



Prep Smart. Score Better.



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XML And Javascript

ABOUT ME : NAVNEET GUPTA

- **8 years teaching experience.**
- **AIR 92 in GATE 2008**
- **Qualified UGC-NET 2012, Raj.-SET 2012, CSIR-Recruitment-Exam in 2011**
- **Achieved 3rd Rank in NPTEL-DBMS Course**
- **Achieved Silver Medal in CSIR on ERP Project in 2013**
- **Area of Expertise : DBMS, Programming, Algorithms, Discrete Math, Computer Networks, Operating system**



XML

- * Extensible Markup Language
- * XML was designed to store and transport data.
- (*) XML was designed to be both human & machine readable
- (*) User-defined tags.

Why Study XML?

- ① XML plays an important role in many different IT systems.
- ② XML is often used for distributing data over the Internet.
- ③ It is important (for all types of software developers!) to have a good understanding of XML.

XML Example

✓ <? XML version = "1.0" encoding = "UTF-8"?>

✓ <bookstore>

<book category = "Children">
 <title> Kids Zone </title>
 <author> XYZ </author>
 <price> 500 </price>
</book>

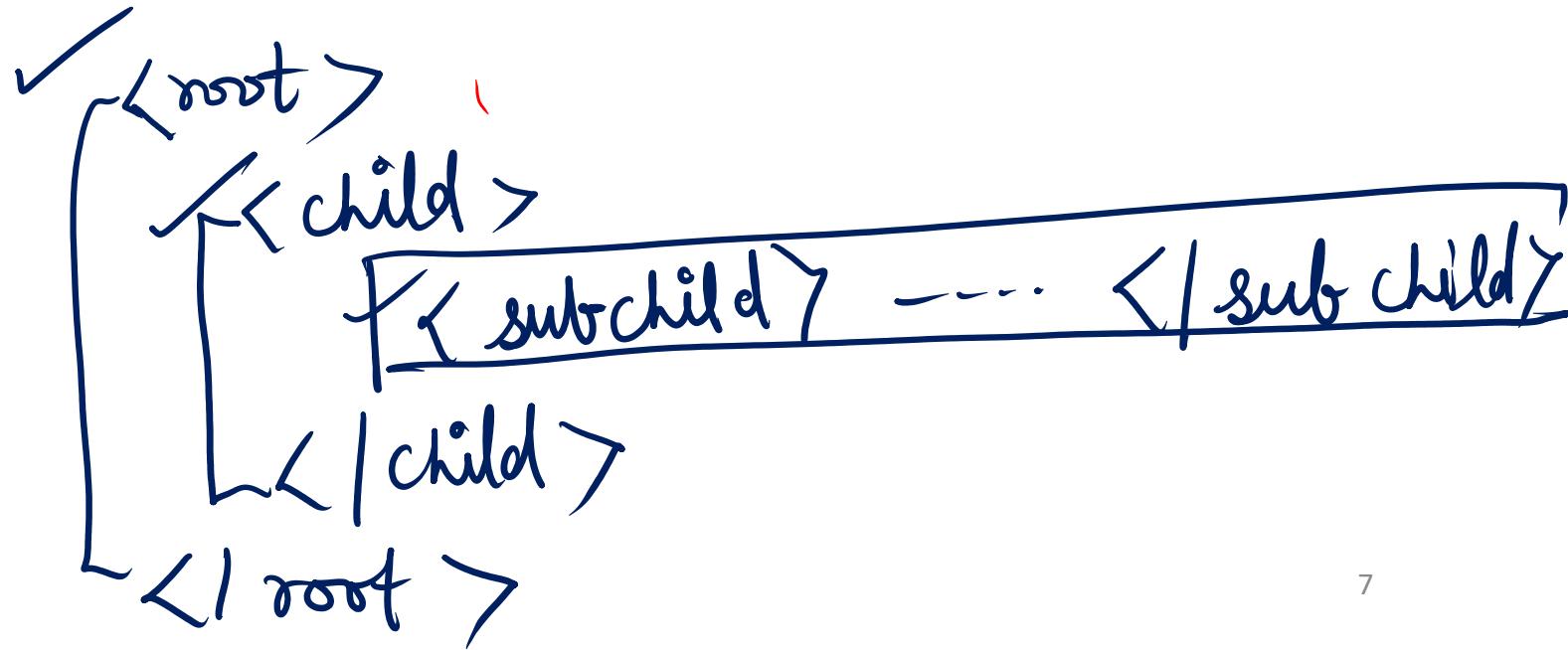
Example:-Contd.

```
<book category="Web">
    <title> PHP + Java </title>
    <author> A M P </author>
    <price> 600 </price>
</book>
</bookstore>
```

children		
title	Author	price
✓	-	-
web	-	-

XML Documents Must Have a Root Element

XML documents must contain one root element that is the parent of all other elements.



