Unit 1

Basics of Web Technology

Unit 1 Content

Introduction:

- Introduction to Web Technology
- History of Web and Internet
- Connecting to Internet
- Introduction to Internet services and tools
- Client-Server Computing, Protocols Governing Web
- Basic principles involved in developing a web site
- Planning process
- Types of Websites
- Web Standards and W3C recommendations,

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Unit 1 Content(cont1..)

- Web Hosting Basics
- Types of Hosting Packages
- Introduction to web testing
- Functional Testing
- Usability & Visual Testing
- Performance & Load Testing

Unit Objective

Objective of Unit 1:

- To learn about web development strategies with protocols governing web and internet services and tools.
- To understand the basic concepts to develop the website as per web standards and W3C recommendations.
- To understand web hosting and web hosting packages.
- To understand to register a domain and maintain web servers.

Introduction to Web Technology

- Web Technology refers to the various tools and techniques that are utilized in the process of communication between different types of devices over the internet.

- A web browser is used to access web pages.

- Web browsers can be defined as programs that display text, data, pictures, animation, and video on the Internet.

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Classification of Web technology

- World Wide Web (WWW)
- Web Browser
- Web Server
- Web Pages
- Web Development

History of Web development and Internet

World Wide Web

- The World Wide Web is a system of interlinked hypertext documents accessed via the Internet. Web is a huge collection of pages of information linked to each other around the globe.

History of WWW:

- WWW is created by Sir Tim Berners Lee in 1989 at CERN in Geneva.
- In 1990, the first text only browsers were setup and CERN scientist.
- To transfer HTML document to remote sites a new protocol was devised called HTTP (Hyper Text Transfer Protocol).

Contd….

- In the fall of **1991**, conference goes around the world started hearing about
- the promise but sparks still were not flying.

- In 1993, there are only about 50 websites world wide.

- A browser that allowed user to take advantage of the web's graphical
- capabilities was developed at the National center for Super Computing application (NCSA).

- NCSA called the browser Mosaic.

Connecting to Internet

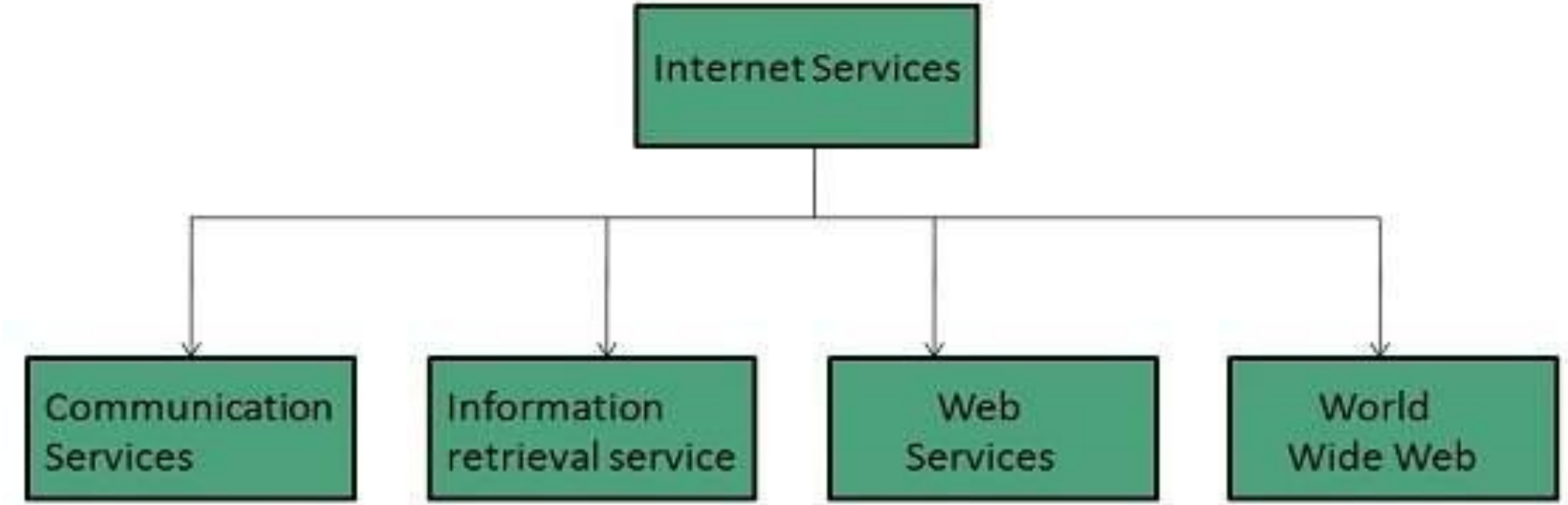
When determining which type of Internet speed and Internet connection type is right for you or your family, it's important to understand the distinction between each connection.

In today's age, there are numerous ways to connect laptops, desktops, mobile phones, gaming consoles, e-readers and tablets to the Internet.

