* Introduction to HTML :-

HTML - Hyper Text Markup Language.

→ HTML is a markup language which provides a set of tags suitable for making up webpages.

→ HTML is a scripting language for web pages and output of programs can be seen after using browser

→ HTML is a hyper text language, because it supports font styled text, pictures, graphics and animations.

→ The HTML documents are plain text files. These are created by using text editor like notepad.

→ HTML is a tag-based system. A tag is a special instruction for browser.

→ A tag is made up of left operator (<) and a right operator (>) and a tagname between these two operators. optionally tag name contains one or more parameters.

→ The browser won't generate any error.

Syntax:

< tagname [parameter = value] >

↓ left operator

↓ Right operator.

Note:- Don't give any space b/w left operator and tagname

→ In HTML, the every tag can have corresponding ending tag preceded by backslash symbol.

Structure of HTML document :-

All HTML documents does follow some basic structure.

It has two blocks

→ Head block

→ Body block

→ Head block contains control information used by the browser and title of the document.

→ Body block contains content that displayed on screen and tags, which controls how that content is formated by browser.

The basic HTML document is

```
<html>
<head>
<title> A HTML document </title>
</head>
<body> ---- </body>
</html>
```

→ In html document, the every tag can have corresponding ending tag preceded by blackslash symbol (/).

Ex:- <html> ---- </html>

Starting tag — ending tag.

* Basic HTML Tags :-

→ <html> --- </html>

This is the basic tag of html document. By using this tag the browser can identifies the weather it is html document or not.

→ <head> --- </head>

This tag indicates the first part of HTML document and it contains control information and title of the html document.

→ <title> --- </title>

It specifies the title of the html document.

→ <body> --- </body>

It indicates the second part of HTML document and it contains all the remaining information about webpage. The body tag has different parameters which indicates background, bgcolor --- etc.

→ Blocks (--- , heading tags)

The two major blocks of text in Html document are paragraph and headings.

(i) <p [align = "left" | "center" | "right"]> ---

It specifies the paragraph.

(ii) heading tags :-

Heading tags are simple forms of text formating that vary text sizes based on header level.

Those are <h1> --- </h1> <h3> -- </h3>
<h2> -- </h2> <h4> --- </h4>
<h5> --- </h5> <h6> -- </h6>

Example :-

blocks.html

```
<html>
<head>
<title> My first document </title>
</head>
<body bgcolor = "skyblue">
 <p> This document displays the title of
The document and different text headings </p>
 <h1> Web Technologies </h1>
 <h2> Web Technologies </h2>
 <h3> Web Technologies </h3>
 <h4> Web Technologies </h4>
 <h5> Web Technologies </h5>
 <h6> Web Technologies </h6>
</body>
</html>
```

→ Text

The text on a HTML page can be altered in a number of ways

(i) ...

By using this tag we can set the size and color of the text.

(ii) ...

It bolds the text.

(iii) <u> ... </u>

It underlines the text.

(iv) ...

Italic text

(v) ...

for emphasis (new standard for Italic).

(vi) ...

for strong (new standard for bold).

(vii) <s> ... </s>

Strikes the text.

Example :-

Text.html

```
<html>
<head>
<title> Text </title>
</head>
<body>
<h1> Changing font sizes </h1>
<font size="7"> Larger, </font>
<font size="3"> Medium </font>
<font color="red"> Red </font>
<font color="blue"> Blue </font>
<b><u><i> Text styles </i> </u> </b>
<b> Web Technologies </b>
<u> Web Technologies </u>
<i> Web Technologies </i>
<em> Web Technologies </em>
<strong> Web Technologies </strong>
<s> Web Technologies </s>
</body>
</html>
```

→ Horizontal Rule <hr />

<hr [width=n] [size=n]

[align={left/right/center}] [noshade]] />

➡ Subscripts & Super scripts :-

_{...} — subscripts

^{...} — super script

Example :-

ss.html

```
<html>
<body>
 <b> Formula for water </b>
 <hr />
  H <sub> 2 </sub> O
  <br />
  <b> Basic Mathematical formula </b>
  <hr/>
   (a+b) <sup> 2 </sup> = a <sup> 2 </sup> +
        b <sup> 2 </sup> + 2 * a * b.
  </body>
  </html>
```

➡ character escape sequences

&amp;		&lt;	&gt;	&quot;	&copy
&		<	>	"	©

➡ Anchor tag <a>

Anchor tag is used to create link between two documents, minimum it requires a parameter i.e "href" which indicates destination document.

