**XML-Extensible Markup Language**

**Data In Plain Text Format:**

Asdba adfsdfsd erwerwerwr 1234567788 82343242342

**XML works like Meta-Data:**

**Meta-Data:** Used for Describing the Data in an efficient way or Providing the Information about the Data

* XML stands for eXtensible Markup Language.
* XML was designed to store and transport data.
* XML was designed to be both human- and machine-readable.

**Data In Plain Text Format:**

**Asdba adfsdfsd erwerwerwr 1234567788 82343242342**

**XML Format:**

<Customers>

<Customer>

<Street> Asdba </Street>

<City> adfsdfsd </City>

<State> erwerwerwr </State>

<Phone> 1234567788 </Phone>

<Zip> 823432</Zip>

</Customer>

</Customers>

**How to write XML File?**

**Elements:**

* Elements describe the complex data (Anchor Tag Data)
* Elements define a boundary or act as separators in describing the data
* Opening Tag: <Customer> Opening Customer Tag
* Closing Tag: </Customer> Closing Customer Tag
* Element Values – Any Content within the Opening and Closing respective tags are values of the Elements

**Types of Elements**

* **Root Element –** First Element in the XML file <Customers>
* **Parent Element** – Customers/ Customer
* **Child Element** – Customer, Street/City
* **Sibling Element –** Street/City/Phone Number/Zip

<Customers>

<Customer>

<Street> Asdba </Street>

<City> adfsdfsd </City>

<State> erwerwerwr </State>

<Phone> 1234567788 </Phone>

<Zip> 823432</Zip>

</Customer>

<Customer>

<Street> XXsdba </Street>

<City> EEfsdfsd </City>

<State> erwerwerwr </State>

<Phone> 1234567799 </Phone>

<Zip> 8234</Zip>

</Customer>

</Customers>

**XML Syntax Rules:**

* All XML elements must have a closing tag.
* XML tags are case-sensitive.
* All XML elements must be properly nested.
* All XML documents must have a root element.
* Attribute values must always be quoted.

<?xml version= “1.0” encoding=“ISO-8859-1”?>

<note date=”05/05/05”>

<to>Dick</to>

<from>Jane</from>

</note>

**How to Run XML File?**

**XML File Error Scenarios**

**Attributes of Elements:**

* Attributes are represented with Key-Value Pair
* Attributes are used to represent Simple Data whereas Elements are Used to represent the Complex Data
* Attributes are declared inside the Opening Tag
* We can have multiple Attributes in the same Element Opening Tag
* Attribute Data is indivisible

<Customers>

<Customer userid =” John” age=”10”>

<Street> Asdba </Street>

<City> adfsdfsd </City>

<State> erwerwerwr </State>

<Phone> 1234567788 </Phone>

<Zip> 823432</Zip>

</Customer>

</Customers>

**The Difference Between XML and HTML**

XML and HTML were designed with different goals:

* XML was designed to carry data - with a focus on what data is
* HTML was designed to display data - with a focus on how data looks
* XML tags are not predefined like HTML tags are (Means User Defined Tags)

**HTML Example:**

<!DOCTYPE html>  
<html>  
<head>  
<title>Page Title</title>  
</head>  
<body>  
  
<h1>This is a Heading</h1>  
<p>This is a paragraph.</p>  
  
</body>  
</html>