--Create table as given below

CREATE TABLE ProductDocs (

ID INT IDENTITY PRIMARY KEY,

ProductDoc XML NOT NULL);

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-- Insert data into ProductDoc Column in XML Form.

INSERT INTO ProductDocs(ProductDoc)

VALUES (

'<Product>

<ProductID> 1 </ProductID>

<ProductName> Chai </ProductName>

<SupplierID> 1 </SupplierID>

<CategoryID> 1 </CategoryID>

<QuantityPerUnit> 10 boxes x 20 bags </QuantityPerUnit>

<UnitPrice> 18.0000 </UnitPrice>

<UnitsInStock> 39 </UnitsInStock>

<UnitsOnOrder> 0 </UnitsOnOrder>

<ReorderLevel> 10 </ReorderLevel>

<Discontinued> 0 </Discontinued>

</Product>');

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-- Create XML schema for ProductDoc column.

CREATE XML SCHEMA COLLECTION ProductDocSchema AS

'

<xs:schema xmlns:xs = "http://www.w3.org/2001/XMLSchema">

<xs:element name = "Product">

<xs:complexType>

<xs:sequence>

<xs:element name = "ProductID" type="xs:integer" />

<xs:element name = "ProductName" type="xs:string" />

<xs:element name = "SupplierID" type="xs:integer" />

<xs:element name = "CategoryID" type="xs:integer" />

<xs:element name = "QuantityPerUnit" type="xs:string" />

<xs:element name = "UnitPrice" type="xs:double" />

<xs:element name = "UnitsInStock" type="xs:integer" />

<xs:element name = "UnitsOnOrder" type="xs:integer" />

<xs:element name = "ReorderLevel" type="xs:integer" />

<xs:element name = "Discontinued" type="xs:boolean" />

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:schema>

'

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--Bind XML schema To the tanle ProductDocs with column ProductDoc.

ALTER TABLE ProductDocs ALTER COlUMN ProductDoc XML(ProductDocSchema);

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-- Verifying for insert and update into schema as below.

--Case 1. If i am trying to insert ProductID as 'ab' it will give errors

--Because it is of integer type.

INSERT INTO ProductDocs(ProductDoc)

VALUES (

'<Product>

<ProductID> ab </ProductID>

<ProductName> Chai </ProductName>

<SupplierID> 1 </SupplierID>

<CategoryID> 1 </CategoryID>

<QuantityPerUnit> 10 boxes x 20 bags </QuantityPerUnit>

<UnitPrice> 18.0000 </UnitPrice>

<UnitsInStock> 39 </UnitsInStock>

<UnitsOnOrder> 0 </UnitsOnOrder>

<ReorderLevel> 10 </ReorderLevel>

<Discontinued> 0 </Discontinued>

</Product>');

--OUTPUT:XML Validation: Invalid simple type value: 'ab'. Location: /\*:Product[1]/\*:ProductID[1]

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-- How to read XML data.Show ProductID and ProductName from the XML data.

SELECT ProductDoc.value('(Product/ProductID)[1]','integer')AS ProductID

,ProductDoc.value('(Product/ProductName)[1]','varchar(50)') AS ProductName

FROM dbo.ProductDocs;

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-- Write an SQL Statement to update the ProductName as ‘NewName’ where ProductID = 1. Verify the changes by querying the XML data.

UPDATE dbo.ProductDocs SET

ProductDoc.modify('replace value of (Product/ProductName)[1] with "NewName"')

WHERE ProductDoc.value('(Product/ProductID)[1]','int')=1;