**Exp 6**

**Xsd**

**Ques1**. Write a XML Schema document for the XML document in Fig. below, that would allow

element note to be a child element of element myMessage. Element note can contain only

text. Validate your document using XML Validator.

<?xml version = "1.0"?>

<!-- Fig. 7.2 : intro.xml -->

<myMessage xmlns = "x-schema:intro-schema.xml">

<greeting>Welcome to XML Schema!

<message>This is the first message.</message>

</greeting>

<message>This is the second message.</message>

</myMessage>

**Ques2.** Write a schema to validate the XML document shown. This XML document contains

information about products in a grocery store. Each product is represented by a product element

that contains the name, manufacturer, quantity and price of the product. Each product has a

unique ID and is categorized as either perishable or nonperishable. If the product is perishable, it contains a food element. Element food contains the expiration date and nutrition facts. Nutrition facts

describe the amount of proteins, fats and calcium in the food. If the product is nonperishable, it contains

details of the stock available in one or more warehouses. A warehouse element has a unique ID

and contains a description of the warehouse, along with product stock available at the warehouse.

<?xml version = "1.0"?>

<!-- Exercise 7.4 : exer07\_4.xml -->

<products xmlns = "x-schema:exer07\_4-schema.xml">

<product id = "p12" perishable = "yes">

<name>Ice cream</name>

<manufacturer>xsz Co.</manufacturer>

<quantity>25</quantity>

<price>2</price>

<food>

<nutrition>

<calcium>10.30</calcium>

<proteins>35.5</proteins>

<fat>10</fat>

</nutrition>

<expirationDate>2000-09-12</expirationDate>

</food>

</product>

<product id = "p13" perishable = "no">

<name>AA Battries</name>

<manufacturer>DCells</manufacturer>

<quantity>100</quantity>

<price>4</price>

<stock>

<warehouse id = "w12">

xsz warehouse

<stock>25000</stock>

</warehouse>

<warehouse id = "w13">

rza warehouse

<stock>5000</stock>

</warehouse>

</stock>

</product>

</products>

Fig. XML document containing food product information.

Q3. Consider the details of students given below:

|  |  |
| --- | --- |
| Element Name | Attributes and Characteristics |
| student | Required: externalId, firstName, lastName  Optional: middleName, email |
| studentAcadAreaClass | [1 ==> N entries] |
| acadAreaClass | Required: academicArea, academicClass |
| studentMajors | [1 ==> N entries] |
| major | Required: academicArea, code |
| studentMinors | [0 ==> N entries] |
| minor | Required: academicArea, code |
| studentGroups | [0 ==> N entries]  Required: group |
| studentAccomodations | [0 ==> N entries]  ==> Required: accomodation |
| External entity: University | Value : UPES |

B. For the above data describe an Schema and xml file for various students.

4. Consider the details of course given below:

|  |  |
| --- | --- |
| Element Name | Attributes and Characteristics |
| course ==> | Required: subject, courseNumber, title  Optional: externalId, approvalType, permanentId, previousSubject, previousCourseNumber  approvalType = instructor, department or timeblock  creditFormat = arrangeHours, fixedUnit, variableMinMax, variableRange  creditType = collegiate, equivalent, mastersCredit, phdThesisCredit  designatorRequired = T or F fractionalCreditAllowed = T or F |
| Sub element of course:  courseCredit ==> | Required: creditType, creditUnitType, creditFormat fixedCredit or (minimumCredit and maximumCredit and fractionalCreditAllowed) |
| Sub element of course:  subpartCredit ==> | [0 ==> N entries]  Required: subpartId, creditType, creditUnitType, creditFormat, fixedCredit or (minimumCredit and maximumCredit and fractionalCreditAllowed) |

B. For the above data describe an Schema and xml file for various courses taught by an organization.