Practical No. 2.
To distinguish client-server architecture, Internet, WWW, web browser & Web server.

Name :- Shreyash Suryakant Gaste.
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Class :- T.Y.CSE.

Problem Statement :
Study & distinguish the following concepts in your words:-

1. Client-server architecture, Internet and World Wide Web.

① World Wide Web (WWW) is a collection of servers distributed all over the world that respond to various clients.

② Client-server model is a distributed application structure that partitions tasks or workloads between the providers for a resource or service, called servers, and service requesters, called clients.

③ The internet is a vast network that connects computers all over the world. Through the internet, people can share information and communicate from anywhere with an it internet connection.

2. Web Browser and Web Server.

Web Browser	Web Server
① Web browser is a software which is used to browse & display pages available over internet.	① Web server is a software which provides these documents when requested by web browsers.

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② A web browser sends request to server for web based documents and services.

③ Web browser sends an HTTP request and gets a HTTP response.

④ Web browser has no processing model.

⑤ Web browsers stores user data in cookies in local machine.

② Web server sees and approves those requests made by web browsers and sends the document in response.

③ Web server receives HTTP Request and sends a HTTP Response.

④ Web server follows 3 major processing models: process based; thread based or hybrid.

⑤ Web server provide an area to store the website.

Problem Statement 2:
Study & describe the following concepts in your words.

1. **Hypertext**
- ① Hypertext is text which is not constrained to be linear.
② Hypertext is text which contains links to other texts. The term was coined by ~~Feb~~ Ted Nelson around 1965.

2. **Hyperlink**
- ① A hyperlink is a piece of text that when clicked takes the user to a webpage.
② Hyperlinks can also link to email addresses :

when clicked, these hyperlinks will open an email program (likely Microsoft Outlook) to send an email to that address.

③ Hyperlinks are formatted with a different color (blue, by default) and an underline.

3. HTTP

- ① Hypertext Transfer Protocol (HTTP) is an application-layer protocol for transmitting hypermedia documents, such as HTML.

② It was desined for communication between web browsers and web servers, but it can also be used for other purposes.

③ HTTP follows a classical client-server model, with a client opening a connection to make a request, then waiting until it recleives a response.

④ HTTP is a stateless protocol, meaning that the server does not keep any data (state) between two requests.

4. HTTP Status Codes with meaning.

- HTTP response status codes indicate whether a specific HTTP request has been successfully completed. Responses are grouped in five classes:

① Informational responses (100-199)

ⓘ 100 Continue :- This interim response indicates that everything so far is OK & that the client should continue the request, or ignore the response if the request is already finished.

ⓘ 101 switching Protocol :- This code is sent in response to an Upgrade request header from the client, and indicates the protocol the server is switching to.

(iii) 102 Processing (Web DAV) :- This code indicates that the server has received & is processing the request, but no response is available yet.

(iv) 103 Early Hints :- This status code is primarily intended to be used with the Link header, letting the user agent start preloading resources while the server prepares a response.

② Successful responses (200-299).

(i) 200 OK :- The request has succeeded. The meaning of the success depends on HTTP method.

(ii) 202 Accepted :- The request has been received but not yet acted upon.

(iii) 203 Non-Authoriatative Information.

(iv) 204 No Content.

③ Redirects (300-399)

(i) 300 Multiple Choice :- The request has more than one possible response.

(ii) 301 Moved Permanently :- The URL of requested resource has been changed permanently. The new URL is given in the response.

(iii) 302 Found :- This response code means that the URI of requested resource has been changed temporarily.

④ Client error (400-499).

(i) 400 Bad Request.

(ii) 401 Unauthorized.

(iii) 402 Payment Required.

(iv) 403 Forbidden.

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⑤ Server errors (500 - 599).

ⓘ 500 Internal Server Error

ⓘⓘ 501 Not Implemented.

ⓘⓘⓘ 502 Bad Gateway

ⓘⱽ 503 Service Unavailable.

ⱽ 504 Gateway Timeout.

ⱽⓘ 505 HTTP Version Not supported,