## UNIT - 1 WEBSITE BASICS, HTML5, CSS3, WEB2.0

## Part-A

## 1. What is Web2.0?(Nov/Dec 2017)

- It is not the second version of Web
- 2.0 denotes two-way data traffic on the Web(R/W)
- It is also called Participatory web (or) Read/Write Web
- Earlier data traffic on the web was unidirectional(Read-Only)

#### 2. Define website.

- A website is defined as a collection of web pages linked together that has a unique domain name, that can be accessed from anywhere across the globe over internet.
- It is hosted by a web server and viewed by web clients
- It can be developed in HTML, JavaScript, DHTML, PHP, etc.

#### 3. Define WWW.

- World Wide Web is defined as a collection of software and corresponding protocols used to access the resources over the internet across the globe.
- It contains huge amount of Docs, images, etc.
- Internet can be accessed through the WWW
- Invented by Tim Berners-Lee in 1994 (W3C) at MIT
- 4. Mention the differences between website and web server(Apr/May 2017).

Website	Web server
It is a collection of web pages	It is a server on which web
	application is executed
It is a software application	It is a physical entity that has
that has unique domain name	unique IP address
It can host many web pages	It can host many websites
They communicate with web	They communicate with other
server	servers such as DB server,
	File server, etc
Web server =	It receives request and gives
HTML&CSS + JS+ DHTML	corresponding response
Ex: https://www.google.co.in	Ex: IIS, Apache

#### 5. Define web crawler.

A web crawler is defined as the ability of the web to parse a
web page into different semantic elements (navigation links,
friend links, group links, etc) and extract the social network
and other associated data.

## 6. What is RIA? What are features of RIA? (Nov/Dec 2016)

 RIA (Rich Internet Application) is defined as a web application that is designed to give the same features and functions associated with desktop applications.

#### Features:-

- It can work on the web
- Information in RIA always visible to users thereby reducing unwanted page refreshes and navigations.
- Ability of web to present complex information to the users
- Good user interactivity such as images, graphics, etc.
- It helps users to understand complex business apps

#### 7. What is a collaboration tool? What are its features?

• Collaboration tools allow a group of people work together virtually in real-time over the internet.

#### Features:-

Easy to use and set up.	Clean interface
Secure	Permissions control
Ability to upload documents	File storage
Scalable	Document locking

#### 8. What is URL?

- Uniform Resource Locator (URL) is defined as an unique address for the file that has to be accessed over the internet
- If we want to access a website, we enter its URL in the address bar of the web browser
- Syntax: protocol: //www.exampleDomain.com/path/filename
- Ex: https://www.vit.ac.in / home.aspx

#### 9. What is IP?

- Internet Protocol (IP) is a network layer protocol which consists of addressing information, that is the fundamental protocol which is being used by data packets over the internet
- Using this protocol, communication between uniquely addressed computers has been made possible.

#### 10. Tabulate the differences between TCP and UDP

TCP	UDP	
Connection oriented (link	Connection less	
between the packets)		
ACK is available	No ACK	
Reliable	Unreliable	
Heavy weight protocol	Light weight protocol	
Handshaking mechanism	No handshaking concept	
Error control, flow control,	No control mechanism	
congestion control, etc		
Complex, tough to implement	Simple, easy to implement	
Ex: Telnet, SMTP, FTP, e-mail,	Ex: VoIP, DHCP, DNS, RIP,	
SSH, HTTP, HTTP, HTTPS	SNMP	

#### 11. What is HTTP?

- Hyper Text Transfer protocol (HTTP) is a request/Response, stateless protocol for communication, to transfer information on LAN and WWW
- It is used to deliver files virtually and other data on WWW
- It takes place through TCP/IP sockets
- A browser is a HTTP client sends HTTP request
- A web server is a HTTP server sends HTTP reply
- It uses port no: 80 (HTTP servers listen to this port)