The most important capability of html is its ability to create hyperlinks. Hyperlinks can be applied to either text & images.

syntax :-

```
<a href="address"> Text </a>
```

Example :-

welcome.html :-

```
<html>
 <head>
 <title> Welcome </title>
 </head>
 <body>
  <h1> Welcome to HTML </h1>
 </body>
 </html>
```

Home.html :-

```
<html>
<head>
<title> Home </title>
</head>
<body>
 <a href = "welcome.html"> click here </a>
</body>
 </html>
```

---

* Lists :-

List is a collection of items and they may be ordered or unordered.

HTML provides 3 types of list

(i) ordered list-

 ...

(ii) unordered list

 ...

(iii) definition list

<dl> ... </dl>

(i) Ordered List :- ...

This is used to display the list of items in a order. It can use the numbers or roman numbers or alphabets as type of order.

It has one inbuild tag i.e <li> ...

In this list the default order is numeric.

Ex:-
```
<ol>
<li> orange </li>
<li> grape </li>
</ol>
```
o/p:-
1. orange
2. grape

Ex:-
```
<ol type = 'A'>
<li> mango </li>
<li> orange </li>
</ol>
```
o/p:-
A. mango
B. orange

Ex:-
```
<ol type = 'I' start = 3 >
<li> cricket </li>
<li> Football </li>
</ol>
```
o/p:-
III. cricket
IV. Football

(ii) unordered List :- ...

This is used to display the list of items by using different types of symbols. In this also there is a inbuilt tag i.e <li> ... .

In this list the default symbol is dot (•).

Ex:-
```
<ul>
<li> orange </li>
<li> apple </li>
</ul>
```
o/p:-
• orange
• apple

Ex:-
```
<ul type = "circle">
<li> cricket </li>
<li> Football </li>
</ul>
```
o/p:-
○ cricket
○ Football

(iii) definition list :- <dl> ... </dl>

The definition list is used to specify list of terms and their definitions.

It has the following tags

<dl> tag specifies the definition list.

<dt> tag specifies the defined term.

<dd> tag specifies the definition for term.

Ex:-
```
<dl>
<dt> HTML </dt>
<dd> HTML is the markup language </dd>
<dt> XML </dt>
<dd> XML is the extended Markup Language </dd
</dl>
```

O/P:-
```
HTML
    HTML is the markup language
XML
    XML is the extended markup language
```

Example :-

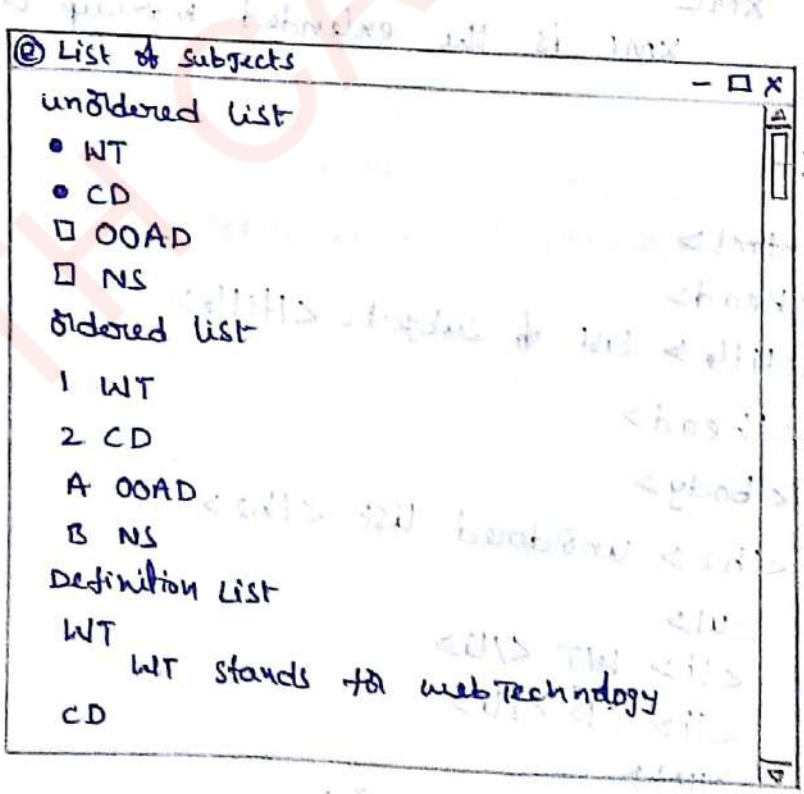
lists.html

```
<html>
<head>
<title> List of subjects </title>
</head>
<body>
<h2> unOrdered list </h2>
<ul>
<li> WT </li>
<li> CD </li>
</ul>
<ul type = "square" >
<li> OOAD </li>
<li> NS </li>
</ul>
```