The XML Prolog

optional

<? xml

✓
version = "1.0"

✓
encoding = "UTF-8")

The XML ~~DTD~~ (Document type definition)

- * An XML document with correct syntax is called as "Well formed".
- * An XML document is validated against a ~~DTD~~ is both "Well formed" & "Valid".

NOTE:-

<Letter>

</letter> X

- i) XML tags are case-sensitive.
- ii) In XML, it is illegal to omit the closing tag.
All elements must have a closing tag.
- iii) XML elements must be properly nested.
- iv) XML attributes values must always be quoted. " "

Why Study JavaScript?

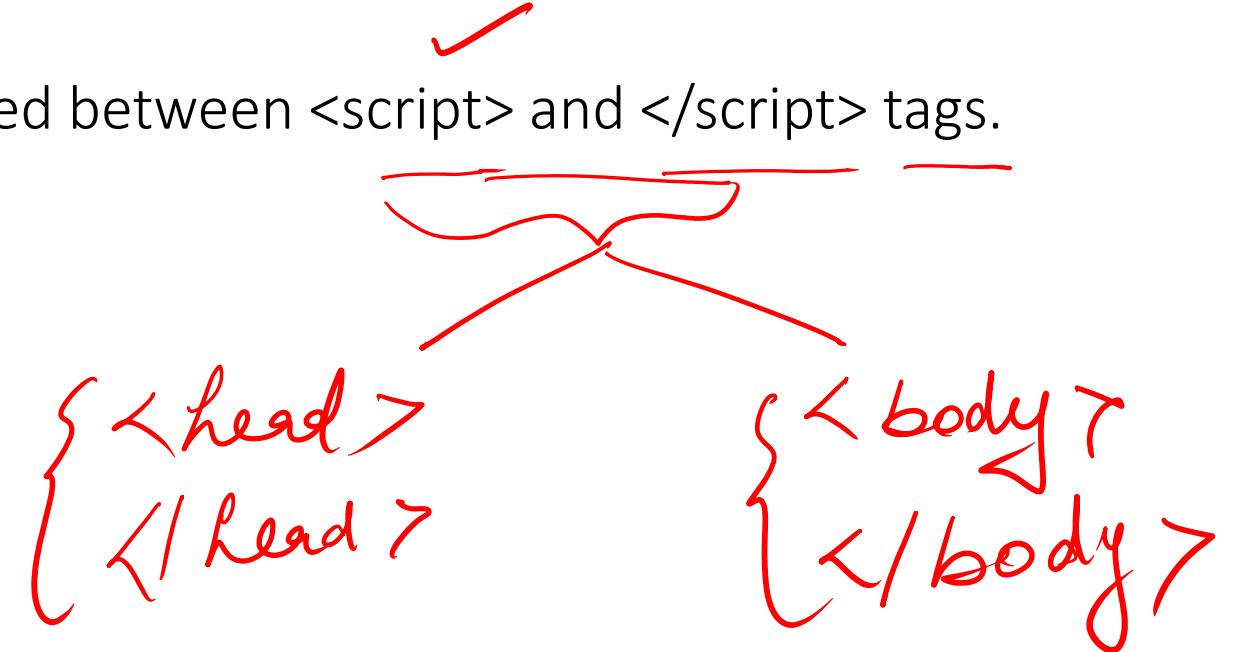
JavaScript is one of the 3 languages all web developers **must** learn:

1. HTML to define the content of web pages
2. CSS to specify the layout of web pages
3. JavaScript to program the behavior of web pages

✓ (*) Java & javascript both languages
are different.

The <script> Tag

In HTML, JavaScript code is inserted between `<script>` and `</script>` tags.



