

---

# WORKSHEET 1-INTRODUCTION TO XML

---

***\*Submit a pdf with the tree drawings for exercise 1 and 2 and the errors of exercise3, together with all the xml files***

## **Exercise #1 – XML basics**

Create an XML document that represents the following data:

### **Groceries**

Item Name	Price	Quantity	Aisle Number
Milk	\$3.00	1	A3
Whole Wheat Bread	\$2.85	1	A5
Carrots	\$2.00	2	C2
Apples	\$3.00	4	C2

Draw a tree representation of the structure.

## **Exercise #2 – XML basics**

Create an XML document that represents the following student data: name, address, date of birth, student id, and one or more subjects (computer science, law, chemistry, sociology etc). Use at least one attribute.

Draw a tree representation of the structure.

## **Exercise #3 – Well Formedness**

Here is a fragment of an XML document instance. Identify all the places where it fails to match the constraints for well-formedness.

```
<PROCEDURE><TITLE>How to Bathe a Cat</TITLE><OVERVIEW>This procedure
tells you how to bathe a cat. <WARNING></OVERVIEW>Cats don't like to
take baths. You could get hurt doing this. Be sure to obtain all the
required protective gear before you start.
</WARNING><EQUIPEMENT><ITEM>Hockey Mask <ITEM>Padded Full-body Kevlar
Armor</ITEM><ITEM>Tub full of warm water</ITEM><ITEM>Towels
</ITEM><ITEM>First Aid kit</ITEM><ITEM>Cat Shampoo</ITEM>
<EQUIPMENT><INSTRUCTIONS> <STEP> Locate the cat, who by now is hiding
under the bed.</STEP><STEP>Place the cat in the tub of water.</STEP>
<ITEM>Using the First Aid kit, repair the damage to your head and
arms.</STEP> <STEP>Place the cat back in the tub and hold it
down.</STEP> <STEP>Wash it really fast, then make an effort to dry it
with the towels.</STEP> <STEP>Decide not to do this again. </STEP>
</INSTRUCTIONS>
```

## ***Exercise #4 – DTD validation***

Create a valid XML document using the definitions from the DTD below:

```
<!DOCTYPE CATALOG [  
  
  <!ELEMENT CATALOG (PRODUCT+)>  
  
  <!ELEMENT PRODUCT  
    (SPECIFICATIONS+,OPTIONS?,PRICE+,NOTES?)>  
  <!ATTLIST PRODUCT  
    NAME CDATA #IMPLIED  
    CATEGORY (HandTool|Table|Shop-Professional) "HandTool"  
    PARTNUM CDATA #IMPLIED  
    PLANT (Pittsburgh|Milwaukee|Chicago) "Chicago"  
    INVENTORY (InStock|Backordered|Discontinued) "InStock">  
  
  <!ELEMENT SPECIFICATIONS_ (#PCDATA)>  
  <!ATTLIST SPECIFICATIONS  
    WEIGHT CDATA #IMPLIED  
    POWER CDATA #IMPLIED>  
  
  <!ELEMENT OPTIONS (#PCDATA)>  
  <!ATTLIST OPTIONS  
    FINISH (Metal|Polished|Matte) "Matte"  
    ADAPTER (Included|Optional|NotApplicable) "Included"  
    CASE (HardShell|Soft|NotApplicable) "HardShell">  
  
  <!ELEMENT PRICE (#PCDATA)>  
  <!ATTLIST PRICE  
    MSRP CDATA #IMPLIED  
    WHOLESALE CDATA #IMPLIED  
    STREET CDATA #IMPLIED  
    SHIPPING CDATA #IMPLIED>  
  
  <!ELEMENT NOTES (#PCDATA)>  
  
]>
```