1. What do you mean by Internet? Explain Internet based Services.

Internet Services allows us to access huge amount of information such as text, graphics, sound and software over the internet. Following diagram shows the four different categories of Internet Services.

2. Explain difference between WWW and Internet

1. Internet :

The internet is a globally connected network system facilitating worldwide communication and access to data resources through a huge collection of personal, public, business, academic and government networks. it's governed by agencies just like Internet Assigned Numbers Authority (or IANA) that establish universal protocols.

2. World Wide Web (WWW) :

World Wide Web (WWW), byname Web, is leading information retrieval service of web (the worldwide computer network). Online gives users access to a huge array of documents that are connected to every other by means of hypertext or hypermedia links—i.e., hyperlinks, electronic connections that link related pieces of data so as to permit a user quick access to them. Hypertext allows the user to pick a word or phrase from text and thereby access other documents that contain additional information concerning that word or phrase.

3. Explain following terms:

1. HTTP

The communications protocol used to connect to Web servers on the Internet or on a local network (intranet). The primary function of HTTP is to establish a connection with the server and send HTML pages back to the user's browser. It is also used to download data from the server either to the browser or to any requesting application that uses HTTP.

2.HTTPS

HTTPS (HTTP Secure) is the encrypted version of HTTP (see HTTPS).

A Stateless Connection

HTTP is a "stateless" request/response system. The connection is maintained between client and server only for the immediate request, and the connection is closed. After the HTTP client establishes a TCP connection with the server and sends it a request command, the server sends back its response and closes the connection.

The first version of HTTP caused considerable overhead. Each time a graphics file on the page was requested, a new protocol connection had to be established between the browser and the server. In HTTP Version 1.1, multiple files could be downloaded with the same connection. It also improved caching and made it easier to create virtual hosts (multiple websites on the same server). See HTTP/2, HTTP header and cookie.

3. Firewall

A firewall is a network security device that monitors incoming and outgoing network traffic and decides whether to allow or block specific traffic based on a defined set of security rules. Firewalls have been a first line of defense in network security for over 25 years.

4. HyperLink

A hyperlink is a word, phrase, or image that you can click on to jump to a new document or a new section within the current document. Hyperlinks are found in nearly all Web pages, allowing users to click their way from page to page. Text hyperlinks are often blue and underlined, but don't have to be. When you move the cursor over a hyperlink, whether it is text or an image, the arrow should change to a small hand pointing at the link. When you click it, a new page or place in the current page will open.

Hyperlinks, often referred to as just "links," are common in Web pages, but can be found in other hypertext documents. These include certain encyclopedias, glossaries, dictionaries, and other references that use hyperlinks. The links act the same way as they do on the Web, allowing the user to jump from page to page. Basically, hyperlinks allow people to browse information at hyperspeed.

5. Search Engines

A search engine is a service that allows Internet users to search for content via the World Wide Web (WWW). A user enters keywords or key phrases into a search engine and receives a list of Web content results in the form of

websites, images, videos or other online data that semantically match with the search query.

The list of content returned via a search engine to a user is known as a **search engine results page (SERP)**.

4.What do you mean by Web Site, Web server, Web Page, Hyperlink?

In computing, a hyperlink, or simply a link, is a reference to data that the user can follow by clicking or tapping. A hyperlink points to a whole document or to a specific element within a document. Hypertext is text with hyperlinks. The text that is linked from is called anchor text.

6. Explain IP address, URL and Information Resources.

It is amazing to think that your computer can distinguish and access a file on a specific computer among over ten million computers connected to the Internet. URLs and IP addresses make it possible. Understanding URL and IP addresses is essential knowledge for understanding how the Internet works. What they are, how they work, and issues about IP addresses shortages are discussed in this paper.

Definition

Suppose you want to make a phone call to your friend. You can call her if you know her telephone number. If you do not know her number, you can look for her number by her name with a telephone book. In the Internet network, the telephone number corresponds to an IP address and her name corresponds to a domain name. The telephone book is similar to the DNS.

IP Address (Internet Protocol Address)

An identifier for a computer or device on a TCP/IP network. Used to distinguish one computer from other computers connected to a TCP/IP network such as Internet or Intranet. Assigned by ICANN (Internet Corporation for Assigned Names and Numbers) to every computer connected to an IP network and strictly controlled to avoid duplicates. Represented as a group of four numbers from 0 to 255 separated by periods (e.g. 123. 45. 225. 1.) The format is based on IPv4 (Internet Protocol version 4).