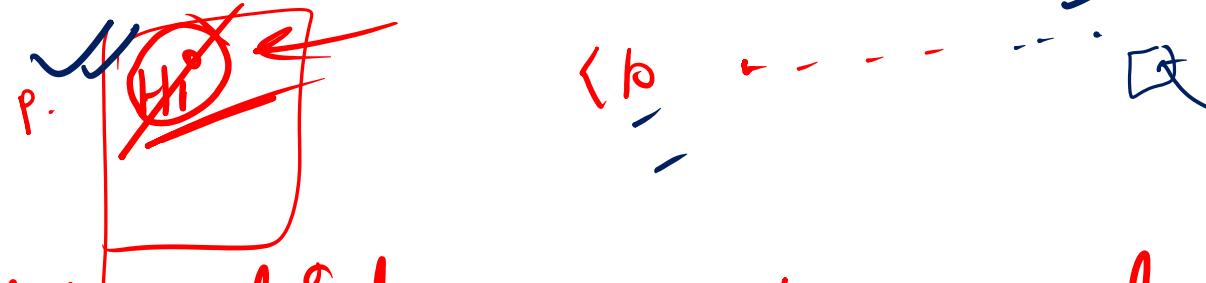
JavaScript Can Change HTML Content

one of many javascript HTML methods is
getElementById()

Note: Javascript accepts both double & single quote

Example:

✓ document. getElementById ("demo"). innerHTML =
"Hello javascript";



This example finds an HTML element with
id = "demo" & changes the element content
(innerHTML) to "Hello Javascript"

1 week

JavaScript Functions and Events

- (*) A javascript function is a block of javascript code, that can be executed when called for.
- (*) for example, a function can be called when an event occurs, like when user clicks a button.

Example

```
<!DOCTYPE HTML>
<HTML>
<Head>
  <script>
    ✓ function myfun ()
    {
      Document.getElementById
        ("demo").innerHTML= "Paragraph
        changed";
    }
  </script>
```

</head>
<body>
✓ <H1> A web page </H1>
=>
<p id = "demo" > A
paragraph </p>
<button type = "button"
onclick = "myfun()" >
Try it </button>
</body>
</HTML>

Output



JavaScript in Head

A Paragraph.

Try it

~~Paragraphs changed~~

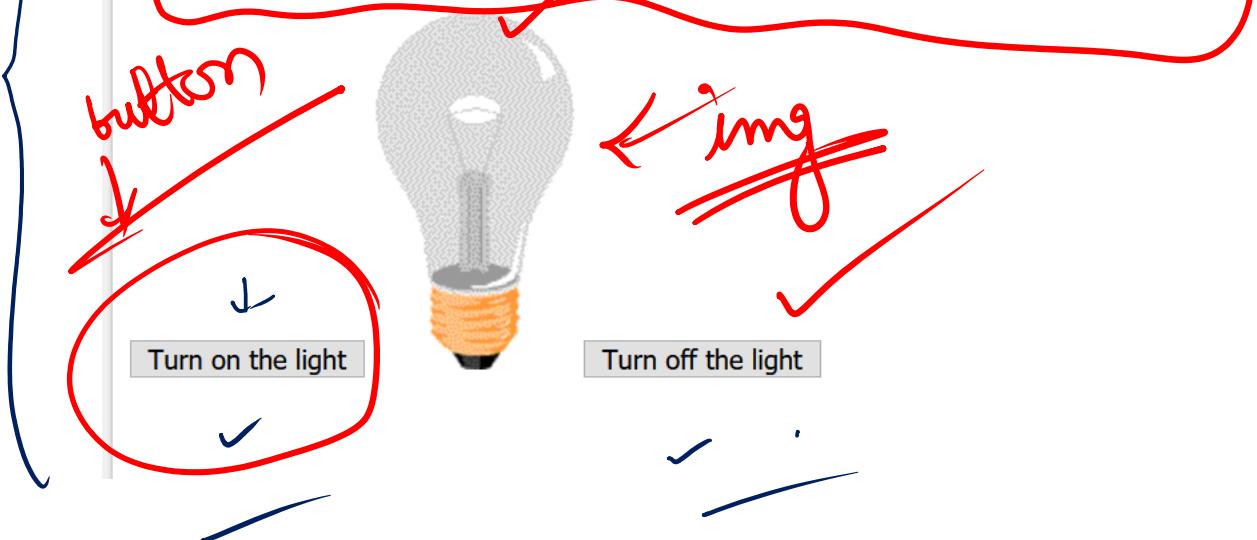


JavaScript Can Change HTML Attribute Values

What Can JavaScript Do?

JavaScript can change HTML attribute values.