Contd..

```
<h2> Ordered list </h2>
<ol>
<li> WT </li>
<li> CD </li>
</ol>
<ol type="A">
<li> OOAD </li>
<li> NS </li>
</ol>
<h2> Definition List </h2>
<dl>
<dt> WT </dt>
<dd> WT stands for Web Technology </dd>
<dt> CD </dt>
<dd> CD stands for compiler design </dd>
</dl>
</body>
</html>
```

O/P:-



* Tables :-

A table is a matrix of rows and columns. The table provides a highly readble way of presenting many kinds of information.

By using table we can presenting information in structuring format and structuring the whole web page.

The basic table tags :-

<table> --- </table> :-

It indicates the starting of the table. The most common attribute for <table> tag is border. And it has different attributes like height, width ---.

<th> --- </th> :-

It is used to give table heading (column header)

<tr> --- </tr> :-

It is used to indicating strating of a Table row.

<td> --- </td> :-

It indicates the table data for a cell.

<caption> -- </caption>

It is used to insert caption into table.

Format :-

```
< table [align = "center"/"left"/"right"] [border = n]
 [cell padding = n] [height = n%] [width = n%]
                    [cellspacing = n] >
 <caption > --- </caption>
 <tr>
  < th > -- </th>
 </tr>
 <tr>
  <td> -- </td>
 </tr> </table>
```

cellpadding :-

It specifies the space between content of cells and its borders in pixels.

cellspacing :-

It specifies the space between cells.

width :-

Sets amount of screen that table will use in the factor of width.

height :-

Sets amount of screen that table will use in the factor of height.

Example :-

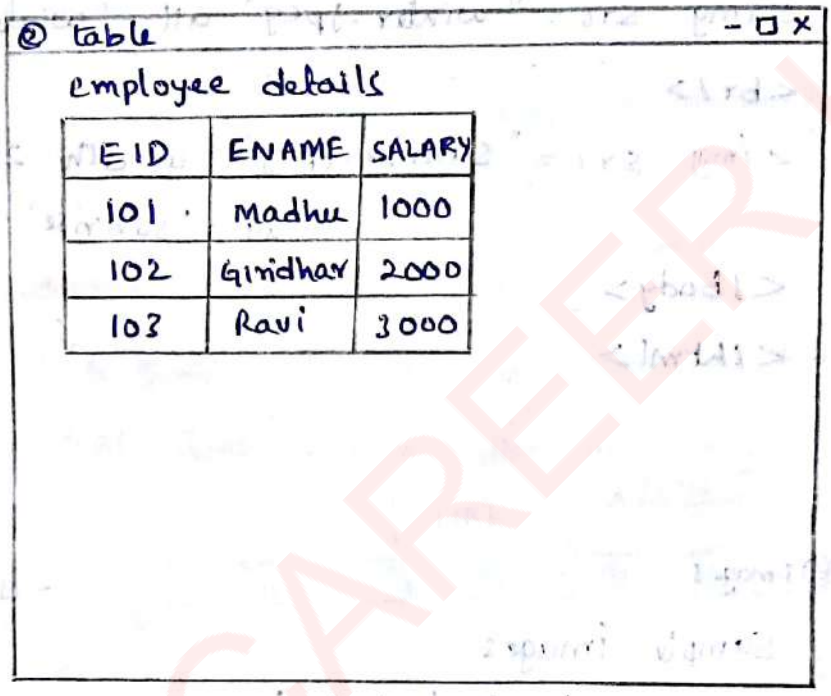
Table.html

```
<html>
<head>
<title> Table </title>
</head>
<body>
<table border = 1 >
<caption> employee details </caption>
<tr>
<th> EID </th>
<th> ENAME </th>
<th> SALARY </th>
</tr>
<tr>
<td> 101 </td>
<td> Madhu </td>
<td> 1000 </td>
</tr>
<tr>
<td> 102 </td>
<td> Giridhar </td>
<td> 2000 </td>
</tr>
```

contd...

```
<tr>
<td> 103 </td>
<td> Satish </td>
<td> 3000 </td>
</tr>
</table>
</body>
</html>
```

O/p:-



* Images :-

Images play an important role in webpages. The total look of a webpage is improved using images.