- MOBILE
- WIFI HOTSPOTS
- DIAL-UP
- BROADBAND
- DSL(DIGITAL SUBSCRIBER LINE)
- CABLE
- SATELLITE

Introduction to Internet services and tools

Internet Services allows us to access huge amount of information such as text, graphics, sound and software over the internet.



Protocols Governing Web

Protocol

A protocol is a set of rules to communicate applications to each other.

A protocol is the interface required for communicating the different applications

Classification of Protocols

- HTTP
- TCP/IP
- FTP
- SMTP
- TELNET

Protocols Governing Web(cont1..)

HTTP Protocol

- HTTP is the primary protocol used to distribute information on the web
- Initial HTTP 0.9 does not allow for content typing and does not have provisions for supplying meta- information.
- Content Typing is to identify the type of data being transferred.
- Meta Information is supplemental data, such as environment variables that identify the client's computer

Protocols Governing Web(cont1..)

TCP/IP

- It is a set of rules that an application can use to package its information for sending across the networks of networks.

FTP

- FTP uses TCP to create a virtual connection for control information and then creates a separate TCP connection for data transfers.

- It is used to transfer the files over networks.

Protocols Governing Web(cont1..)

SMTP

It is an Internet standard for electronic mail (e- mail) transmission across Internet Protocol (IP) networks.

Telnet

This protocol used to remotely login into another system .

This is used to browse file and directories on the remote system.

Daily Quiz

1.) The HTML and HTTP standard are defined by __
   (A) Web client
   (B) Internet association
   (C) WWW consortium
   (D) WWW

2.) The ____ passes the information given by the user to a specified program.
   (A) User
   (B) Programmer
   (C) Web server
   (D) Browser

3.) Which language is used for creating Web Pages?
   (A) PASCAL
   (B) C
   (C) HTML
   (D) BASIC

Daily Quiz

4.) What is the abbreviation of HTTP?

(A) Hypertext tag path

(B) Hyper Text Transfer Protocol

(C) Hypertext transfer path

(D) None

5.) The entire web document is contained within ____

(A) Comments

(B) Tags

(C) Web page

(D) HTML element

Types Of Websites

Website:

- A website is simply a collection of interlinked web pages.

Classification of Website

- Corporate Website
- Individual website

Websites

Corporate Website:

- In this, there is certain no. of persons, who develop their website for a particular organization.
- The corporate website are formed when group of people have common interest and objective.
- The purpose of this website is to convey the information of organization to all over the world

Websites(cont1..)

Individual Website

- Personal web pages are world wide web pages created by an individual to contain content of a personal nature rather than content pertaining to a company, organization or institution.
- It is just like profile management system.
- In this type of website an individual wants to develop website for hi-projection, career growth etc.

Web Applications

Web application is a kind of application that can be through the web browser over the internet.

Web applications may include simple office software word processors, Google docs, project management, computer-aided design, online spreadsheets, and presentation tools.

Some common scripting languages are used to create web applications such as JSP, ASP and PHP.

Web applications interact with program variables ,spreadsheets and databases using user input for creating the dynamic web content.

Web Applications(cont1..)

Examples of Web Application

- Airline Reservation System.
- Message Boards.
- Shopping Cart.
- Net-banking.

Writing a Web Projects

Objective of above Topic:

To developed web project and understand the concepts of web project development differs from traditional web projects

Phases of writing the web projects

Write a project mission statement

- Write the specific mission statement that you want to do.

Identify Objectives

- Specific
- Measurable
- Attainable
- Realistic
- Time limited

Writing a Web Projects(cont1..)

Phases of writing the web projects(cont..)

❖Identify your target users

•The matter of a website will be determined by the users whom you want to visit the site. This is totally depend upon

i. Market research

ii. Focus group

iii. Understanding the audiences

❖Determine the scope

- By supporting documents and client's approval.

Writing a Web Projects(cont1..)

Phases of writing the web projects(cont..)

- **Budget**
  - ❖ Assumption for budgets.
  - ❖ Budget categories.
  - ❖ Determine hidden costs and tools.

Planning issues:

❖Discuss client's existing information system.

❖Project team and developing infrastructure.

❖Where the website will place.

Connecting To Internet

Telephone

- A Telephone is a device that converts voice communication into electrical signals that can be transferred to other telephones and heard.

- Telephones enable people to communicate with other people all over the world and is widely credited as being first invented by Alexandra Graham Bell in 1876.

- There are three basic phones in use today. The classic corded telephone, which could be rotary dial like or have buttons, the cordless or wireless phone, and the cell phone

Connecting To Internet(cont1..)

Cable

A **cable** is one or more wires covered in a plastic covering that connects a computer to a power source or other device.

Two Types of computer cables

A data cable is a cable that provides communication between devices.

For example, the data cable that connects your monitor to your computer and allows your computer to display a picture on the monitor such as SATA and USB etc.

A power cable is any cable that powers the device.

Connecting To Internet(cont1..)

Types of Cables:

AT - Used with early keyboard.

ATA - Used with hard drives and disc drives.

CAT5 - Used with network cards.

Coaxial -Used with TV and Projectors.

DVI - Used with Monitors Projectors, and other display

E-SATA - Used with external drives.