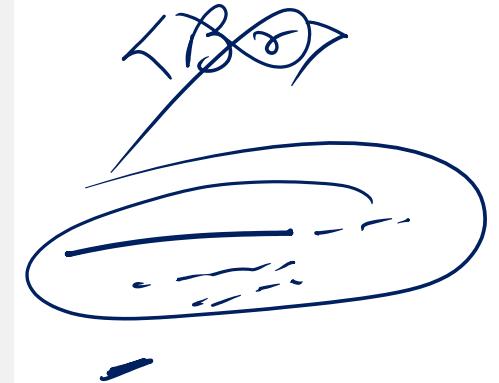
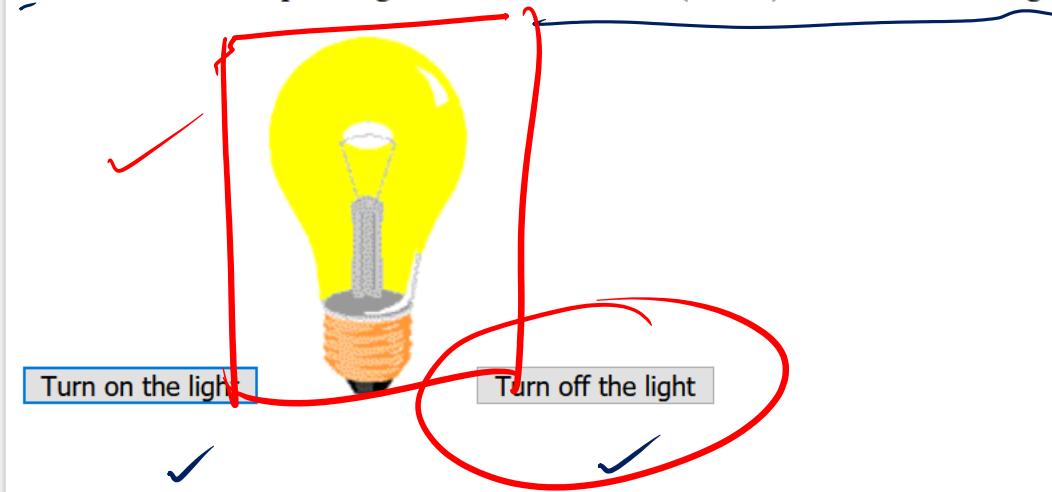
In this case JavaScript changes the value of the src (source) attribute of an image.



What Can JavaScript Do?

JavaScript can change HTML attribute values.

In this case JavaScript changes the value of the src (source) attribute of an image.



CODE:-

```
<!DOCTYPE HTML>
<html>
<body>
<h2>What Can Javascript Do? </h2>
<p>Javascript can change HTML
  & attribute values </p>
<p>In this case javascript
  changes the value of src
  (source) attribute of an
```

<button type="button"
 onclick="document.getElementById('myimage').src = 'bulb.on.gif'>