#### 12. What are the protocols used in email?

<u>SMTP</u>	POP	<u>IMAP</u>
<ul> <li>Connection-</li> </ul>		<ul> <li>Manipulate email</li> </ul>
oriented		<ul> <li>No downloading</li> </ul>
<ul> <li>Text-based</li> </ul>		<ul> <li>Can't transfer</li> </ul>
• Works in	Offline email access	email
application		<ul> <li>Access the</li> </ul>
layer	Download is needed	received emails
• ACK is	Only 1 mailbox	<ul> <li>Search the mails</li> </ul>
available	Less internet usage	<ul> <li>Many mailboxes</li> </ul>
• It uses port 25		<ul> <li>More internet</li> </ul>
	OTI	usage

## 13. What are the differences between internet and intranet?

INTERNET	INTRANET (Nov'15)	
Network of networks, open for	Network of computers, for	
all	closed group	
Limited no. of users	Unlimited no. of users	
Different sources of info	Limited sources of info	
Large no. of intranets	Less number of systems	
Internet =LAN + WAN + MAN	Intranet = LAN   WAN   MAN	

## 14. What are the flavours of HTML? (types of HTML DTD)

- XHTML 1.0 Strict: When we want a clean mark-up code
- XHTML 1.0 Transitional: To use HTML features
- XHTML 1.0 Frameset: To make use of frames

## 15. What is XHTML? (Nov/Dec 2017)

- Extensible HTML is the extended version of HTML that has strict rules when compared to HTML
- It is more consistent, well-structured document
- Web pages made in XHTML can be easily understood by the present and future web browsers

#### 16. What is the use of forms in HTML?

- HTML form element is used to allow a user to give input data on the web page.
- To create registration forms, login forms, getting user info, conducting surveys
- <form>......</form> tags are used
- · Attributes used: action, method

#### Ex

<form action = http://www.google.co.in/ method = post>
</form>

#### 17. What is the use of frames in HTML?

- It allows the web developers to present the web document in multiple views
- Using this, within a same window, one can keep some information visible, other part of web page to contain some other information, other part of web page can be reloaded.
- Ex: one frame can display company info, second frame can display navigation menu, etc.

## 18. Why HTTP is stateless protocol?

- HTTP cannot remember previous user information
- It does not recall the number of page visits
- It means it cannot remember its previous states.
- That is the reason why HTTP is stateless protocol.

#### 19. Mention some of the protocols that are used in internet.

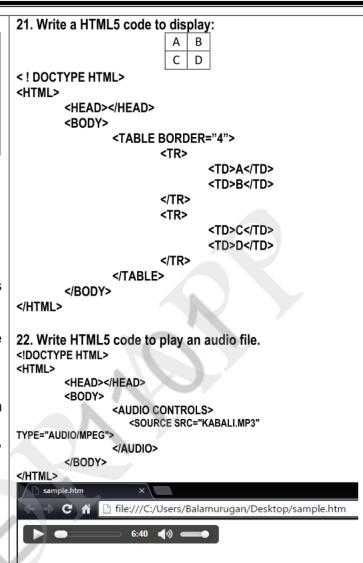
• FTP, HTTP, SNMP, SMTP, POP3, IMAP, TCP, UDP, IP

#### 20. What are HTML tags? Give examples.

- An HTML tag is defined as a command that tells the web browser, how to display the text, audio, video, and graphics on a web page when loaded.
- They are mentioned in a pair of angular brackets <>

Ex:

• <html></html>	<h1></h1>
• <head></head>	 br/>
<title></title>	<hr/>
<pre> <hody> </hody></pre>	



# 23. Write an HTML5 code to display a video file.

<!DOCTYPE HTML>

<HTML>

</HTML>

<HEAD></HEAD>

<BODY>

<VIDEO WIDTH = "400" HEIGHT = "300" CONTROLS>

<SOURCE SRC="kochadaiyaan.mp4" TYPE="VIDEO/MP4">

</VIDEO>

</BODY>







## UNIT 2,3 - CLIENT SIDE & SERVER SIDE SCRIPTING

## PART- A

Mention the differences between client side and server side scripting.