Connecting To Internet(cont1..)

Types of Cable

MDI - Used with musical keyboards and other equipment.

Mini Plug - Used with headphone, microphone and speakers.

Molex - Power cable used inside your computer.

Connecting To Internet(cont1..)

Satellite Connection

- A satellite connection uses broadband but does not require cable or phone lines.
- It connects to the Internet through satellites orbiting the Earth.
- It can be used almost anywhere in the world, but the connection may be affected by weather patterns.

Satellite Connection(cont..)

- A satellite connection also relays data on a delay, so it is not the best option for people who use real-time applications, like gaming or video conferencing.

- A satellite Internet connection is an arrangement in which the upstream (outgoing) and the downstream (incoming) data are sent from, and arrive at, a computer through a satellite.

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Daily Quiz

1.) A program that is used to view websites is called a
   (A) Browser
   (B) Web viewer
   (C) Spreadsheet
   (D) Word processor
2.) Which of the following is not a type of broadband internet connection?
   (A) Satellite
   (B) DSL
   (C) Dial up
   (D) Cable
3.) Servers are computers that provide resources to other computers connected to a
   (A) Client
   (B) Mainframe
   (C) Supercomputer
   (D) Network

Daily Quiz

4.) Sending an E-mail is similar to
- (A) Sending a package
- (B) Talking on the phone
- (C) Writing a letter
- (D) Drawing a picture

5.) ARPANET stands for
- (A) Advanced Rehearse Projects Agency Network
- (B) Advanced Research Projects Agency Newark
- (C) Advanced Research Projects Agency Network
- (D) None of these

6.) The process of connecting to the internet account is
- (A) Sing in
- (B) Sing out
- (C) Login
- (D) Logout

Introduction To Internet Services

- **Common Protocol Used To Provide Internet Services**

  The File Transfer Protocol (**FTP**) is a standard network protocol used to transfer computer files from one host to another host over a TCP-based network, such as the Internet

  Telnet is a network protocol used on the Internet or local area networks to provide a bidirectional interactive text-oriented communication facility using a virtual terminal connection.

Introduction To Internet Services(cont..)

❖**RSH** Remote Shell allows you to send single commands to the remote server.

❖**RCP** Remote Copy provides the capability to copy files to and from the remote server without the need to resort to FTP or NFS (Network File System, the UNIX form of folder sharing

❖**NNTP(Network News)-**(Reading and posting USENET news)

Introduction To Internet Services(cont..)

HTTP(Hypertext Transfer Protocol)-(Transferring documents on the Web)

SMTP(Simple Mail Transfer Protocol)- (Sending mail)

POP3(Post Office Protocol)- (Reading Mail)

Post Office Protocol (**POP**) protocol used by local e-mail clients to retrieve e-mail from a remote server over a TCP/IP connection.