Images can be embedded inside document using <img> tag. Minimum it requires a parameter i.e "src", which indicates source.

Syntax:-

```
<img src="filename/path" [Border=n]
[Alt="text"] [height=n] [width=n]>
```

some times we can use images as hyperlink.

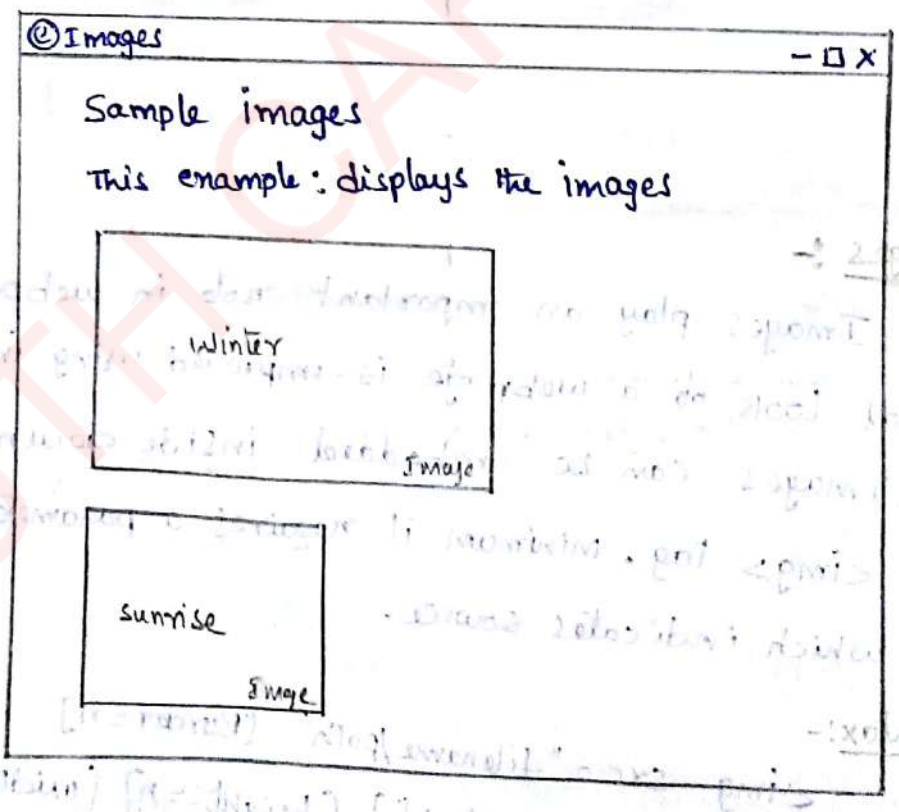
Ex:- `<a href="a.html"><img src=" "></a>`

Example :-

Images.html

```
<html>
<head>
<title> Images </title>
</head>
<body>
<h1> Sample images </h1>
<p> This example : displays the images </p>
<img src = " winter.jpeg" alt = "winter" />
<br/>
<img src = " sunrise.jpeg" width = 20% height=10
                                alt = 'sunrise" />
</body>
</html>
```

O/p :-



* Forms :-

Form is the most common way for a user to communicate the information from a web browser to server.

<form> tag is used to create a html form. This tag has several attributes and important among them are "Method" and "action".

action :- This attribute specifies the URL of the application, which is to be called when the user clicks the submit button (or) submitting the form.

Method :- This attribute specifies how the entered data in form is sent to destination. There are two methods of sending information, one is "post" and other is "get".

"post" Method	"get" Method
→ Information sent along with body	→ Information sent along with URL
→ Data is invisiable while sending	→ Data is visiable in site addres
→ It provides security	→ No security
→ It can send any no. of characters	→ It sends limited characters

User Interface elements in forms :

(i) Label :-

Label

This is used to display the text on the screen.

