

Generate an XML document using a SQL Procedure

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-- Drop existing procedure before creating
Drop procedure QGPL.GENEMDPXML;

-- Create procedure to generate XML
create procedure QGPL.GENEMDPXML
  (IN xmlformat char(6))

language SQL

begin
declare string char(2000);

-- Create temporary table to hold generated XML
create table QTEMP.GENEMDPXML(char1 char(2000));

-- Insert XML header
insert into QTEMP.GENEMDPXML
  values('<?xml version="1.0" encoding="UTF-8"?>');

-- Insert XML Root element
insert into QTEMP.GENEMDPXML values('<Employees>');

-- Generate XML for each DB row returned from Employee & Department tables
FOR Each_EmpDept AS EmpDept CURSOR FOR
  SELECT EMPNO, FIRSTNAME, LASTNAME, WORKDEPT, DEPTNAME, LOCATION,
    SALARY
  FROM QGPL.EMPLOYEE, QGPL.DEPARTMENT
  WHERE WORKDEPT = DEPTNO
  ORDER BY EMPNO

DO
-- Insert Employee parent element
  insert into QTEMP.GENEMDPXML values(' <Employee>');

-- Replace XML Character Entity values in Department Name
  set deptname = replace(deptname, '&', '&amp;');
  set deptname = replace(deptname, "'", '&apos;');
  set deptname = replace(deptname, '>', '&gt;');
  set deptname = replace(deptname, '<', '&lt;');
  set deptname = replace(deptname, '"', '&quot;');

-- Check format of XML document to generate
-- .If TREE, generate XML document in top to bottom tree structure
IF xmlformat ='TREE' THEN
  set string =
  ' <Empno>' || rtrim(empno) || '</Empno>';
  insert into QTEMP.GENEMDPXML values(string);

  set string =
  ' <Firstname>' ||rtrim(firstname) || '</Firstname>';
  insert into QTEMP.GENEMDPXML values(string);
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set string =
' <Lastname>' || rtrim(lastname) || '</Lastname>';
insert into QTEMP.GENEMDPXML values(string);

set string =
' <Workdept>' || rtrim(workdept) || '</Workdept>';
insert into QTEMP.GENEMDPXML values(string);

set string =
' <Deptname>' || rtrim(deptname) || '</Deptname>';
insert into QTEMP.GENEMDPXML values(string);

set string =
' <Location>' || rtrim(location) || '</Location>';
insert into QTEMP.GENEMDPXML values(string);

set string =
' <Salary>' || rtrim(char(Salary)) || '</Salary>';
insert into QTEMP.GENEMDPXML values(string);

-- .If not TREE, generate XML document in left to right structure
ELSE
set string =
' <Empno>' || rtrim(empno) || '</Empno>' ||
'<Firstname>' || rtrim(firstname) || '</Firstname>' ||
'<Lastname>' || rtrim(lastname) || '</Lastname>' ||
'<Workdept>' || rtrim(workdept) || '</Workdept>' ||
'<Deptname>' || rtrim(deptname) || '</Deptname>' ||
'<Location>' || rtrim(location) || '</Location>' ||
'<Salary>' || rtrim(char(Salary)) || '</Salary>';
insert into QTEMP.GENEMDPXML values(string);

END IF;

-- Insert Employee parent element end
insert into QTEMP.GENEMDPXML values('</Employee>');

END FOR;

-- Insert XML Root element end
insert into QTEMP.GENEMDPXML values('</Employees>');

-- Set CPYTOIMPF string to create XML stream file from work table
set string = 'call QSYS.qcmdexc(''CPYTOIMPF FROMFILE(QTEMP/GENEMDPXML)
TOSTMF('''/tempxml/doc/EmplDept.xml''') MBROPT(*REPLACE)
STMFCODPAG(819) RCDDL(*CRLF) DTAFMT(*FIXED) STRDLM(*NONE)'',
0000000164.00000)';

prepare s1 from string;

execute s1;

-- Drop temporary work table
drop table QTEMP.GENEMDPXML;
end;

```