

Q1 What is XML? Explain the anatomy of XML with proper syntax

- • XML stands for extensible markup language
- XML is a markup language much like HTML
- XML was designed to store and transport data
- XML was designed to be self-descriptive
- XML is a W3C Recommendation

XML syntax:-

- 1. The XML declaration is case sensitive and must begin with "<?xml>" where "XML" written in lower-case.
- 2. If document contains XML declaration then it strictly needs to be the first statement of the XML document
- 3. The XML declaration strictly needs be the first statement in the XML document.
- 4. An HTTP protocol can override the variable of encoding that you put in the XML declaration

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Q 2 What is DTD? Explain the types of DTD with suitable example.

→ A document type definition (DTD) is a set of markup declarations that define a document type for an SGML family markup language (GML, SGML, XML, HTML).

A DTD defines the valid building blocks of an XML document. It defines the document structure with a list of validated element and attributes. A DTD can be declared inline inside an XML document, or as an external references.

Types of DTD:-

DTD identifier is an identifier for the document type definition, which maybe the path to a file on the system or URL to a file on the internet. If the DTD is pointing to external path, it is called External subset. The square brackets [] enclose an optional list of entity declaration called Internal subset.

Internal DTD

A DTD is referred to as an internal DTD if elements are declared within the XML files. To refer it as internal DTD, standalone attribute in XML declaration must be set to yes. This means, the declaration works independent of an external source.

External DTD

In external DTD elements are declared outside the XML file. They are accessed by specifying the system attributes which may be either the legal DTD file or a valid URL. To refer it as external DTD, standalone attribute in the XML declaration must be set as no. This means, declaration includes information from the external source.

Q3 Write a short note on XML Schema.

→ An XML Schema describes the structure of an XML document

The XML Schema language is also referred to as XML Schema definition (XSD)

The purpose of an XML Schema is to define the legal building blocks of an XML document:

- The elements and attributes that can appear in a document
- The number of (and order of) child element
- Data types for elements and attributes
- Default and fixed values for elements and attributes.
- It is easier to describe allowable document content
- It is easier to validate the correctness of data
- It is easier to define data facets
- It is easier to convert data between different data types.

Q4 Define PHP. How to pass information in PHP with GET and POST method?

→ PHP:-

stands for "Hypertext Preprocessor". It is a recursive acronym, if you can understand what that means. PHP is an HTML-embedded web scripting language. This means PHP code can be inserted into the HTML of a Web page. When a PHP page is accessed, the PHP code is read or "parsed" by the server the page resides on.

GET and POST Methods in PHP

PHP provides two methods through which a client (browser) can send information to the server. These methods are given below, and discussed in details:

- 1) GET Method
- 2) POST Method

Get and Post methods are the HTTP request methods used inside the <form> tag to send form data to the server.

HTTP Protocol enables the communication between the client and the server where a browser can be the clients ; and on a computer system that hosts your website can be the server.

GET Method.

The get method is used to submit the HTML form data . This data is collected by the predefined `$_GET` variable for processing.

POST Method.

Similar to the GET method , the POST method is also used to submit the HTML form data . But the data submitted by this method is collected by the predefined superglobal variable `$_POST` instead of `$_GET`

Q5 What are regular expressions? Explain with example

→ A regular expression is a sequence of characters that forms a search pattern. When you search for data in a text.

The W3C search XML Schema standard defines its own regular expression flavour. You can use it in the pattern facet of simple type definitions in your XML schema. Eg the following defines the simple type "SSN" using a regular expression that require the element to contain a valid US social security number

```
<xsd:simpleType name = "SSN">
  <xsd:restriction base = "xsd:token">
    <xsd:pattern value = "[0-9]{3} - [0-9]{2} - [0-9]{4}" />
  </xsd:restriction>
</xsd:simpleType>
```

Compared with other regular expression flavours, the XML Schema flavour is quite limited in features.

Q6 write in short on superglobal arrays

→ These are specifically defined array variables in PHP that make it easy for you to get information about a request or its context. The superglobals are available throughout your script. These variables can be accessed from any function, class or any file without doing any special task such as declaring any global variable etc. They

They are mainly used to store and get information from one page to certain another etc in an application.

Below is the list of superglobal variables available in PHP:-

- 1) \$GLOBALS
- 2) \$_SERVER
- 3) \$_REQUEST
- 4) \$_GET
- 5) \$_POST
- 6) \$_SESSION
- 7) \$_COOKIE
- 8) \$_FILES
- 9) \$_ENV

Q7 Explain string and string functions with example:

→ A string is a sequence of characters, like "Hello World!"

A string is a collection of characters. String is one of the data types supported by PHP. The string variables can contain alphanumeric characters. Strings are created when you declare variable and assign string characters to it.

Example

The PHP `strlen()` function returns the length of a string

Return the length of the string "Hello World!"

```
<?php  
    echo strlen("Hello World!");  
?>
```

Output :- 12