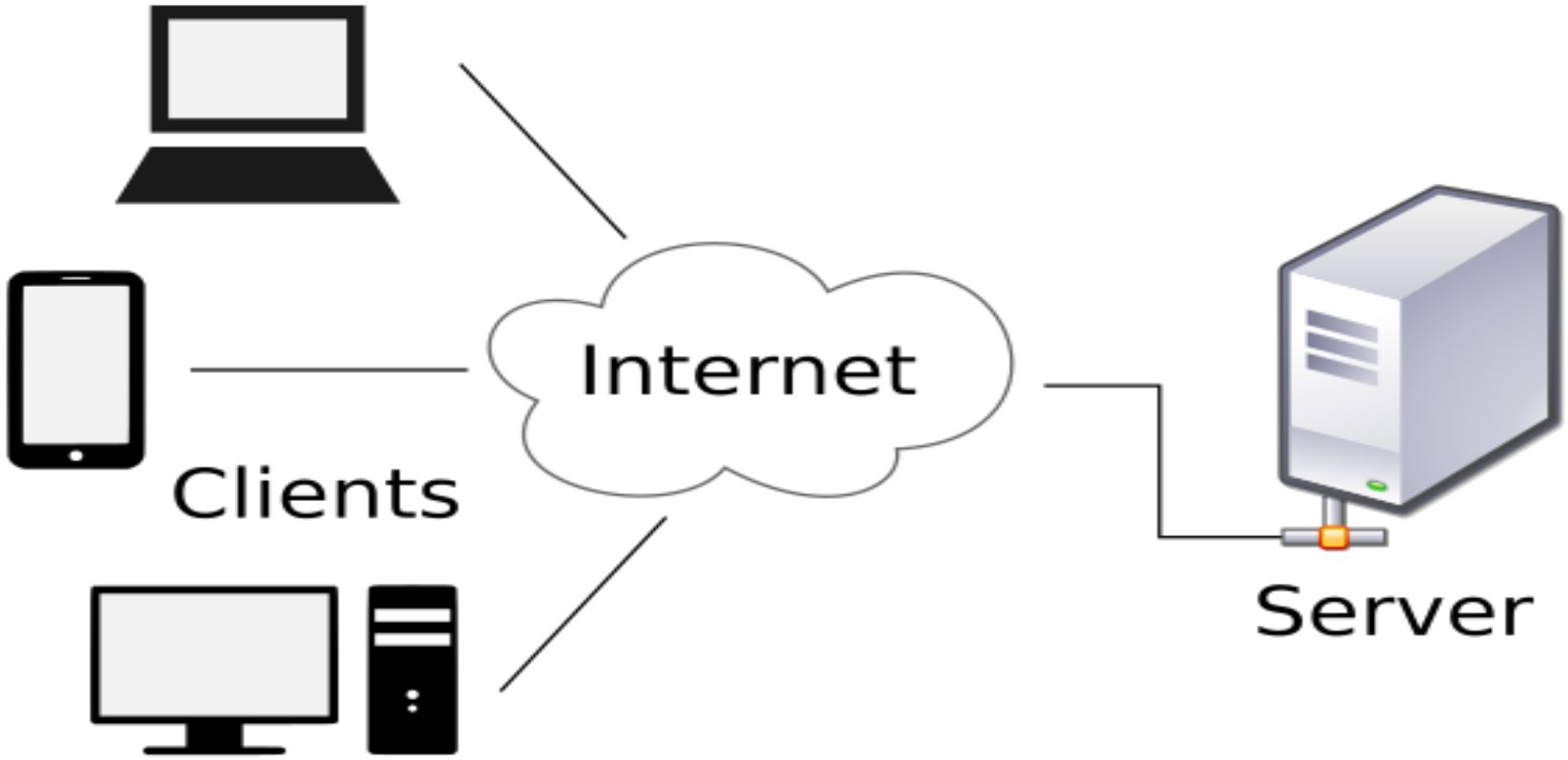
Client/Server Definition

In client/server computing "server software accepts requests for data from client software and returns the results to the client"

Elements of C-S Computing

- A Client
- A Server
- And a network
- In client-server computing major focus is on SOFTWARE

A Client/Server Computing



1. Web Server

A web server powers the site you're looking at right now. This genre of server focuses on serving web content to clients.

Web servers simply take "GET" and "POST" requests from clients (among other verbs).

A "GET" request is when a client simply wants to retrieve information and doesn't have any information to submit to the server.

A "POST" request on the other hand is when a client does have information to share with the server and expects a response back. For example, filling up a form on a web server and clicking the submit button is a "POST" request from the client to the server.

Web servers are typically "headless" in nature. This is to preserve the memory on the server and ensure that there's enough to power the operating system and applications on the server.

“Headless” means that it doesn’t run like a traditional home computer, but rather just serves content. The administrators of these servers can only connect to them through command line terminals.

Remember that these types of servers can run any type of application just like your home computer can.

They can also run on any operating system, as long as they obey the general “rules” of the web.

Modern web applications usually run on a series of layers, starting with server-side scripts and programs that process data (e.g PHP, ASP.NET etc), and ending with client-side scripting (e.g Javascript) that programs how the data should be displayed.

Some Ports used for Webservers: Port 80 for HTTP (not encrypted) and Port 443 for HTTPs (encrypted).

Database Server

A database server typically operates in together with another type of server. This kind of server simply exists to store data in groups.

There are countless methods of keeping data that operate on different theories. One of the more common types is known as “SQL” or “Structured Query Language”.

Database programmers can create databases on these servers using scripting in the language of the database.

Web applications usually have their server-side components connect to a Database server to grab data as users request it.

A good practice is to have webservers and database servers on different machines. The reason that database servers should exist on their own is for security.

If a hacker gains access to the main webserver but not the database server, they will be able easily to retrieve or modify the data stored in the database server.

Some popular Database servers include MySQL, MariaDB, Microsoft SQL, Oracle Database etc.

Some Ports used for Database Servers: Port 3306 (MySQL, MariaDB), Port 1433 (MS-SQL), Port 1521 (Oracle DB).

3. eMail Server

An email server typically runs on “SMTP” or “Simple Mail Transfer Protocol”. There are other possible protocols that newer mail servers operate on, but SMTP remains the dominant protocol.

An email server powers mail services. These servers in themselves simply take in emails from one client to another and forward the data to the other server.

Data is simplified when sent through SMTP, so some information, like web formatting, is usually lost in email transactions.

The modern approach to email servers typically pairs them with web servers. This allows for users to have a “web client” that graphically shows the data on a web page. Some newer web applications can even mimic a home computer email client without installing anything.

Some Ports used for eMail Servers: Port 25 (SMTP), Port 587 (Secure SMTP), Port 110 (POP3)

4. Web Proxy Server

A web proxy server can run on one of many protocols, but they all do one thing in common.

They take in user requests, filter them, and then act on the user's behalf. The most popular type of web proxy server is designed to get around school and organizational web filters.

Because web traffic is all through one IP address and website that isn't yet blocked, users can gain access to sites that are forbidden through these filters.

The less popular type is an organizational proxy server. This has the same effect, but it's typically authorized by an organization.

It takes users' web traffic, usually logs it for evaluation later, and sends it to the Internet.

This puts users' traffic all together so that one computer cannot be differentiated publicly from another.