Client side scripting Server side scripting It runs on web browser It runs on web server Front end concept Back end concept Script is processed at end Script is processed at server user's PC To develop websites that are To develop sites that fetches interactive with user data from DB Visible to user Invisible to user Less secure More secure Less customization High customization More tasks at the browser More tasks at the server

## 2. State the differences between programming and scripting

Changes will affect DB

ColdFusion, Go, Python

Ex: PHP, ASP.NET, Perl, Ruby,

Programming	Scripting
Compiled and executed	Interpreted
Has complete syntax and	Less syntax and semantics
semantics	
To build apps	To control apps
Stand alone	Need other programs to execute
Contents of a system	Acts upon a system
Heavy weight	Light weight
Single usage tool	Multi usage tool
Not as quick as scripting	Quicker
.EXE files cannot be viewed	Scripts can be viewed

## 3. Mention the features of JavaScript.

- It is useful for page designers
- · Light weight, interpreted, embedded in HTML
- Network centric apps
- JS = JAVA + HTML

Any changes will affect DB

Ex: JS, VB script, Dart

- It is a FOSS
- To develop dynamic and interactive pages
- To react to events
- To validate data, create cookies

#### 4. What is DOM? What are the uses of DOM tree?

 DOM is a set of platform independent and language independent API, that tells how to access and manipulate information stored in XML, XHTML, JS

## Uses:-

- To identify interface and object for representing and manipulating a document
- To find behaviour and attributes of interface & object
- To find relation between interface and object

## DOM tree:-

- Documents in DOM are represented using a tree like structure
- Every element is represented as a node
- This tree structure is called as DOM tree

#### 5. What are the levels of DOM?

**Level 0**: To access few html elements (by Netscape in 1990s)

**Level 1:** To change entire web page (1998)

**Level 2:→** Platform independent, language independent

→To access dynamically, update contents, structure, style

**Level 3: →** Platform independent, language independent

→ To access dynamically, update contents, structure, style

# 6. What are getElementByID() and innerHTML properties? getElementById:-

- To access HTML element, we need ID of it.
- For instance, there can be many ...tags in a same HTML document.
- To find a specific element from the HTML document, we use getElementById() method

#### innerHTML:-

- To get the content of an element, this property is used
- To get/replace the contents present within tags

#### 7. What is validation?

- It occurs usually at the server, after the client had entered all necessary data and then clicked submit button
- If user enters some wrong/missing data, server has to send all the contents back to client and request for resubmission with correct information
- This increases the task of a server
- Javascript validates user's data at the browser, reduces the workload of a server

#### 8. What are the differences between HTML and DHTML?

HTML	DHTML	
Hypertext Markup Language	Dynamic HTML	
Static web pages	Dynamic web pages	
It works slowly upon client-	It works faster on client-server	
server technology	technology	
No CSS, and no dynamic	Use CSS, events, methods to	
contents	create dynamic pages	
No processing at browser	Script is processed at browser	
Contents will not be changed	Contents can be changed	
Simple, less interactive	Complex, more interactive	
Only HTML contents	DHTML = HTML+CSS+JS	

#### 9. Define servlet.

- Servlets are defined as simple java programs that are dynamically loaded and run on JVM of web servers, to respond to the requests from the clients
- It acts as middle layer between browser and server
- To develop sites with secure access, interact with DB, maintain unique session info of each client
- Used with HTTP, hence called HttpServlet
- It makes use of two packages: Javax.servlet and javax.servlet.http

## 10. What is servlet container?

- The server that executes a servlet is called as servlet container or servlet engine
- Browsers send an HTTP request to server, which in turn sends to servlet container
- Servlet container receives the request from the server, processes appropriate servlet, sends back request.

