimEmployee$;

--2. List each employee’s first name with the day and month of their employment’s start date in one column.

SELECT EmployeeFirstName + ' ' +

CAST(DAY(EmployeeStartDate) AS VARCHAR) + '-' +

CAST(MONTH(EmployeeStartDate) AS VARCHAR) AS EmployeeNameWithStartDate

FROM uop.dbo.DimEmployee$;