# **Lab 12: Functions**

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## **Purpose:**

Create a function and execute it.

## **Deliverables:**

Multiple screenshots, as described through the lab. Scripts that you used to carry out the actions.

## **Steps:**

 Create a function that will accept Courseld and Numerical Grade and will calculate the letter grade. The function will return the appropriate Letter Grade Description based on the input and the CourseGrade & LetterGrades table<sup>12</sup> you created in Lab 7 & 8. Provide a screenshot of the function being created.

### Script:

CREATE FUNCTION calcGrade3(@courseid AS INT, @numgrade AS INT)
RETURNS VARCHAR(256)

AS

**BEGIN** 

DECLARE @letterGradeID INT

DECLARE @result varchar(256)

SELECT @letterGradeID = (SELECT TOP 1 LetterGradeId FROM nsuryapr.CourseGrade

WHERE Courseld = @courseid and GradeValue <= @numgrade);

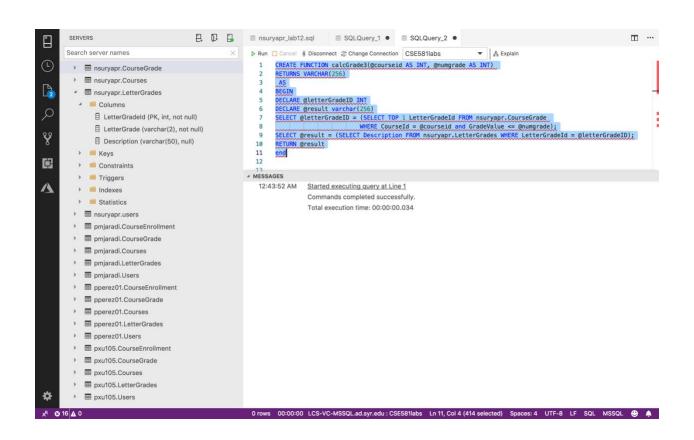
SELECT @result = (SELECT Description FROM nsuryapr.LetterGrades WHERE LetterGradeId = @letterGradeID);

**RETURN** @result

end

<sup>&</sup>lt;sup>1</sup> Please consider how grades are calculated. For example, if 90-92.9 is an A-, and you get a 92, then you get an A-.

<sup>&</sup>lt;sup>2</sup> Please do not hardcode values into your function. Use the table to make the decisions.

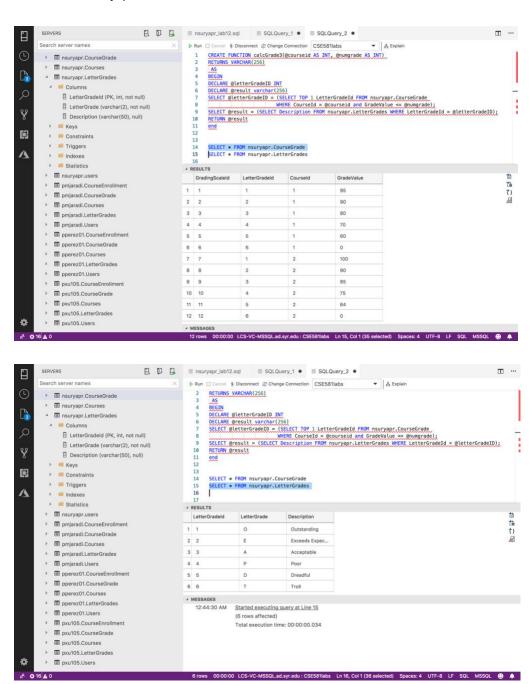


2. Take a **screenshot** of the table containing Letter Grade Description, Course Id and Numerical grade, so that way both you and I can check that the function works properly.

#### SCRIPT:

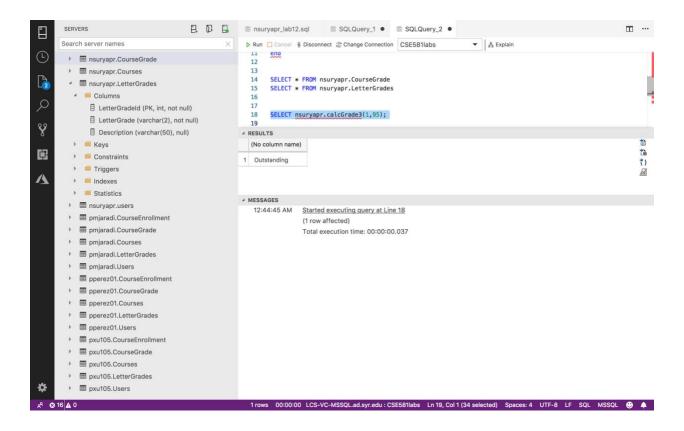
SELECT \* FROM nsuryapr.CourseGrade

SELECT \* FROM nsuryapr.LetterGrades



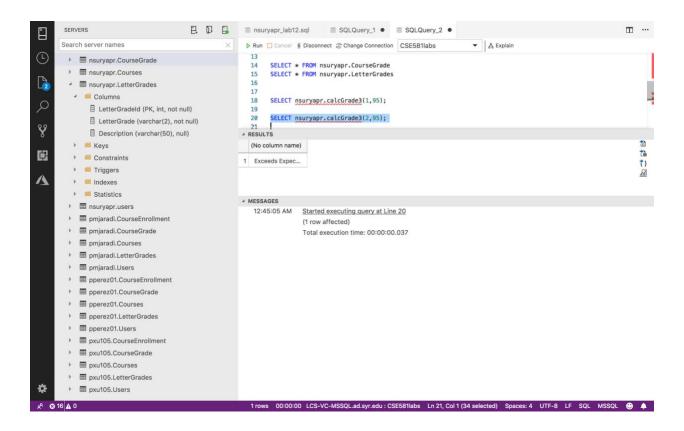
3. Run the function for the Courseld = 1, NumericalGrade = 95. Provide a **screenshot** of execution, showing the result.

SCRIPT: SELECT nsuryapr.calcGrade3(1,95);



4. Run the function for the Courseld = 2, NumericalGrade = 95. Provide a **screenshot** of execution, showing the result.

SCRIPT: SELECT nsuryapr.calcGrade3(2,95);



5. Run the function for the CourseId = 2, NumericalGrade = 85. Provide a **screenshot** of execution, showing the result.

SCRIPT: SELECT nsuryapr.calcGrade3(2,85);