#### 17. What are the uses of cookies?

- Identifying a user during an e-commerce session
- Avoiding username and password.
- Customizing a website as we want.
- Focusing on advertising in web pages

# 11. What are the methods and phases of servlet life cycle? Methods:-

• init(), service(), destroy()

## Phases:-

- Phase 1: Servlet class is loaded
- **Phase 2:** Servlet instance is created
- Phase 3: Init() method is invoked
- Phase 4: Service() method is invoked
- Phase 5: Destroy() method is invoked

#### 12. Mention the differences between GET and POST

HTTP GET request	HTTP POST request	
doGet() method is used	doPost() method is used	
URL string displays request	URL string does not display	
submitted by the user	request submitted by user	
To download info from server	To upload info from server	
No effect on data	Has effect on data	
Page can be bookmarked	Page cannot be bookmarked	
page can be cached, saved	Page cannot be cached,	
in history	cannot be saved in history	
Only ASCII characters	Any character is allowed	
allowed		
Unsafe	More secure	

## 13. What are session tracking techniques?

- It is a mechanism by which we can keep track of previous sessions between server and browser
- Session ID is passed between client and server
- HTTP cannot have any data about precious clientserver communication (stateless)
- To achieve it, we use session tracking

#### Techniques:-

- Use cookies
- Hidden form fields
- URL rewriting

#### 14. What is a cookie? Mention its types.

- A cookie is defined as short piece of data, not actually any source code, which is sent from a web server to browser when a browser visits the server's site.
- Cookie = "name-value" pair
- It is one of the session tracking technique
- Cookie is a plain text data record of 5 fields: expiry time, domain, path, secure, "name=value"
- **Types**: Session cookies, permanent cookies

#### 15. What is hidden form field?

- A hidden text field is used for maintaining the state of a user
- Here, information is stored in hidden field
- It is better if we have to submit form in all the pages and we don't depend on the browser
- Ex: <input type="hidden" name="sid" value="abc123">

## 16. What is URL rewriting?

- The process of adding the name of the user in the query string and getting the value from the query string in another page is called URL rewriting
- "name-value" pairs are passed in URL
- Ex: url?name1=value1&name2=value2&??

## 18. What is JDBC? What are its uses? Mention its types.

- JDBC is defined as an API that provides industry standard and database connectivity between java apps and database servers
- It is a framework that contains many classes, interfaces, exceptions, using which java apps can send SQL statement to database to store and retrieve data

#### Uses:-

- It helps client to store and retrieve data to databases
- It helps client to update databases

## Types:-

- JDBC-ODBC bridge driver
- Partial java driver
- Pure java driver for accessing middleware
- Pure java driver for direct DB access

#### 19. What is JSP?

- Java Server Pages is a kind of server side scripting language that enables user to embed java code with HTML elements for the creation of dynamic, platform-independent method for building web apps
- JSP = Java + HTML + servlet

#### 20. What are the differences between JSP and servlet?

JSP	Servlet
JSP = Java inside HTML	Servlet = HTML inside Java
It generates dynamic web contents	It generates dynamic web pages
In MVC, JSP acts as a view	In MVC, servlet acts as controller
JSP makes use of custom tags	No custom tags

#### 21. Define scriptlet.

 A scriptlet can contain any number of Java language statements, variables or method declarations, or expressions that are valid in the page scripting language

## 22. What is JSTL? What are its advantages?

- Java Standard Tags Library represents set of tags to simplify JSP development
- J2EE is used for server side programming using JAVA and JSTL (a component of J2EE web app development)
- It is useful in performing condition execution, loop execution, data procession, etc
- Embed logic in JSP page without java code

## 23. What are HttpServletRequest and HttpServletResponse?

- They are two commonly used interfaces from javax.servlet.http package
- HttpServletRequest enables servlet to read data from HTTP request
- HttpServletResponse enables servlet to write data to HTTP response

