

XML

Thursday, June 1, 2017 10:53 PM

The screenshot shows a SQL Server Enterprise Manager window with two tabs: 'ForXML.sql - (local...nd (LABS\dellp (54)))' and 'ForJSON.sql - (loca...nd (LABS\dellp (56)))'. The 'ForXML.sql' tab is active, displaying three SQL queries. The first query uses 'FOR XML AUTO'. The second query uses 'FOR XML RAW' with a root element 'Employees'. The third query uses 'FOR XML RAW' with a root element 'Employees' and an XML schema. Below the queries, the 'Results' pane shows the output of the first query, which is an XML document with a single row containing employee data. The 'Messages' pane shows the execution status of the query.

```
Use Northwind
GO

Select EmployeeID, FirstName, LastName, HireDate
From Employees
Where Region = 'WA'
For XML AUTO;

Select EmployeeID, FirstName, LastName, HireDate
From Employees
Where Region = 'WA'
For XML RAW ('Employee'), ROOT ('Employees'), ELEMENTS;

Select EmployeeID, FirstName, LastName, HireDate
From Employees
Where Region = 'WA'
For XML RAW ('Employee'), ROOT ('Employees'), ELEMENTS, XMLSCHEMA;
```

115 %

Results Messages

XML_F52E2B61-18A1-11d1-B105-00805F49916B
1 <Employees EmployeeID="1" FirstName="Nancy" Last...

XML_F52E2B61-18A1-11d1-B105-00805F49916B
1 <Employees><Employee><EmployeeID>1</EmployeeID><...

XML_F52E2B61-18A1-11d1-B105-00805F49916B
1 <Employees><xsd:schema targetNamespace="um:sche...

Query executed successfully. (local)\sqlexpress01 (13.0 ... LABS\dellp (54) Northwind 00:00:00 4 rows

XML String

Tuesday, June 20, 2017 11:38 PM

XmlString.sql - (loc...er (LABS\dellp (55))

```
1 declare @XML xml;
2
3 set @XML =
4 '
5 <employees>
6   <employee>
7     <empID>1</empID>
8     <first>Mickey</first>
9     <last>Mouse</last>
10  </employee>
11  <employee>
12    <empID>2</empID>
13    <first>Minnie</first>
14    <last>Mouse</last>
15  </employee>
16 </employees>
17 ';
```

```
19 Select @XML.query('/employees');
20 Select @XML.query('/employees/employee');
21 Select @XML.query('/employees/employee/last');
22 select @XML.query('/employees/employee[2]');
23 Select @XML.query('/employees/employee[first="Minnie"]');
```

103 %

Results Messages

(No column name)	
1	<employees><employee><empID>1</empID><first>Mick...
(No column name)	
1	<employee><empID>1</empID><first>Mickey</first><...
(No column name)	
1	<last>Mouse</last><last>Mouse</last>
(No column name)	
1	<employee><empID>2</empID><first>Minnie</first><...
(No column name)	

Query executed successfully. (local)\sqlexpress01 (13.0 ... LABS\dellp (55) master 00:00:00 5 rows

Xml Stream Query

Tuesday, June 20, 2017 11:33 PM

```
XmlManipulation.sql...r (LABS\delip (57))  X ForXML.sql - (local...nd (LABS\delip (56))  Xml
1  DECLARE @xml XML
2
3  SET @xml=N'<Root>
4      <orderHRD ID="101">
5          <custID>501</custID>
6          <orderDTL ID="201">
7              <prodID>1</prodID>
8              <qty>5</qty>
9              <cost>25.12</cost>
10         </orderDTL>
11         <orderDTL ID="202">
12             <prodID>2</prodID>
13             <qty>3</qty>
14             <cost>30.00</cost>
15         </orderDTL>
16     </orderHRD>
17     <orderHRD ID="102">
18         <custID>502</custID>
19         <orderDTL ID="203">
20             <prodID>11</prodID>
21             <qty>12</qty>
22             <cost>140.78</cost>
23         </orderDTL>
24     </orderHRD>
25     <orderHRD ID="103">
26         <custID>503</custID>
27         <orderDTL ID="204">
28             <prodID>6</prodID>
29             <qty>8</qty>
30             <cost>60.35</cost>
31         </orderDTL>
32         <orderDTL ID="205">
33             <prodID>9</prodID>
34             <qty>2</qty>
35             <cost>10.50</cost>
36         </orderDTL>
37         <orderDTL ID="206">
38             <prodID>10</prodID>
39             <qty>6</qty>
40             <cost>120.89</cost>
41         </orderDTL>
42     </orderHRD>
43 </Root>' ;
44
```

Run as We Build each Line

```
select
    XMLSet.Field.value('../@ID', 'int') as OrderHDR_ID,
    XMLSet.Field.value('..../custID[1]', 'int') as Cust_ID,
    XMLSet.Field.value('@ID', 'int') as OrderDTL_ID,
    XMLSet.Field.value('prodID[1]', 'int') as Prod_ID,
    XMLSet.Field.value('qty[1]', 'int') as QTY,
    XMLSet.Field.value('cost[1]', 'float') as Cost,
    XMLSet.Field.value('count(..../orderDTL)', 'int') as Cust_Ord_Count
from @xml.nodes('/Root/orderHRD/orderDTL') XMLSet(Field)
```

JSON

Thursday, June 1, 2017 10:51 PM

ForJSON.sql - (loc...nd (LABS\dellp (56))

```
use Northwind
GO

Select EmployeeID, FirstName, LastName, HireDate
From Employees
Where Region = 'WA'
For JSON AUTO;

DECLARE @JSONText NVARCHAR(MAX)
SET @JSONText = N'{
    "Order":{
        "OrderID":43663,
        "Status":5,
        "PONumber":"PO18009186470"
    },
    "Product":{
        "ShipDate":"2011-06-07T00:00:00",
        "ProductID":760
    }
}'

SELECT * FROM OPENJSON(@JSONText);
SELECT * FROM OPENJSON(@JSONText, '$.Order');
SELECT * FROM OPENJSON(@JSONText, '$.Product');
```

115 %

Results Messages

JSON_F52E2B61-18A1-11d1-B105-00805F49916B

1 [{"EmployeeID":1,"FirstName":"Nancy","LastName":"..."]

	key	value	type
1	Order	{ "OrderID":43663, ...	5
2	Product	{ "ShipDate":"2011-06-07T0...	5

	key	value	type
1	OrderID	43663	2
2	Status	5	2
3	PONumber	PO18009186470	1

	key	value	type
1	ShipDate	2011-06-07T00:00:00	1
2	ProductID	760	2

Value of the Type column	JSON data type
0	null
1	string
2	int
3	true/false
4	array
5	object

Query executed successfully.

(local)\sqlexpress01 (13.0 ... LABS\dellp (56) Northwind 00:00:00 8 rows