

Unit 1.

Q1 What are XML Schemas? How are they better than DTDs.

=> XML Schema is used to define the legal building blocks of an XML document, just like DTD. XML schemas are richer and more powerful than DTDs.

XML Schema is a W3C standard. It is an XML-based alternative to DTDs. XML Schema defines user-defined integrants like elements, sub-elements, and attributes needed in an XML document. It defines the datatypes for elements and attributes along with the occurrence order.

Q2 List and describe any 5 HTML tag with one example.

1. Body tag

`<Body> ... </Body>`

Body tag contains some attributes such as `bg color`, `background` etc.

2. Paragraph tag

`<P> ... </P>`

This is used to put paragraph in web.

3. Heading tag:

There are six heading tags.

`<h1> ... </h1>` - largest heading

`<h2> ... </h2>`

`<h3> ... </h3>`

`<h4> ... </h4>`

`<h5> ... </h5>`

`<h6> ... </h6>` - smallest heading

4. Anchor tag:

` text `

This is used to put link or hyperlinks in web.

where href attribute is used to give path of a file.

5. List tag:

1) Unordered list

` `

2) Ordered list

` `

Q3. What are the DTDs? Explain how do they work.

- A Document type Definition defines the legal building blocks of an XML document. - It defines the structure with a list of legal elements and attributes.

- DTDs examine the validity of structure and vocabulary of an XML document against the grammatical rules and

- regulations of suitable xml language
- a) An application can take place help of DTD to check that xml data is valid
 - 5) xml document are
 - 1) well formed 2) valid

Q8 Define the term

① Website :

A website is made up of number of web pages. A website is a file which is accessible anywhere in world through internet website are usually created for commercial purpose .com .org .net .biz.

② Web page

A web page is a hypertext document provided by a website and displayed to user in a web browser.

③ Webserver

A web server is a computer software and underlying hardware that accept request via HTTP A web server is a computer that run website.

④ Homepage

A Homepage is the main web page of a website It is a starting point of website.

website It is located in the root directory

⑤ URL :- Uniform Resource Locator colloquially termed as web address is a reference to a web resource that specifies its location on a computer network.

Unit 2

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Q1 Difference Between JavaScript and JQuery.

JavaScript

JQuery

1. JavaScript is a Scripting language work with all browser. JQuery contains Set of Library functions made of JavaScript.
2. JavaScript can make Web pages more useful by supplying immediate feedback. JQuery Become easier and useful in Creating a web based Application using JQuery.
3. JavaScript is a combination of European computer manufacturers Association Script (ECMA) and DOM. JQuery has DOM.
4. JavaScript cannot possible To use Animation. JQuery Allow Easily To use Animation.

Q2 List and describe any five functions in JavaScript.

→

① Constructor ()

Returns the function that created this object's instance. By default this is the Number Object.

② toString ()

Return the string representation of the number's value.

③ value of ()
Returns the primitive value of the Boolean object.

④ concat()
Combines the next of two strings and returns a new string.

⑤ search()
Executes the search for a match between a regular expression and a specified string.

Q 3 Explain the different Data types available in Javascript.

→ String - Represents sequence of characters e.g. "Hello"

Number - represents numeric value
e.g. 100

Boolean - represent boolean value either false or true.

undefined - represents undefined value

Object - represents instance through which we can access members

Array - represents group of similar values

Reg Exp - represents regular expression

How to create and read array element in JavaScript

JavaScript arrays are used to store multiple values in a single variable

Ex: `const cars = ["Saab", "volvo", "BMW"];`

~~What is an array?~~

An array is a special variable which can hold more than one value at a time

Creating an Array

Using an array literal is the easiest way to create a JavaScript Array.

Syntax:

`const array_name = [item1, item2, ...];`

Access the Full Array

Ex. `const cars = ["Saab", "volvo", "BMW"];`

`document.getElementById("demo").`

`innerHTML = cars;`

Unit 3

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Q1 Write difference Between include action and include directive in JSP

Include Directive	Include action
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1) The code of one jsp page is inserted into another jsp. It called compile time/static including.	The response of one page will be inserted into another page. It is called, runtime or dynamic ic including.
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2) For both source & destination pages only a single servlet will be generated internally so no. of servlet object are reduced	Individual servlet are generated for each jsp page so it increase the number of Servlet object.
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3) Both HTML and XML Syntax for the tag	Only XML Syntax but there is only HTML Syntax
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4) <code><%@include file = "" %></code>	<code><% JSP: include page = "" %></code>
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5) file must be available in the within some application	5) Pages may exist either within same application or another web application of server.
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Q2 What is JSP action tag? Discuss in detail JSP :: useBean action tag.

1) JSP action are used to handle the behaviours of servlet engine.

2) These action can perform various task

task like insertion of file dynamically forward the control of next page usage JavaBeans component.

3) `<JSP:useBean>` action

This action is used to use Beans in a JSP page Beans are invoked by this tag

Syntax - `<JSP:useBeans>`

4) `<JSP:useBean id = "bean_id" class = "package.name.class name" />`

Q3 List and elaborate any five JSP implicit object with example.

1. The request object
2. The response object
3. The out object
4. The session object
5. The application object

1) The request object

i) This object is an instance of `java.servlet.http.servlet Request` object

2) The response object

i) The response object is an instance of `java.servlet Request`. `HttpServlet Request` object

3) The out object

i) The out implicit object is an instance of `javax.servlet.jsp.writers` object

ii) It represent output stream.

4) The session object
 i) The session object is an instance of `javax.servlet.http.HttpSession`

5) The config object
 i) The config object is an instance of `javax.servlet.ServletConfig`

Q4. Write advantages of JSP over servlet
 Explain life cycle of JSP.

Advantages

- 1) Extension to servlet
- 2) Easy to maintain
- 3) Fast Development
- 4) Less code than Servlet
- 5) Exception Handling
- 6) Readability
- 7) Less Complexity

Life cycle of JSP

1) Translation Phase

At first when there is a request for JSP pages the JSP page is translated into Servlet.

2) Compilation Phase

JSP engine check whether the JSP page request is for first time. If yes then generated servlet is compiled.

3) Execution Phase

Jsp servlet method are executed
`public void jspInit()`

6) Cleanup Phase

The end of JSP life cycle is in this phase of JSP is destroy and removed from the container `JSPDestroy()`.