# UNIT 4 - PHP AND XML

## Part - A

#### 1. Define PHP

- PHP is defined as a server side scripting language that is mainly used for form handling and database access.
- PHP stands for Hypertext Pre Processor
- It was invented in 1994 by Rasmus Lerdorf
- It is the most popular scripting language in web
- It is a FOSS

## 2. Mention the features of PHP

- Embedded inside HTML, easy to develop
- FOSS
- Easy to manage dynamic content, database, session tracking
- Supports many protocols such as LDAP, IMAP, POP3
- Supports many databases such as MS SQL server, Oracle, SyBase, PostgreSQL, MySQL, etc
- As much forgiving as possible
- Simple like C and HTML

#### 3. List the uses of PHP

- To perform system functions such as file create, open, close, read, write, etc
- To handle forms, gather data from files, save data to a file, send email, etc
- To add, delete, modify database contents
- To access and set cookies and variables
- To restrict users from page access
- To encrypt data

## 4. What are the rules in PHP?

- White space insensitive
- Case sensitive
- Each statement ends with semi colon
- Expressions are combination of tokens
- Braces creates blocks
- \$ is used before variables
- Save file as .php and access it from localhost server

#### 5. List the data types in PHP.

Simple types	Compound types	Miscellaneous
1. Integer	6. Arrays	8. Resourcess
2. Double	7. Objects	
3. Boolean	•	
4. Null		
5. String		

#### 6. Differentiate echo and print in PHP

echo	Print
No return value	Return value is 1
Cant be used in expression	Can be used in expression
Can take many parameters	Can take 1 parameter
Faster than print	Slower than echo

## 7. explain foreach loop in PHP

	<pre><?php \$a = array (1,2,3); foreach(\$a as \$i) {   echo "\$i   }</pre>		Foreach loop is very much useful in iterations The name itself suggests, for each iteration in for loop, it performs the operations. Iteration variable goes through all the elements in the array
	Output:-	•	
	1		and didmente in the array
	2		
	3		

#### 8. What are cookies in PHP?

- A cookie is a name-value pair that is stored on client computer for tracking purpose
- It is created by some software on the server
- In every HTTP communication between client and server, there is a header, within that, cookies are present
- PHP supports cookies
- Server puts cookie into client machine on first visit.
- When that client machine sends request to that server next time, server identifies which user it is, from where the request arrives, from what device the request comes

## 9. Define XML

- Xtensible Markup language
- XML is defined as a text based mark up language derived from Standard Generalised Markup Language
- Developed by W3C in Feb 1998 to overcome HTML
- A web script that contains XML tags is called XML document
- It is a mark up language that defines set of rules for encoding documents in a format that is both human readable and machine readable
- It is not a programming language

#### 10. Mention the features of XML

- Extensible: user defined tags
- Secure: Carries data, but does not shows it
- Public standard: developed by W3C
- Simplifies HTML for large websites
- To offload and reload databases
- To store and arrange data
- Can be merged with CSS
- Any data can be expressed in XML

#### 11. What are the rules in XML declaration?

- If XML declaration is present, it should be placed 1st
- If XML declaration is present, it must contain version no
- Parameter name and parameter value is case sensitive
- Correct order is: version, encoding, standalone
- Either ' or " can be used
- XML declaration has no close tag →</?xml> is wrong

## 12. What are the types of XML tags?

- Start tag: starting point of user defined tag <username>
- End tag: every start tag must have end tag </username>
- Empty tag: An element that has no content <br><hr>

13. Differentiate XML and HTML				
XML	HTML			
To transport and store data	To display data			
Focus on what data it is	Focus on how the data looks			
Provides framework for defining mark up languages	It is mark up language itself			
It is neither a programming	It is a presentation language			
language, nor a presentation				
language				
Case sensitive	Case insensitive			
User defined tags	No user defined tags			
Closing of each tag is	Not necessary of closing all			
mandatory	the opened tags			
Preserve white space	Does not.			