(ii) Text field :-

It is an reanglar box. It is used to take the input from the user. This can be created using <input> tag.

Madhu

format :- <input type="text" [size=n] [name=" "] [maxlength=n] [value="name"]>
</input>

(iii) Buttons :-

Button

HTML supports three types of buttons.

- Button creates a simple button

format:- <input type="button" [value=" "]></input>

- Submit button creates a button and it invokes the form action i.e submits the form.

format:- <input type="submit" [value=" "]></input>

- Reset button creates a button and it clears the entries which are entered by user in the form.

format:- <input type="Reset" [value=" "]></input>

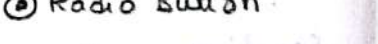
(iv) password field :-

This is used to enter the password.

format:- <input type="passwdd" [size=n] [name=" "]>
</input>

(v) Radio Button :-

This is used to select only one value at a time.



format:- <input type="radio" [name=" "]
[value=" "]></input>

(vi) CheckBox :-

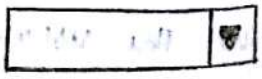
This is used to select multiple values at a time

format:- <input type="checkbox" [name=" "]
[value=" "]></input>

(vii) Combo Box :-

It is used to select one value from multiple values

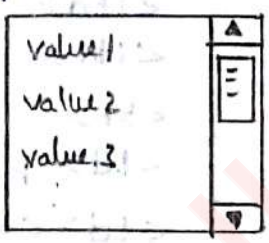
format:- <select [name=" "]>
<option> --- </option>
<option> --- </option>
</select>



(viii) List box :-

It is used to select one (or) more values from multiple values.

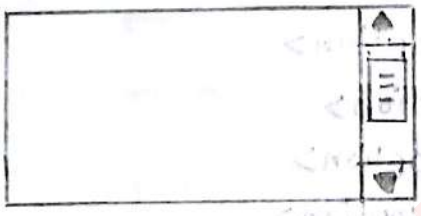
format :- <select [name=" "] [size = n] >
<option [selected] > ... </option>
<option> ... </option>
</select>



(ix) Text area :-

This is just like a text field but it has multiple rows and columns.

format :- <textarea [name=" "] [rows = n] [cols = n] >
</textarea>



Example :-

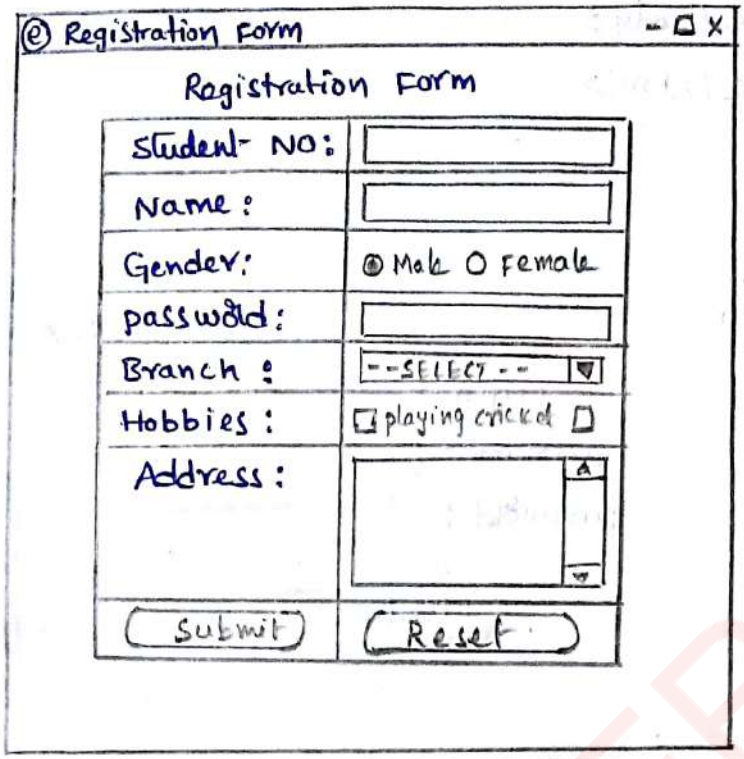
Registration.html

```
<html>
<head>
<title> Registration Form </title>
</head>
<body bgcolor = "skyblue" >
<form name = "frm1" >
<center> <h2> Registration Form </h2> </center>
<table align = "center" border = 1 >
<tr>
<td> Student NO : </td>
<td> <input type = "text" name = "sno" > </input> </td>
</tr>
<tr>
<td> Name : </td>
<td> <input type = "text" name = "name" > </input>
</td>
</tr>
```

