

UNIT – I

Web Essentials: Clients, Servers, and Communication. The Internet-Basic Internet Protocols -The World Wide Web-HTTP request message-response message- Web Clients Web Servers-Case Study. Markup Languages: XHTML. An Introduction to HTML History-Versions-Basic XHTML Syntax and Semantics-Some Fundamental HTML Elements-Relative URLs-Lists-tables- Frames-Forms-XML Creating HTML Documents Case Study.

1. Define Internet?

The internet is the world's largest IP-based network. It is an amorphous group of computers in many different countries on all seven continents that talk to each other using the IP protocol.

2. Define Protocol?

A protocol is a precise set of rules defining how components communicate, the format of addresses, how data is split into packets

3. Write the expansion for the following.

ARPA – Advanced Research Projects Agency UDP – User Datagram Protocol

POP3 – Post Office Protocol version 3

MIME – Multimedia Internet Message Extension Protocol

IMAP – Internet Message Access Protocol

4. List out the basic Internet Protocols.

TCP/IP, POP3, MIME, IMAP

5. What are the two major protocols for accessing email from servers?

HTTP - Hypertext Transfer Protocol and SMTP - Simple Mail Transfer Protocol

6. Define HTTP Protocol.

HTTP is a form of stateless communication protocol which gives a detailed specification of how web client and server should communicate and the basic structure followed is known as ***Request-Response*** model.

7. What is the structure of HTTP Request Message?

Start line (Request method, Request URI portion of web address, HTTP version) Header fields

Blank line, Message Body

8. Write the structure of HTTP Response Message.

Status line Header fields Blank line Message Body

9. What are HTTP Status Codes?

This code provides the information about the HTTP Response from the server. All status code is three-digit decimal numbers. The first digit represents the general class of status code. The last two digits of a status code define the specific status within the specified class

10. List out the five classes of HTTP 1.1 status codes.

Digit Class

1 International

2 Success

3 Redirection

4 Client Error

5 Server Error

11. List out the available HTTP methods.

GET, HEAD, POST, OPTIONS, PUT, DELETE, TRACE

12. What is Cache?

Browsers often cache (save on disk) web pages so they can quickly reload the pages. If there are no changes between the last version stored in the cache and the current version on the Web, this helps speed up your browsing experience.

13. Define Web Clients.

A Web Client is software that accesses a web server by sending an HTTP request message and processing the resulting HTTP response.

14. What are Web Servers?

A Web Server is software that accepts HTTP requests from web clients and returns an appropriate resource in the HTTP response.

15. What are Secure Servers?

The standard means of indicating to a browser that it should encrypt an HTTP request is to use the *https* scheme on the URL for the request. For e.g. <https://www.example.org> will cause the browser to attempt to send an encrypted HTTP GET request.

16. What is HTML?

Hypertext is ordinary text that has been designed with extra features such as formatting, images, multimedia and links to other documents. Markup is the process of taking ordinary text and adding extra symbols. Each of the symbols used for markup in HTML is a command that tells a browser how to display the text. HTML is the technical term for the format used to create normal web pages.

17. What are HTML forms?

An HTML form is used to allow a user to input data on a web page and the element used is **form element** and its main attributes are **action** and **method**. Its format is <form action

= `http://www.example.orgmethod = "get"> <form>`

18. How will you create a password field in a HTML form? (NOV/DEC2011)

The password field for a form is created by "input of type password".

19. What are entity references?

A reference which uses a mnemonic name for the character references in the HTML document always begins with ampersand (&) and ends with semicolon (;) is called an entity reference. E.G. &NBSP;, " < > ETC.

20. What are character references?

This reference are second type of reference for each symbol in an HTML document and begins with a number sign which follows the ampersand beginning the reference and is followed by the Unicode Standard value of the character. E.g. < , ñ , α.

21. Discuss about comments in HTML.

A comment in HTML, like comments in other computer languages, is something that is intended to be read by the programmers but to be ignored by the software processing the document. A comment begins with the string of characters `<!--`—which must contain no white space. A comment ends with the string `-->` again with no white space.

`<!-- Single line Comment Multi line Comments -->`

22. What are the types of list supported by HTML?

There are three types of list supported by HTML.

Unordered – A bullet list

Ordered – a number list and Definition – A list of terms and definitions for each

23. Define URI. (APRIL/MAY 2011)

Uniform Resources Identifier (URI) is an identifier that is intended to be associated with a particular resource on World Wide Web.

24. What is #PCDATA?

The keyword #PCDATA (—Parsed Character Data) used in defining the character

data and mixed content types represent any string of characters excluding less-than and

ampersand, which are included because they represent the start characters for markup.

25. List out some important HTML elements.

<HTML> </HTML>

<BODY> </BODY>

<FORM> </FORM>

<TABLE> </TABLE>

<PRE>,
,

<P>, , <I>, <U>

, , <TT>,

<H1>.... <H6>

, ,

<INPUT> <SELECT>

26. List any four common browsers. (NOV/DEC2011)

1. Firefox

2. Internet Explorer

3. Chrome

4. Safari

27. What are the types of Entity Declarations?

XML DTD can contain entity declarations each of which begins with the keyword

ENTITY

followed by an entity name and its replacement text such as

```
<!ENTITY GT “&#62;”>
```

Types of Entities are i) General Entities ii) Parameter Entities iii) External Entities

28. What are attribute list declarations?

An attribute list declaration is included in the DTD for each element that has attributes and its declaration begins with the keyword ATTLIST followed by an element type name and specifies the names for all attributes of the named element, the type of data that can be used as the value of each attribute, and default value information.

29. List out the types of attribute list declarations?

NMTOKEN Name token

ID Identifier

IDREF Identifier Reference IDREFS Identifier Reference list CDATA
Character Data

PCDATA Parsed Character Data

30. State the use of web server logs and list the contents of a message log.

The server log may be used to examine traffic patterns by time of day, day of week, referrer, or user agent. Efficient web site administration, adequate hosting resources and the fine tuning of sales efforts can be aided by analysis of the web server logs. Marketing departments of any organization that owns a website should be trained to understand these powerful tools.

31. Explain in brief the interaction between a web server and a Servlet.

Client

- Makes a request by specifying a URL + additional info
- Basically a method call, the method and arguments.

Web Server

- Receives the request.
- Identifies the request as a servlet request
- Passes the request to the servlet container

Servlet Container

- Locates the servlet (Java code, loaded and running in the container JVM)
- Feeds the request parameters to the servlet

Servlet

- Executes in a separate thread
- The servlet can store/retrieve objects (possibly session scoped) from the servlet container.
- Output is sent back to the requesting web browser.

- Servlet continues to be available in the servlet container.