## 14. What are the advantages of XML?

- Human readable, easy to understand
- Language neutral
- Tree structured, understood in simpler manner
- Independent of hardware, software and OS
- User defined tags

#### 15. Mention the uses of XML

- To display meta contents
- To exchange data between applications and databases
- To store any kind of complex data in simpler way
- A java program can generate XML and can be parsed by Perl

## 16. What are the building blocks of XML?

- Elements (start and end tags)
- Attributes (flag type="true")
- CDATA (Character DATA, parsed by XML parser)
- PCDATA ( Parsed Character DATA, i.e., text)

#### 17. What is DTD?

- DTD stands for Document Type Declaration
- DTD is used to define basic building block of any XML document
- We can specify element types, attributes and relationship with one another
- To specify set of rules for structuring data in XML

#### 18. What is XML schema?

- It is also known as XML schema Definition (XSD)
- To represent structure of XML document
- To describe and validate structure and content of XML
- Defines elements, attributes and data types
- To define building blocks of XML

Ex: <xs:schema xmlns:xs=http://www.w3.org/2001/XMLSchema>

## 19. Define XML DOM

- A DOM is a collection of nodes in tree hierarchy
- It is a set of platform independent and language neutral API that describes how to access and manipulate information in XML
- It is used for Loading, accessing, deleting XML

#### 20. Define XML parser

- XML parser is a software library or a package that gives interface for client apps to work with XML
- It checks for proper format of XML document and validate XML documents
- To parse the given XML document

#### 21. Differentiate DOM and SAX

DOM	SAX
Document Object model	Simple API for XML
Tree based parsing to parse	Event based parsing to parse
the XML document	the XML document
Entire XML is stored in	Parsing is done by sequence
memory before actual	of events
processing	
Useful for smaller apps	Useful for large apps
Simple and less memory	Complex and more memory
needed	needed
We can insert or delete a	We can insert or delete a
node	node
Traverse in any direction	Top-down traversing

#### 22. What are the rules of a well formed XML?

- Non DTD files should have predefine character entity for amp(&), apos('), gt(>), lt(<), quot(double quotes)</li>
- Inner tag must close before outer tag
- It must have only one attribute in start tag
- Entities other than amp, apos, gt, lt, quot should be declared

#### 23. What is XSL?

- XML concentrates on structure of information
- W3C has published 2 recommendations for style sheets → CSS and XSL
- XSL = XML Style sheet Language
- To transform a document before display
- For advanced style information

## 24. What are the parts of XSL?

- XSLT: XSL Transformation, to transform XML
- XPath: a language for navigating XML
- XSL-FO: XSL-Formatting Objects, for formatting XML

## 25. What is XSLT?

- XSLT is a language to specify transformation of XML documents
- It takes XML document, transforms it into another XML document
- It is XML related technology to manipulate and transform XML documents
- To define XML transformations and presentations

## 26. Define newsfeed

- News feeds are an example of automated syndication
- It allows info to be automatically updated on sites, emailed to users, etc
- It can provide updated news, stock market shares, cricket scores, etc.

# **UNIT 5 - AJAX & WEB SERVICES**

#### Part-A

## I. What is Ajax? (Nov/Dec 2018)

- AJAX is an acronym for asynchronous JavaScript and XML
- It is a set of web development techniques using many web technologies on the client-side to create asynchronous Web applications.
- With Ajax, web applications can send data to and retrieve from a server asynchronously (in the background) without interfering with the display and behavior of the existing page.
- Ajax is not a technology, but a group of technologies.
- HTML and CSS can be used in combination to mark up and style information.
- The DOM is accessed with JavaScript to dynamically display and allow the user to interact with the information presented.
- JavaScript and the XMLHttpRequest object provide a method for exchanging data asynchronously between browser and server to avoid full page reloads.

