# XML

1. XML is a markup language for documents containing structured information.
2. XML is used to describe, store and transport data.
3. XML is pure information wrapped in user-defined tags.
4. XML was created so that richly structured documents could be used over the internet.
5. XML shall be straight forwardly usable over the internet.
6. XML shall support a wide variety of applications.
7. XML documents shall be easy to create .It form a logical tree structure.
8. XML tree structure illustrates the hierarchy and locality of the elements in a XML document.
9. XML tree structure can help in showing which elements are the parent and child to each element.

**XML Element :-**

1. Element are used to classify data in an XML document to make the data understandable .
2. Element can have any name desired and are usually descriptive to the data they hold.
3. Element can contain other element usually to include more details.
4. Element can contain attributes which allow additional information.
5. Elements are defined by its opening and closing tags.

**XML Attributes:-**

1. XML Attributes provide a additional information to the element to which it belongs.
2. Attributes are information that is often not part of data but is used to manipulating the data the element holds.
3. Attributes are commonly used for identification purposes, in cases as such there is more than one element of the same type.

**Validation:-**

1. Validating of xml documents is done through a DTD(Document Type Defination) or XSD(XML Schema Definition)
2. Different type of XML documents is terms of validity

1)Broken XML document

2)well-Formed XML document

3)Valid XML document

3) Broken XML document s refers to XML documents where syntax rules are violated.

4) well-formed XML documents refer to xml documents that fully according to the syntax rules.

5) Valid XML documents refer to XML documents that are well-formed and according to a DTD/XSD.

6)A DTD defines the structure of an XML document with the list of legal elements and attributes.

7)XML Schema Defination(XSD) is the XML based alternative of DTD, having the same purpose of DTDs but more powerful and extensible.

8)DTD is the older standard. It is most likely to XSD which will replace DTD for validating XML Documents.

**DTD VS XML Schema**

1. XSD is extensible to accept future additions
2. XSD is more powerful that its prepecessor.
3. XSD makes use of XML syntax
4. XSD support datatypes.
5. XSD supports namespaces.
6. XSD is written similar to XML as XSD makes use of XML syntax, hence most of the rules of XML apply to XSD.
7. XML schema has dattypes and namespaces unlike DTDs.
8. XML schema datatype include-> String, Date, Numeric etc.

XML:

<java>

<student>

<name>sandip</name>

<rollno>101</rollno>

<address>hyedrabad</address>

</student>

<student>

<name>kiran</name>

<rollno>102</rollno>

<address>hyedrabad</address>

</student>

</java>