

Создайте scalar-valued функцию, которая будет принимать в качестве входного параметра id модели для продукта (Production.ProductModel.ProductModelID) и возвращать суммарную стоимость продуктов данной модели (Production.Product.ListPrice).

```

/*
CREATE FUNCTION dbo.ProductSum(@ProductModelID INT)
RETURNS MONEY
AS
BEGIN
    DECLARE @RESULT MONEY;
    SELECT @RESULT = SUM(PP.ListPrice)
    FROM Production.Product AS PP
    WHERE PP.ProductModelID = @ProductModelID
    IF (@RESULT IS NULL)
        SET @RESULT = 0;
    RETURN @RESULT;
END

```

Создайте inline table-valued функцию, которая будет принимать в качестве входного параметра id заказчика (Sales.Customer.CustomerID), а возвращать 2 последних заказа, оформленных заказчиком из Sales.SalesOrderHeader.

```

/*
CREATE FUNCTION dbo.LastSales (@CustomerID INT)
RETURNS TABLE
AS
RETURN
(
    SELECT TOP(2) *
    FROM Sales.SalesOrderHeader AS SSH
    WHERE SSH.CustomerID = @CustomerID
    ORDER BY SSH.OrderDate DESC
);
GO

```

100 %

Messages

Command(s) completed successfully.

Вызовите функцию для каждого заказчика, применив оператор CROSS APPLY.

Вызовите функцию для каждого заказчика, применив оператор OUTER APPLY.

```

/*
SELECT *
FROM Sales.Customer AS SC
CROSS APPLY dbo.LastSales(SC.CustomerID)

SELECT *
FROM Sales.Customer AS SC
OUTER APPLY dbo.LastSales(SC.CustomerID)

```

100 %

Results Messages

11	11005	6990	NULL	9	AW00011005	C3057568-1851-4728-AEAE-65683458F474	2008-10-13 11:15:07.263	51612	3
12	11005	6990	NULL	9	AW00011005	C3057568-1851-4728-AEAE-65683458F474	2008-10-13 11:15:07.263	51612	3
13	11006	6229	NULL	9	AW00011006	5FDD038A-9B9C-4CD5-ACA6-DE2778A79EE9	2008-10-13 11:15:07.263	58007	3
14	11006	6229	NULL	9	AW00011006	5FDD038A-9B9C-4CD5-ACA6-DE2778A79EE9	2008-10-13 11:15:07.263	51198	3

	CustomerID	Person...	Store...	Territor...	AccountNum...	rowguid	ModifiedDate	SalesOrde...	RevisionNum...
1	1	NULL	934	1	AW00000001	3F5AE95E-B87D-4AED-95B4-C3797AFCB74F	2008-10-13 11:15:07.263	NULL	NULL
2	2	NULL	1028	1	AW00000002	E552F657-A9AF-4A7D-A645-C429D6E02491	2008-10-13 11:15:07.263	NULL	NULL
3	3	NULL	642	4	AW00000003	130774B1-DB21-4EF3-98C8-C104BCD6ED6D	2008-10-13 11:15:07.263	NULL	NULL
4	4	NULL	932	4	AW00000004	FF862851-1DAA-4044-BE7C-3E85583C054D	2008-10-13 11:15:07.263	NULL	NULL
5	5	NULL	1026	4	AW00000005	83905BDC-6F5E-4F71-B162-C98DA069F38A	2008-10-13 11:15:07.263	NULL	NULL
6	6	NULL	644	4	AW00000006	1A92DF88-BFA2-467D-BD54-FCB9E647FD...	2008-10-13 11:15:07.263	NULL	NULL

```

/*
    Измените созданную inline table-valued функцию, сделав ее multistatement table-valued
    (предварительно сохранив для проверки код создания inline table-valued функции).
*/
CREATE FUNCTION dbo.ProductSumMulti(@CustomerID INT)
RETURNS @RESULT TABLE (
    [SalesOrderID] int NOT NULL,
    [RevisionNumber] tinyint NOT NULL,
    [OrderDate] datetime NOT NULL,
    [DueDate] datetime NOT NULL,
    [ShipDate] datetime NULL,
    [Status] tinyint NOT NULL,
    [OnlineOrderFlag] dbo.Flag NOT NULL,
    [SalesOrderNumber] AS (isnull(N'SO'+CONVERT(nvarchar(23),[SalesOrderID]),N'*** ERROR ***')),
    [PurchaseOrderNumber] dbo.OrderNumber NULL,
    [AccountNumber] dbo.AccountNumber NULL,
    [CustomerID] int NOT NULL,
    [SalesPersonID] int NULL,
    [TerritoryID] int NULL,
    [BillToAddressID] int NOT NULL,
    [ShipToAddressID] int NOT NULL,
    [ShipMethodID] int NOT NULL,
    [CreditCardID] int NULL,
    [CreditCardApprovalCode] varchar(15) NULL,
    [CurrencyRateID] int NULL,
    [SubTotal] money NOT NULL,
    [TaxAmt] money NOT NULL,
    [Freight] money NOT NULL,
    [TotalDue] AS (isnull(([SubTotal]+[TaxAmt])+[Freight],(0))),
    [Comment] nvarchar(128) NULL,
    [rowguid] uniqueidentifier ROWGUIDCOL NOT NULL,
    [ModifiedDate] datetime NOT NULL
)
AS
BEGIN

```

```

AS
BEGIN
    INSERT INTO @RESULT (
        [SalesOrderID],
        [RevisionNumber],
        [OrderDate],
        [DueDate],
        [ShipDate],
        [Status],
        [OnlineOrderFlag],
        [PurchaseOrderNumber],
        [AccountNumber],
        [CustomerID],
        [SalesPersonID],
        [TerritoryID],
        [BillToAddressID],
        [ShipToAddressID],
        [ShipMethodID],
        [CreditCardID],
        [CreditCardApprovalCode],
        [CurrencyRateID],
        [SubTotal],
        [TaxAmt],
        [Freight],
        [Comment],
        [rowguid],
        [ModifiedDate])
    SELECT TOP(2) [SalesOrderID],
        SELECT TOP(2)

```

```

SELECT TOP(2) [SalesOrderID],
               [RevisionNumber],
               [OrderDate],
               [DueDate],
               [ShipDate],
               [Status],
               [OnlineOrderFlag],
               [PurchaseOrderNumber],
               [AccountNumber],
               [CustomerID],
               [SalesPersonID],
               [TerritoryID],
               [BillToAddressID],
               [ShipToAddressID],
               [ShipMethodID],
               [CreditCardID],
               [CreditCardApprovalCode],
               [CurrencyRateID],
               [SubTotal],
               [TaxAmt],
               [Freight],
               [Comment],
               [rowguid],
               [ModifiedDate]
FROM Sales.SalesOrderHeader AS SSH
WHERE SSH.CustomerID = @CustomerID
ORDER BY SSH.OrderDate DESC
RETURN;
END;
GO

```