This is done intentionally by an organization to prevent users from being targeted and usually to be able to inspect, cache and analyze packets sent and received.

Some Ports used for Web Proxy Servers: Port 8080, 8888 etc

5. DNS Server

A DNS server, or “Domain Name Service” server, is used to translate domain names to their corresponding IP addresses.

This server is what your browser references when you type in a domain name and press Enter. The idea is that users don’t have to memorize IP addresses and organizations can have a fitting name

Typically, Internet Service Providers (ISPs) provide DNS servers to their users. However, there are many organizations that provide this lookup service for free, as well (such as the popular Google DNS server with IP 8.8.8.8).

Some users who are more concerned about their privacy on the web often use these alternate DNS servers.

DNS servers are also tapped when users create a new domain name. DNS servers operate on a hierarchical basis, so there are some more “authoritative” servers than others.

The domain name is registered with one higher-up DNS server that other, lower-level DNS servers reference. Usually through a process taking anywhere from 24 to 48 hours, this registration propagates across the world.

Ports used for DNS Servers: Port 53 (both TCP and UDP).

6. FTP Server

FTP servers, or “File Transfer Protocol” servers, have a single purpose: to host a file exchange among users.

These servers do not provide any type of encryption by default, so there are a number of secured versions of the protocol that are often used in its place (such as sFTP which is FTP over secure SSH protocol).

This type of server allows users to upload files to it or download files after authenticating through an FTP client. Users can also browse the server’s files and download individual files as they wish.

Some Ports used for FTP Servers: Ports 20,21 for FTP or Port 22 for sFTP.

7. File Server

A File Server is different from an FTP server. This type of server is more modern and is typically capable of “mapping” networked files onto drives. This means that users can use their home computer’s file browser to look into folders.

The main advantage of this form of server is that users can upload and download shared files. Permissions to files are controlled by the administrator.

Usually File Servers exist in corporate networks in a Windows Active Directory environment or in Linux environments.

8. DHCP Server

A DHCP Server uses the Dynamic Host Communication Protocol (DHCP) to configure the network settings of client computers.

Different Server Platforms

1. Physical Server

A Physical Server is what truly serves data in the end. Operating on metal and electricity, modern physical servers are often capable of serving far more than one user could ever want.

These are typically housed in data centers by hosting companies to serve a variety of clients. The only exception would be larger organizations who rely on these; in these cases, the organizations usually own the network of physical servers.

In the past, each server in a network (e.g Webserver, Database Server etc) was hosted on its own dedicated physical server. This concept is now being replaced with Virtualization technologies whereby each server can be a virtual machine inside a bigger physical machine.

Different Server Platforms

2. Virtual Server

A virtual server is a partitioned part of a physical server. Most “servers” online are virtual servers. They often are given a dedicated amount of physical server resources to utilize (such as RAM, CPU, Storage space).

Users can rent virtual servers for a fraction of the cost of a physical server. This is because hosting companies typically own or rent the physical server for a wholesale price, then profit off of selling parts of the physical machine at a time to users with smaller audiences.

Daily Quiz

1.)----- is whatever you're using to interact with the internet

(A) client
(B) HTTP
(C) server
(D) navigation

2.) The-------is about communication between web clients and web servers.

(A) client
(B) HTTP
(C) server
(D) navigation

3.) Communication between client computers and web servers is done by sending --- and receiving-------

(A)client server
(B) HTTP request HTTP responses
(C) server client
(D) navigation browser

Daily Quiz

4.) A client (a browser) sends an---------to the web

(A) client
(B) HTTP Request
(C) server
(D) navigation

5.) The-------request to the server for any information

(A) client
(B) HTTP
(C) server
(D) navigation

6.) The--------provide the information to the client

(A)client server
(B) HTTP request HTTP responses
(C) server
(D) navigation browser

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Previous Topics: Recap

Protocols governing web, and internet services and tools that connect to the internet.

It was also discussed about the history of web.

We had also discuss Cyber Laws and Website and its classification

Previous Topics: Recap(Cont..)

The above topic was focused on the Web Application with its examples and phases.

It was also discussed about the connection of Internet through:-

- Telephone
- Cables and its types
- Satellite Connection.

We have also discussed about the client server computing and Categories of Server.

How to write the web project in the previous topic

Topic Objective/Outcome

Topics: Web Hosting Basics, Types of Hosting Packages, Introduction to Web testing, Functional Testing, Usability & Visual Testing, Performance & Load Testing. (CO1)

Objective of the above topics:

- To know the basics of web hosting and hosting packages.
- To get the knowledge about Web Testing.
- To learn how testing is used in a web server and how to test a website?

Web Hosting Basics

When a hosting provider allocates space on a web server for a website to store its files, they are hosting a website.

Web hosting makes the files that comprise a website (code, images, etc.) available for viewing online.

web hosting is the process of renting or buying space to house a website on the World Wide Web.

Website content such as HTML, CSS, and images has to be housed on a server to be viewable online.

Web hosting service providers have the servers, connectivity, and associated services to host websites.