## 2. Mention the open standards of Ajax.

- Browser-based presentation using HTML and Cascading Style Sheets (CSS).
- Data is stored in XML format and fetched from the server.
- Behind-the-scenes data fetches using XMLHttpRequest objects in the browser.
- JavaScript to make everything happen.

## 3. Brief about asynchronous nature of AJAX.

- Asynchronous means that the script will send a request to the server, & continue it's execution without waiting for reply.
- As soon as reply is received a browser event is fired, which in turn allows the script to execute associated actions.
- Ajax knows when to pull data from server, because you tell it when to do it.

#### 4. What is XHR?

- XMLHttpRequest (XHR) is an API that can be used by JavaScript, JScript, VBScript, and other web browser scripting languages to transfer and manipulate XML data to and from a webserver using HTTP, establishing an independent connection channel between a webpage's Client-Side and Server-Side.
  - Update a web page without reloading the page
  - Request data from a server after the page has loaded
  - Receive data from a server after the page has loaded
  - Send data to a server in the background

#### 5. What is a web service? (Nov/Dec 2015)

- Web services are open standard (XML, SOAP, HTTP etc.) based Web applications that interact with other web applications for the purpose of exchanging data.
- It is OS and language independent
- Web Services can convert your existing applications into Webapplications.
- A web service is a collection of open protocols and standards used for exchanging data between applications or systems.

## 6. Mention the characteristics of web service.

- Machine-to-machine interactions
- Loose coupling
- Interoperability
- Platform-independence
- Operating system-independence
- Language-independence
- Leveraging the architecture of the World Wide Web

#### 7. What are the components of Web Services?

The basic web services platform is XML + HTTP.

- SOAP (Simple Object Access Protocol)
- UDDI (Universal Description, Discovery and Integration)
- WSDL (Web Services Description Language)

## 8. What are the advantages of web service?

- Exposing the Existing Function on the network
- Interoperability
- Standardized protocol
- Low Cost of Communication

#### 9. What are RESTful web services?

- RESTful Web Services are REST architecture based web services.
- In REST Architecture everything is a resource. RESTful web services are light weight, highly scalable and maintainable
- It is very commonly used to create APIs for web based applications.
- REST stands for REpresentational State Transfer.
- REST is web standards based architecture and uses HTTP Protocol for data communication.

#### 10. Define WSDL

- WSDL stands for Web Services Description Language.
- It is the standard format for describing a web service.
- WSDL was developed jointly by Microsoft and IBM.
- To exchange information in a distributed environment.
- WSDL is used to describe web services
- WSDL is written in XML
- WSDL is a W3C recommendation from 26. June 2007

## 11. What are the elements of WSDL?

- Types— a container for data type definitions using some type system (such as XSD).
- Message— an abstract, typed definition of the data being communicated.
- Operation

   an abstract description of an action supported by the service
- Port Type-an abstract set of operations supported by one or more endpoints.
   Binding- a concrete protocol and data format specification for
- Binding— a concrete protocol and data format specification to a particular port type.
- Port
   – a single endpoint defined as a combination of a binding and a network address.
- Service- a collection of related endpoints.

#### 12. Define SOAP

- SOAP is an acronym for Simple Object Access Protocol.
- It is an XML-based messaging protocol for exchanging information among computers.
- SOAP is an application of the XML specification.
- SOAP is an application communication protocol
- SOAP is a format for sending and receiving messages
- SOAP is platform independent
- SOAP is based on XML
- SOAP is a W3C recommendation

## 13. Mention the features of SOAP.

- SOAP is a communication protocol designed to communicate via Internet.
- SOAP can extend HTTP for XML messaging.
- SOAP provides data transport for Web services.
- SOAP can exchange complete documents or call a remote procedure
- SOAP can be used for broadcasting a message.
- SOAP is platform- and language-independent.
- SOAP is the XML way of defining what information is sent and how.
- SOAP enables client applications to easily connect to remote services and invoke remote methods.