URL (Uniform Resource Locator)

Represents an address of a certain file on the TCP/IP network and leads a user to a file on any computer connected to the Internet anywhere in the world. The format is standardized as the method of protocol to be used://the domain name/the directory name/the file name

An example:
http://www.gmu.edu/departments/telecomm/special.html

7. List out difference between Internet and Intranet.

INTERNET	INTRANET
Simultaneously link computers on different network / global network	**Owned by local or private organisations / companies**

Support multiple users	**Users are limited**
Unsafe, not protected	**Protected and secured**
It's a public network with more traffic	**A private network and traffic is less**
Can transfer unlimited data	**Can transfer only limited data**
Can be widely accessed and used	**Company or organisation employees or admin with access to login details can only use this**
More data or information can be accessed or availed	**Data or information accessible over intranet will be limited and specific to the company records or details**

7.Explain Email Services and Protocols.

Email protocol is a method by which a communication channel is established between two computers and email is transferred between them. When an email is transferred, a mail server and two computers are involved. One computer sends the mail and the other one receives it.

Electronic mail (email or e-mail) is a method of exchanging messages ("mail") between people using electronic devices. Email entered limited use in the 1960s, but users could only send to users of the same computer, and some early email systems required the author and the

recipient to both be online simultaneously, similar to instant messaging. Ray Tomlinson is credited as the inventor of email; in 1971, he developed the first system able to send mail between users on different hosts across the ARPANET, using the @ sign to link the user name with a destination server. By the mid-1970s, this was the form recognized as email.

What is email protocol ?

Email protocol is a method by which a communication channel is established between two computers and email is transferred between them. When an email is transferred, a mail server and two computers are involved. One computer sends the mail and the other one receives it. The mail server stores the mail and lets the receiving device access it and download it if needed. There are four different mail protocols. These protocols differ in the way by which they establish connections and allow user access to emails.

8. Explain Types of CSS with example.

Internal CSS

An internal CSS is used to define a style for a single HTML page.

An internal CSS is defined in the **<head>** section of an HTML page, within a **<style>** element.

The following example sets the text color of ALL the **<h1>** elements (on that page) to blue, and the text color of ALL the **<p>** elements to red. In addition, the page will be displayed with a "powderblue" background color:

Example

```
<!DOCTYPE html>
<html>
<head>
<style>
body {background-color: powderblue;}
h1   {color: blue;}
p    {color: red;}
</style>
</head>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

External CSS

An external style sheet is used to define the style for many HTML pages.

To use an external style sheet, add a link to it in the <head> section of each HTML page:

Example

```
<!DOCTYPE html>
<html>
<head>
  <link rel="stylesheet" href="styles.css">
</head>
```

```html
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

Inline CSS

An inline CSS is used to apply a unique style to a single HTML element.

An inline CSS uses the **style** attribute of an HTML element.

The following example sets the text color of the **<h1>** element to blue, and the text color of the **<p>** element to red:

Example

```html
<h1 style="color:blue;">A Blue Heading</h1>

<p style="color:red;">A red paragraph.</p>
```

9. Write HTML code for following Registration form:

Code:

```html
<!DOCTYPE html>
<html>

<head>
  <title>forms</title>
</head>
<style>
  th {
    text-align: left;
  }

  .align {
    align-content: center;
    margin-left: 500;
    margin-right: 500;
  }
</style>

<body bgcolor="grey">
  <div class="align">
    <table>
      <form method="get">
        <tr>
          <th>Enter Your Name</th>
          <th>:</th>
          <th><input type="text" name="name" placeholder="Enter Your Name"></th>
        </tr>
        <tr>
          <th>Enter Your Mail-ID</th>
```

```html
            <th>:</th>
            <th><input type="email" placeholder="ex:myname@xyz.com"></th>
        </tr>
        <tr>
          <th>Enter Your Gender</th>
          <th>:</th>
          <th>
            <input type="radio" id="male" value="male">
            <label for="male">Male</label>
            <input type="radio" id="female" value="female">
            <label for="female">Female</label>
          </th>
        </tr>
        <tr>
          <th>Create Your Password</th>
          <th>:</th>
          <th><input type="text" name="password" placeholder="Enter your password"></th>
        </tr>
        <tr>
          <th>Confirm Your Password</th>
          <th>:</th>
          <th><input type="password" name="password" placeholder="Confirm your
password"></th>
        </tr>
        <tr>
          <th>Mobile No</th>
          <th>:</th>
          <th><input type="number" name="number" placeholder="Enter Your mobile
number"></th>
        </tr>
        <tr>
          <th>choose your dob</th>
          <th>:</th>
          <th><input type="date" name="dob" placeholder="Enter Your birthdate"></th>
        </tr>
        <tr>
          <th>Enter Your Address</th>
          <th>:</th>
          <th><input type="textarea" name="address" placeholder="Enter Your address"></th>
        </tr>
        <tr>
          <th>choose your locations</th>
          <th>:</th>
          <th>
            <label for="locations"></label>
            <select name="locations" id="locations">
              <option value="select">select</option>
              <option value="india">INDIA</option>
```

```html
            <option value="australia">AUSTRALIA</option>
            <option value="austria">AUSTRIA</option>
            <option value="brazil">BRAZIL</option>
            <option value="pakistan">PAKISTAN</option>
            <option value="bhutan">BHUTAN</option>
          </select>
        </th>
      </tr>
      <tr>
        <th>
          <input type="submit" value="SUBMIT">
          <input type="submit" value="CLEAR">
        </th>
      </tr>
    </form>

    </table>
  </div>
</body>

</html>
```