Choosing the right hosting plan will mean having access to the right allocation of resources to keep your website loading quickly and reliably for your visitors.

Types of Hosting Packages

There are the six types of web hosting:

Shared hosting

Virtual private server (VPS) hosting

Dedicated server hosting

Cloud hosting

Managed hosting

Colocation

Shared hosting

- Shared hosting allows multiple websites to utilize a single server. Usually, you'll have no idea who or what websites you're sharing the resources of a server with. Each customer will usually have a limit on the total amount of server resources they can use, but this will be defined by your hosting package.

- Shared hosting is easily the cheapest and most economical option for your needs. However, the cheap price comes with limitations, which we'll get to below. Since most hosting companies will offer the same amount of space and storage it's important to choose a company you can trust.

Types of Hosting Packages

Virtual private server (VPS) hosting

- A VPS hosting plan is the ultimate middle ground between a shared server and a dedicated server.
- It's ideal for website owners that need more control, but don't necessarily need a dedicated server.
- VPS hosting provides website owners with more customization and storage space, but still they are not able to handle incredibly high traffic levels or spikes in usage meaning that the site performance can still be affected by other sites on the server.
- VPS hosting is used by website owners who want dedicated hosting but don't have the technical knowledge needed.
- VPS hosting offers the cost benefits of shared hosting with the control of dedicated hosting.

Types of Hosting Packages

Dedicated server hosting

- Dedicated hosting gives website owners the most control over the server that their website is stored on.
- Customer has full root and admin access, so he can control everything from security to operating system that you run.
- Dedicated servers cost are one of the most expensive web hosting options.
- Used by website owners with high levels of website traffic, and those who are in need of complete control of their servers.
- A high level of technical expertise is required for the installation and ongoing management of the server.

Cloud hosting

- It's a hosting solution that works via a network and enables companies to consume the computing resource like a utility.
- This allows users to employ as many resources as they need without having to build and maintain their own computing infrastructure.
- Cloud-based hosting is scalable, meaning your site can grow over time, using as many resources as it requires and while the website owner only pays for what they need.

Types of Hosting Packages

Managed hosting

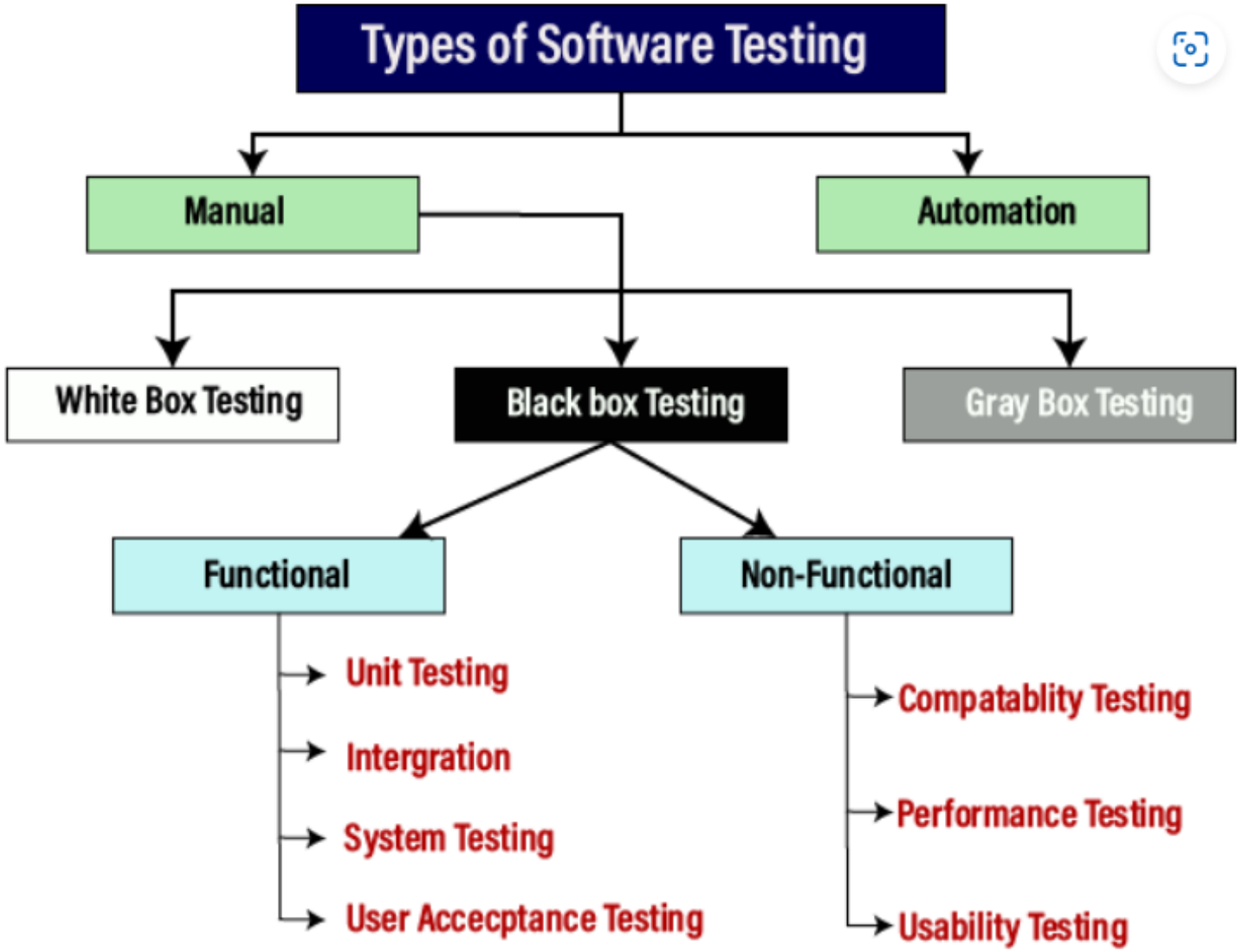
- Hosting companies provide technical services such as hardware and software setup and configuration, maintenance, hardware replacement, technical support, patching, updating and monitoring.
- With managed hosting, the provider looks after the day-to-day management of the hardware, operating systems and standardized applications.

