CSIS05I

Database Systems II

Lab (9)

INTRODUCTION TO FUNCTIONS-SOLUTION

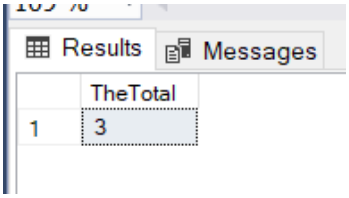
Exercise

1- Create a function that retrieves the total number of orders.

Solution:

```
CREATE FUNCTION NumOfOrders()
RETURNS int
AS
BEGIN
Declare @TotalNumOfOrders INT
select @TotalNumOfOrders=Count(*)
FROM Orderr
RETURN @TotalNumOfOrders
END


Select dbo.NumOfOrders() as TheTotal;
```



2- Create a function that calculates the multiplication of two numbers.

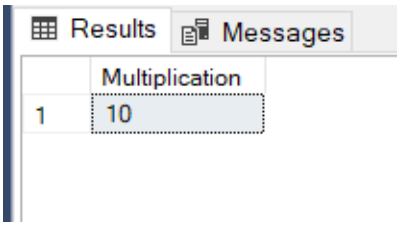
Solution:

```
CREATE FUNCTION MultiplyTwoNumbers
(@Num1 int, @Num2 int)

RETURNS INT

AS
Begin
Declare @Multi INT
Select @Multi=(@Num1*@Num2)
RETURN @Multi
END

Select dbo.MultiplyTwoNumbers (2,5) As Multiplication
```

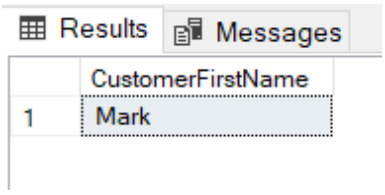


3- Create a function that retrieve the first name of a customer giving the customer id entered by the user.

Solution:

```
CREATE FUNCTION CustomerFirstName
(@CustomerID int)
RETURNS varchar(20)
AS
BEGIN
Declare  @Fname  varchar(20)
Select @Fname=CustFirstName
From customer
Where CustomerID= @CustomerID
RETURN @Fname
END

Select  dbo.CustomerFirstName(1) As CustomerFirstName
```

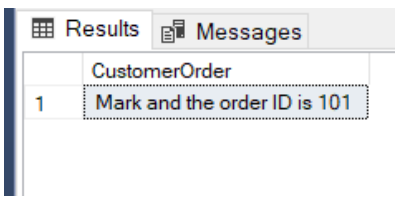


4- Create a function that returns all the customers' first names and their order ids giving the customer id entered by the user.

Solution:

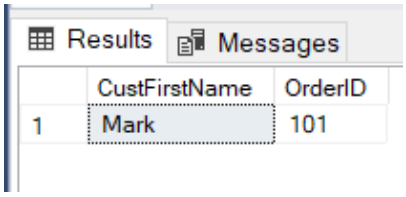
```
--First solution / scalar function--
CREATE or alter FUNCTION CustomerNameAndOrder (@CustomerID int)
RETURNS varchar(100)
AS
BEGIN
Declare @Fname varchar(100)
Select @Fname=(Select CustFirstName+ ' and the order ID is ' +cast(OrderID
as varchar)
From customer, orderr
Where CustomerID=CID And CustomerID= @CustomerID)
RETURN @Fname
END

Select dbo.CustomerNameAndOrder(1) As CustomerOrder
```



```
--Another solution / inline table function--
CREATE FUNCTION CustomerNameAndOrderNew (@CustomerID int)
RETURNS table
AS
return
Select CustFirstName, OrderID
From customer, orderr
Where CustomerID=CID And CustomerID= @CustomerID

Select * from CustomerNameAndOrderNew(1)
```



Results | Messages

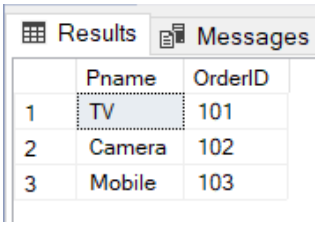
	CustFirstName	OrderID
1	Mark	101

5. Create a function that returns all product names along with their order IDs.

Solution:

```
CREATE FUNCTION getProductNameandOrderID()
RETURNS table
AS
RETURN Select Pname,OrderID
          From product,order_details
          Where ProductID=PID

Select * From getProductNameandOrderID()
```



Results | Messages

	Pname	OrderID
1	TV	101
2	Camera	102
3	Mobile	103

Difference between Function and Procedure Useful Link:

https://www.tutorialspoint.com/difference-between-function-and-procedure