Basics of Web

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Markup Language

❖ It is Standard text encoding system consisting of a set of symbols inserted in a text document to control its structure, formatting or the relationship between its parts.

❖ **TYPES: (Mostly used)**

➢ SGML – Standard Generalized Markup language

➢ HTML – Hyper Text Markup language

➢ XML – eXtensible Markup language

Markup Language

❖Markup symbols can be interpreted by a device to control how a document should look when printed or displayed on a monitor

❖ **Two Types of text:**

➢ Text to be displayed

➢ Markup Language on how to display

XML

➢ Designed to be self descriptive

➢ Designed to carry data, not to display data

➢ Tags are not defined, should define your own tags

➢ Designed to store & transport data

➢ Easy to use & store self describing data

➢ Platform independent & Language independent

➢ International Acceptance

Sample XML Code

```xml
<?xml version="1.0" encoding="UTF-8"?>
- <note>
  <to>Tove</to>
  <from>Jani</from>
  <heading>Reminder</heading>
  <body>Don't forget me this weekend!</body>
</note>
```

HTML

- ➢ Most widely used language over the internet

- ➢ Used to create web pages and link them from one to another

- ➢ Other technologies like CSS & JavaScript are used to give a new look to the pages developed by HTML

Advantages of HTML

➢ **EASIER TO CODE**

More relaxed syntax compared to XHTML, which makes it easier to code

➢ **BACKWARD COMPATIBILITY**

Compatible with older version i.e., can be used with older web browsers

➢ **MULTIMEDIA SUPPORT**

Includes support for multimedia elements such as video, image & audio makes easier to create web pages that include multimedia content

Disadvantages of HTML

➢ **NON-STANDARDIZATION**

Different web browsers may interpret differently

➢ **SECURITY ISSUES**

Includes new features such as Geolocation & Offline storage which can create security vulnerabilities if not implemented properly

➢ **INCOMPATIBILITY WITH SOME OLDER WEB BROWSERS**

Some older web browsers nay not be able to display HTML5 documents properly

Sample HTML Code

```
<!DOCTYPE html>
<html>
<body>
<h1>My First Heading</h1>
<p>My first paragraph.</p>
</body>
</html>
```

XHTML

➢ Part of XML as it as features of both XML & HTML

➢Extended from XML & HTML

Advantages of XHTML

➢ **STRICT SYNTAX**

   More structured and easier to read

➢ **STANDARDIZATION**

   Follows rules of XML, makes easier to create interoperable web pages that work well with different web browsers & devices

➢ **BETTER FOR PARSING**

   Easier to parse & processed by software tools to create web pages

Disadvantages of XHTML

➢ **MORE DIFFICULT TO CODE**

➢**NO BACKWARD COMPATIBLE**

➢**REQUIRES MORE BANDWIDTH**

Stricter syntax & increased number of tags

Sample XHTML Code

```
<?xml version="1.0" encoding="UTF-8"?>

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "DTD/xhtml1-transitional.dtd">

<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en">

<head>

<title> Transitional DTD XHTML Example </title>

</head>

<body bgcolor="#FFFFFF" link="#000000" text="red">

<p>This is a transitional XHTML example</p>

</body>

</html
```

Similarities between HTML & XHTML

➢ **BASIC STRUCTURE**

   Same basic structure consisting of a Head & a body

   HEAD –contains information of documents such as title & any scripts or stylesheets

   BODY – contains the content that is displayed on the web page

➢ **SEMENTICS**

   Tags used to structure the content are meaningful & descriptive

   Helps search engines & screen readers to understand the content & improve accessibility

Similarities between HTML & XHTML

➢ **BROWSER SUPPORT**

    Supported by all modern web browsers

    Choose either language & be confident that their pages displayed correctly

➢ **SEPARATION OF CONTEXT & PRESENTATION**

    Structured for content by using Semantics markup

    Presentation by CSS

➢ **ACCESSIBILITY**

    Prioritize, provides tools & techniques

HTML v/s XHTML

HTML	XHTML
Hyper Text Markup Language	eXtensible Hyper Text Markup Language
Developed by Tim Berners- Lee	Developed by W3C i.e., World Wide Web Consortium
Developed in 1991	Released in 2000
Extended from SGML	Extended from XML & HTML
Format is a document file format	Format is a markup language
All tags & attributes are not necessarily to be in lower or upper case	Every tag & attributes should be in lower case
Doctype is not necessary to write at the top	Doctype is very necessary to write at the top of the file
Not necessary to close the tags in the order they are opened	Necessary to close the tags in the order they are opened
Attributes need not mentioned in quotes Eg: <Great>	Attributes mandatory mentioned in quotes Eg: <Great = "GJG">
File name extension: .html, .htm	File name extension: .xtml, .xht, .xml

ANY QUERIES??????