Colocation

- Instead of keeping servers in-house or at a private data center, you may choose to "'co-locate" your equipment by renting space in a colocation center.
- he center will provide the power, bandwidth, IP address and cooling systems that your server requires. Space is rented out in racks and cabinets.
- Colocation gives access to higher levels of bandwidth than a normal office server room at a much lower cost.
- You're left to your own devices (literally) and will be expected to take care of everything including the hardware, software and services.

Introduction to Web Testing

- Web testing, at its core, is simply checking your web application or your website for problems before you make that web application or website live. Web testing is designed to check all aspects of the web application's functionality, including looking for bugs with usability, compatibility, security, and general performance.
- Web testing is a crucial part of assembling any web application or website, as you don't want to invest the many resources in time and money you've spent developing this web application and then have it run into immediate problems upon release. We have seen that happen before, and it isn't pretty.


Types of Software Testing
Manual
Automation
White Box Testing
Black box Testing
Gray Box Testing
Functional
Non-Functional
Unit Testing
Intergration
System Testing
User Accecptance Testing
Compatablity Testing
Performance Testing
Usability Testing

Functional Testing

- Functional testing is a stage in the software delivery lifecycle (also referred to as a ‘process’) in which quality engineers verify whether the application under test’s features behaves as per their requirements.

Here are some typical examples of functional testing:

- Do appropriate error messages appear when users input the incorrect information (e.g. invalid email address, card number)?
- Can users request to change their credentials (e.g. user name, passwords, etc.,...)?
- Can users log in with the new credentials?

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Functional Testing Vs Non Functional Testing

	Functional Testing	**Non-functional testing**
Method	Normally performed under the black-box method. In which the testers only validate with inputs and outputs instead of the internal structure of the system.	Normally performed under the white-box method. In which the tester is made aware of the system's internal design to generate test cases accordingly.
Areas of concern	Whether or not the system's outputs satisfy the specification or requirements given	The system's performance, stability, security, usability, etc.
Inputs	Business requirements, client's specifications	Speed, throughput, scalability, etc.
Examples	Unit testing API testing Regression testing (can be both functional and non-functional)	Security testing Performance testing Load testing Stress testing

Usability & Visual Testing

Usability testing refers to evaluating a product or service by testing it with representative users. Typically, during a test, participants will try to complete typical tasks while observers watch, listen and takes notes. The goal is to identify any usability problems, collect qualitative and quantitative data and determine the participant's satisfaction with the product.

To run an effective usability test, you need to develop a solid test plan, recruit participants, and then analyze and report your findings.

Visual Testing

- Visual testing is a software testing technique that evaluates the visual appearance and behavior of a software application's user interface (UI) or graphical user interface (GUI). Visual testing aims to verify that the application's visual elements like colors, images, fonts, and layouts, are displayed correctly and consistently across different devices, operating systems, and browsers.
- Visual testing ensures that the user interface (UI) of the developed product appears as intended for users. It accomplishes this through several key benefits, including:
- Identifying defects or issues in the UI interface.
- Detecting variations in the UI that do not match the baseline snapshots.
- Creating specialized visual test cases that cover functional points.
- Identify visual bugs on different browsers.

Performance & Load Testing

Performance testing is a type of testing that is performed for verifying the performance of a system and to monitor the behavior of the system under stress. It tells about the reliability, stability, response time, and scalability of a system. On the other hand, load testing is primarily aimed for identifying the behavior of a system under the expected load.

What is Performance Testing?

Performance testing is performed over the software to test its performance under a particular workload for its sensitivity, reaction time and its stability. Performance testing is basically a superset of stress testing.

The primary goal of performing performance testing is to set the standards and benchmarks for the product. Performance testing indicates how the product behaves under regular parameters. Checking for concurrent users and response time is an example of performance testing.

Performance & Load Testing

- Load testing checks the performance of a software to check its performance under real life-based loads. In other words, load testing is a type of testing that checks the behavior of a system under the expected load. To perform the load testing of a system, we first need to know the expected load on the application in real life.