Turn on the light </button>

<button onclick="document.getElementById('myimage').src = 'bulboff.gif'">

image </p>

CODE:-

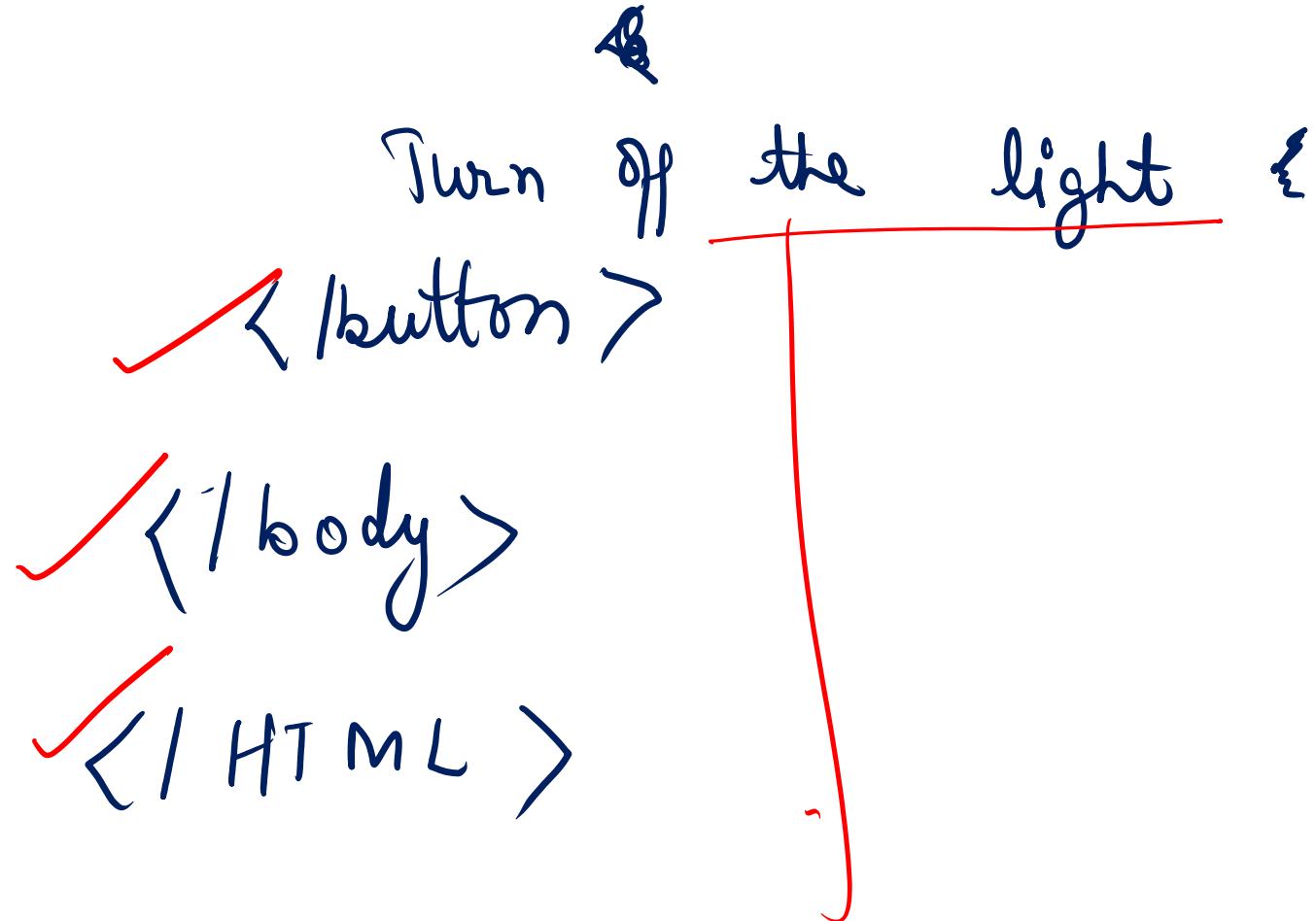
A

Turn off the light {

✓ </button>

✓ </body>

✓ </HTML>



The handwritten code diagram illustrates the structure of a simple HTML document. At the top, the text "Turn off the light {" is written in blue ink. A horizontal red line extends from the opening brace "{" to the word "light". Below this, the word "the" is followed by a vertical red line that descends to the closing brace "}" at the bottom. To the left of the code, three red checkmarks are placed next to the closing tags "</button>", "</body>", and "</HTML>".

HTML Events

Example

↓

```
<button onclick = "document.getElementById('demo').innerHTML = Date()">
```

The time is ?

```
</button>
```

The time is?



The time is?

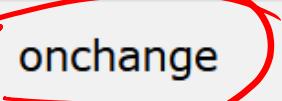
Tue Jan 05 2021 14:52:04 GMT+0530 (India Standard Time)



Common HTML Events

Here is a list of some common HTML events:

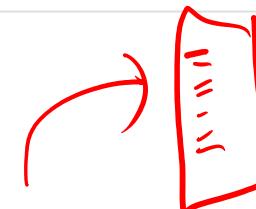
< b id="demo">
Hello

onchange = '----' 




Wellcome

| Event | Description |
|-------------|--|
| onchange | An HTML element has been changed |
| onclick | The user clicks an HTML element |
| onmouseover | The user moves the mouse over an HTML element |
| onmouseout | The user moves the mouse away from an HTML element |
| onkeydown | The user pushes a keyboard key |
| onload | The browser has finished loading the page |



Q1 What can you say about the following statements?

1. XML tags are case-insensitive F
2. In JavaScript, identifier names are case-sensitive T
3. Cascading Style Sheets (CSS) cannot be used with XML F
4. All well formed XML documents must contain a document type definition ~~NOT~~

1. only I and II are false
2. only III and IV are false
3. only I and III are false
4. only II and IV are false

Q)

Which works similar to *<i>* element?

- a) ``
- b) ``
- c) ``
- d) `<blockquote>`

``

emphasis

3)

Which works similar to **** element?

- a) ****
- b) ****
- c) **<i>**
- d) **<blockquote>**

↳ bold

4) Which element is used for short quote?

- a) <q>
- b) <blockquote>
- c)
- d) <abbr>

I am <q> Narneet Gupta </q>



I am "Narneet Gupta"

5)

A hexadecimal literal begins with _____

- a) 00
- b) 0x
- c) 0X
- d) Both 0x and 0X

Javascript

0x

0X

6) JavaScript _____ when there is an indefinite or an infinite value during an arithmetic computation.

- a) Prints an exception error
- b) Prints an overflow error
- c) Displays "Infinity" ✓
- d) Prints the value as such

$$\frac{a}{0}$$

**HAVE
A
GREAT
DAY!**