10. Write code to design Nested List:

Learning Web Development

I. Background Skills
   A. Unix Commands
   B. Vim Text Editor
II. HTML
   A. Minimal Page
   B. Headings
   C. Tags
   D. Lists
      i. Unordered
      ii. Ordered
      iii. Definition
      iv. Nested
   E. Links
      i. Absolute
      ii. Relative
   F. Images
III. CSS
   A. Anatomy
   B. Basic Selectors
      i. Element
      ii. Class
      iii. ID
      iv. Group
   C. The DOM
   D. Advanced Selectors
   E. Box Model
IV. Programming
   A. Python
   B. JavaScript
V. Database
   A. Flat File
   B. Relational

HTML Valid!

Code:

```html
<!DOCTYPE html>
<html>

<head>
  <title>list</title>
</head>

<body>
  <h1><b>Learning Web Development</b></h1>
  <ol type="I">
    <li>Background skills</li>
```

```html
    <ol type="A">
       <li>Unix Commands.</li>
       <li>Vim Text Editor.</li>
    </ol>
    <li>HTML.</li>
    <ol type="A">
       <li>Minimal Pages.</li>
       <li>Heading.</li>
       <li>Tags.</li>
       <li>lists.</li>
       <ol type="i">
          <li>Unordered.</li>
          <li>Ordered.</li>
          <li>Defination.</li>
          <li>Nested.</li>
       </ol>
       <li>Links.</li>
       <ol type="i">
          <li>Absolute.</li>
          <li>Relative.</li>
       </ol>
       <li>Images.</li>
    </ol>
    <li>CSS</li>
    <ol type="A">
       <li>Anatomy.</li>
       <li>Basic Selectors.</li>
       <ol type="i">
          <li>Element.</li>
          <li>Class.</li>
          <li>ID.</li>
          <li>Group.</li>
       </ol>
       <li>The DOM.</li>
       <li>Advanced Selectors.</li>
       <li>Box Model.</li>
    </ol>
    <li>Programming.</li>
    <ol type="A">
       <li>Python.</li>
       <li>javascript.</li>
    </ol>
    <li>Database.</li>
    <ol type="A">
       <li>Flat File.</li>
       <li>Relational.</li>
    </ol>
  </ol>
```

```
</body>

</html>
```

11. Write code for below Structure:

Day	Seminar		
	Schedule		Topic
	Begin	End	
Monday	8:00 a.m.	5:00 p.m.	Introduction to XML
			Validity: DTD and Relax NG
Tuesday	8:00 a.m.	11:00 a.m.	XPath
	11:00 a.m.	2:00 p.m.	
	2:00 p.m.	5:00 p.m.	XSL Transformations
Wednesday	8:00 a.m.	12:00 p.m.	XSL Formatting Objects

Code:

```html
<!DOCTYPE html>
<html>

<head>
  <title>table</title>
</head>
<style>
  th {
    text-align: center;
  }

  td {
    text-align: center;
  }
</style>

<body>
  <table border="5pt" align="center">
    <tr>
      <th rowspan="3">Day</th>
      <th colspan="3">Seminar</th>
    </tr>
    <tr>
```

```html
      <th colspan="2">Schedule</th>
      <th rowspan="2" colspan="2">Topic</th>
    </tr>
    <tr>
      <th>Begin</th>
      <th>End</th>
    </tr>
    <tr>
      <td rowspan="2">Monday</td>
      <td rowspan="2" bgcolor="yellow">8:00 a.m.</td>
      <td rowspan="2" bgcolor="purple">5:00 p.m.</td>
      <td>Introduction to XML.</td>
    </tr>
    <tr>
      <td>Validity:DTD and Relax NG.</td>
    </tr>
    <tr>
      <td rowspan="3">Tuesday</td>
      <td bgcolor="yellow">8:00 a.m.</td>
      <td bgcolor="yellow">11:00 a.m.</td>
      <td>XPath.</td>
    </tr>
    <tr>
      <td bgcolor="yellow">11:00 a.m.</td>
      <td bgcolor="green">2:00 p.m.</td>
      <td rowspan="2">XSL Transformation.</td>
    </tr>
    <tr>
      <td bgcolor="green">2:00 p.m.</td>
      <td bgcolor="purple">5:00 p.m.</td>
    </tr>
    <tr>
      <td>Wednesday</td>
      <td bgcolor="yellow">8:00 a.m.</td>
      <td bgcolor="green">12:00 p.m.</td>
      <td>XSL Formatting Objects.</td>
    </tr>
  </table>
</body>

</html>
```

****