- Load testing collects all the data about response time, reliability, and stability of the system, and then analyzes the data to find the inconsistencies. Basically, the load test is performed to ensure the stable operation of a system under an expected load.

- The greatest advantage of load testing is that it helps in understanding the expected load that a system can handle so that we can reduce the risk of a failure.

Performance & Load Testing

The following are some of the important differences between Performance Testing and Load Testing –

Key	Performance Testing	Load Testing
Purpose	Performance testing tests the system performance under varying loads.	Load testing tests the system performance for multiple users using the application at the same time.
Threshold	Performance testing is conducted at below and above threshold limits.	Load testing is conducted at threshold limits.
Result	Performance testing ensures that the system is performing perfectly under varying loads.	Load testing ensures that the system can handle how many users at a time without performance degradation.
Result	Performance testing checks the performance of the system.	Load testing checks the operational capacity of the system.
Cost	Performance testing tools are not much costly.	Load testing tools are very costly.
Targets	Performance testing checks the reliability, scalability, and speed of the system.	Load testing checks the sustainability of the system.

Daily Quiz

What are shared on the Internet and are called as Web pages?

a) Programs

b) Cables

c) Hypertext documents

d) None

What is the name of the location address of the hypertext documents?

a)Uniform Resource Locator

b) Web server

c) File

d) Web address

Daily Quiz(cont..)

Which of the following is true about public access modifier?

a)Variables, methods and constructors which are declared public can be accessed by any class.

b)Variables, methods and constructors which are declared public can be accessed by any class lying in same package.

c)Variables, methods and constructors which are declared public in the superclass can be accessed only by its child class.

d)None of the above.

Which program is used by web clients to view the web pages?

a)Web browser

b) Protocol

c) Web server

d) Search Engine

Daily Quiz(Cont..)

(a) The following "Things to consider" while planning a website:

(i) Purpose of website (ii) Target audience
(iii) Website contents (iv) All of these

(b) The initial stage of planning your website is to:

(i) Identify the target audience (ii) Identity the Purpose of the Site
(iii) Budgeting (iv) Prepare Blue Print

(c) Which of following are the are web site design consideration and principles?

(i) Easy to read (ii)Easy to navigate
(iii) Quick download (iv) All of these

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Weekly Assignment

1. Explain the following: **[CO1]**
    1. URL
    2. domain name space
    3. Domain name server
2. Explain the term protocol. List all the commonly used web protocols. **[CO1]**
3. Explain the role of web server on the internet. **[CO1]**
4. Explain the working of web with proper diagram. **[CO1]**
5. Give **examples** of each: static and dynamic website.**[CO1]**
6. Describe domain name space and domain name server. **[CO1]**
7. Describe all the steps of web site hosting. **[CO1]**
8. Explain Hypertext and Hypermedia. **[CO1]**
9. What do you understand by a markup language? List all the types of markup languages. **[CO1]**
10. Explain HTML with basic structure of an HTML document. **[CO1]**

MCQ s

Who is making web standards

a.Netscape

b.Microsoft

c.WWWC

Range of Heading tags in HTML

a.<h1> to <h3>

b.<h1> to <h8>

c.<h1> to <h6>

d.<h1> to <h9>

What does HTML stand for ?

a.Hyperlinks and Text Markup Language

b.Home Tool Markup Language

c.Hyper Text Markup Language

d.Home Text Markup Language

MCQ s(Cont..)

Web is a huge collection of …….of information linked to each other around the globe.

a.Pages

b.Website

c.HTML

Father of WWW

a.J.T. Thomson

b.Dennis Ritchie

c.Tim Berners-Lee

Who is responsible for creating the look and feel of a site?

a.Creative Lead

b.Programmer

c.Analyst

d.Designer

MCQ s(Cont..)

Which of the following are information retrieval services on the internet?
i) World Wide Web ii) File Transfer Protocol iii) Telnet iv) Email
A) i, ii and iv only
B) ii, iii and iv only
C) i, ii and iii only
D) All i, ii, iii and iv

. …….. allows remote accessing to the files which contain programs, technical handouts, reports etc.
A) Remote Desktop
B) FTP
C) Telnet
D) Chat

Glossary Questions

…….. allows remote accessing to the files which contain programs, technical handouts, reports etc.

A) Remote Desktop
B) FTP
C) Telnet
D) Chat

……. is a global hypertext system that was initially developed in 1989 by Tim Berners Lee.

A) FTP
B) Telnet
C) www
D) email

The ……. application is built with a protocol interpreter, a data transfer, process and user interface.

A) TCP
B) FTP
C) Telnet
D) Chat

Glossary Questions

ARPANET used the concept of packet switching network consisting of subnet and …… computers.
A) local
B) remote
C) **host**
D) network

Internet was possible because of the use of the TCP/IP reference model and …… protocol stack.
A) FTP
B) **TCP/IP**
C) DHCP
D) UDP

……. was created for organizing machines into domains and map hostname onto IP address.
A) Domain Addressing System
B) **Domain Naming System**
C) Host Naming System
D) Domain Mapping System