# XSD Tasks

Three tasks total. The last one is optional. The creativity is appreciated.

**1.** Create a well-formed and valid XML document accordingly to the following schema:

Include all optional elements and attributes!

<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" targetNamespace="http://tempuri.org/po.xsd"

xmlns="http://tempuri.org/po.xsd" elementFormDefault="qualified">

<xs:element name="purchaseOrder" type="PurchaseOrderType"/>

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

<xs:complexType name="PurchaseOrderType">

<xs:sequence>

<xs:element name="shipTo" type="USAddress"/>

<xs:element name="billTo" type="USAddress"/>

<xs:element ref="comment" minOccurs="0"/>

<xs:element name="items" type="Items"/>

</xs:sequence>

<xs:attribute name="orderDate" type="xs:date"/>

</xs:complexType>

<xs:complexType name="USAddress">

<xs:sequence>

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

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

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

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

<xs:element name="zip" type="xs:decimal"/>

</xs:sequence>

<xs:attribute name="country" type="xs:string" fixed="US"/>

</xs:complexType>

<xs:complexType name="Items">

<xs:sequence>

<xs:element name="item" minOccurs="0" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

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

<xs:element name="quantity">

<xs:simpleType>

<xs:restriction base="xs:positiveInteger">

<xs:maxExclusive value="100"/>

</xs:restriction>

</xs:simpleType>

</xs:element>

<xs:element name="USPrice" type="xs:decimal"/>

<xs:element ref="comment" minOccurs="0"/>

<xs:element name="shipDate" type="xs:date" minOccurs="0"/>

</xs:sequence>

<xs:attribute name="partNum" type="SKU" use="required"/>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:complexType>

<!-- Stock Keeping Unit, a code for identifying products -->

<xs:simpleType name="SKU">

<xs:restriction base="xs:string">

</xs:restriction>

</xs:simpleType>

</xs:schema>

**2.** Find, describe and correct errors in the following schema:

I want to use following schema to describe each EPAM office, but it is not working. Could you please show me errors and correct them? Thanks in advance.

<?xml version="1.0" encoding="utf-8" ?>

<xs:schema targetNamespace="http://tempuri.org/XMLSchema.xsd"

elementFormDefault="qualified"

xmlns="http://tempuri.org/XMLSchema.xsd"

xmlns:mstns="http://tempuri.org/XMLSchema.xsd"

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

<xs:complexType name="officeType" minOccurs="0" maxOccurs="unbounded">

<xs:sequence name="officeTypeSequence">

<xs:element name="worker" type="plankton">

<xs:complexType>

<xs:all minOccurs="1" maxOccurs="1">

<xs:element name="firstname" type="xs:string" ref="nameElement"/>

<xs:element name="lastname" ref="lastname" />

<xs:element name="workerID">

<xs:complexType>

<xs:simpleContent name="workingYear">

<xs:extension base="xs:positiveInteger">

<xs:attribute name="first working year" type="xs:gYear" />

</xs:extension>

</xs:simpleContent>

</xs:complexType>

</xs:element>

</xs:all>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:complexType>

<xs:element name="nameElement" type="xs:string">

<xs:simpleType name="nameElementType">

<xs:restriction base="xs:string">

<xs:lengthMax value="50" />

<xs:lengthMin value="0" />

</xs:restriction>

</xs:simpleType>

</xs:element>

<xs:element name="lastname" type="nameElementType"/>

<!--Global complex element-->

<xs:element name="officeList">

<xs:complexType base="officeType">

<xs:sequence maxOccurs="unbounded">

<xs:element name="office" type="officeType"/>

</xs:sequence>

<xs:anyAttribute/>

</xs:complexType>

</xs:element>

</xs:schema>

**3.** Below is the business view of the task. Create corresponding schema and sample XML document.

Hello, my name is Vasja and I work in the McDonalds Company. I want to send my customers a list of available food in XML format. As for now we have only hamburgers and soft drinks available, but in the future we’ll have more different food. We have hamburgers with beef, pork, turkey, or a combination of meats and we also serve them with lettuce, bacon, tomato, onion, pickles, cheese. We also have following condiments in stock: mustard, mayonnaise, ketchup and relish. Our soft drinks list includes cola, flavored water, sparkling water, iced tea, sweet tea and sparkling lemonade.

I want to provide my customers with price, available amounts and rating of each item. We also have a discount on some combinations of hamburgers and soft drinks sometimes. Could you please create a schema for me?