contd ...

```
<tr>
<td> Gender:</td>
<td>
<input type="radio" name="gen"> Male </input>
 
<input type="radio" name="gen"> Female</input>
</td>
</tr>
<tr>
<td> password: </td>
<td><input type="password" name="pwd"></input>
</td></tr>
<tr>
<td> Branch:</td>
<td><input select name="branch">
<option> --SELECT-- </option>
<option> CSE </option>
<option> ECE </option>
<option> EEE </option>
<option> MECH </option>
</td></tr>
<tr>
<td> Hobbies </td>
<td> <input type="checkbox" name="hb">
Playing cricket </input>  
<input type="checkbox" name="hb">
Reading books </input></td>
</tr>
<tr>
<td> Address: </td>
<td> <textarea name="addrs" rows=4 cols=15>
</textarea> </td>
</tr>
<tr>
<td><input type="submit" name="subm" value="submit">
</input> </td>
<td><input type="Reset" name="rs" value="Reset">
</input> </td></tr> </table>
</form> </body>
</html>
```

o/p:-



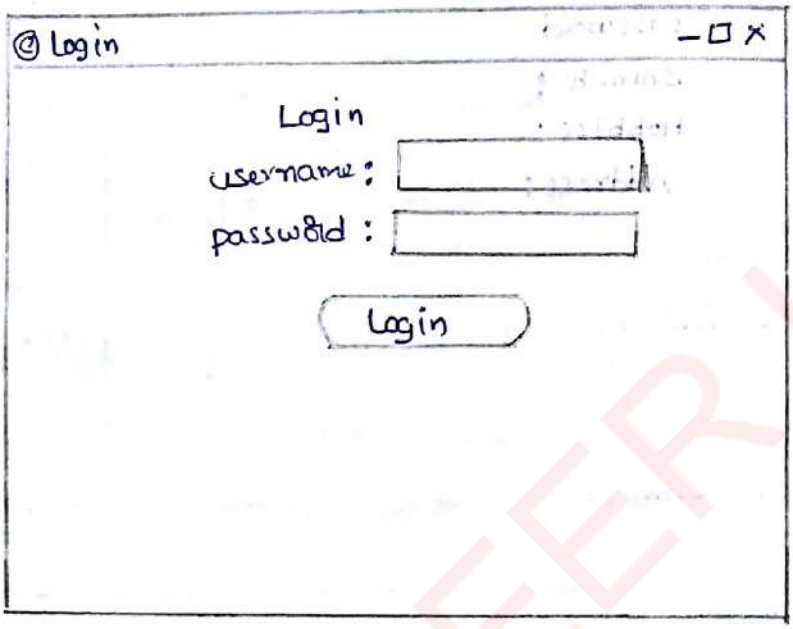
Example :-

login.html

```
<html>
<head>
 <title> login </title>
</head>
 <body>
  <center> <h2> Login </h2> </center>
```

```
</table>
</body>
</html>
```

o/p:-



* Frames :-

Generally the browser window can be used to display the one or more documents at a time.

The window can be devided into rectangular areas each of which is a "frame".

By using <frameset> tag, we can specifies the numb of frames and their layout.

A set of frames are defined using <frameset> ta which ends with </frameset> tag.

A frameset tag takes the place of the body tag, ie A html document has eiltier a body or a frameset tag, bu can't have both.

The <frameset> tag must have either a "rows" or "cols" attribute and they often have both.

rows :- This attribute specifies the no of rows of frames that will occupy the window.

cols :- This attribute specifies the no of columns of frames that will occupy the window.

```
<frameset [cols = "%, %"] [rows = "%, %"] >
    ...
</frameset>
```

The <frameset> tag have one inbuilt tag i.e <frame> tag. It is used to specifies the content of frame.

```
<frame src = "filename" [name = " "] [scrolling : "yes" | "auto"
                                    | "no"] [frameborder = "0" | "1"] />
```

The frame tag has several attributes and important among are "src" and "name"

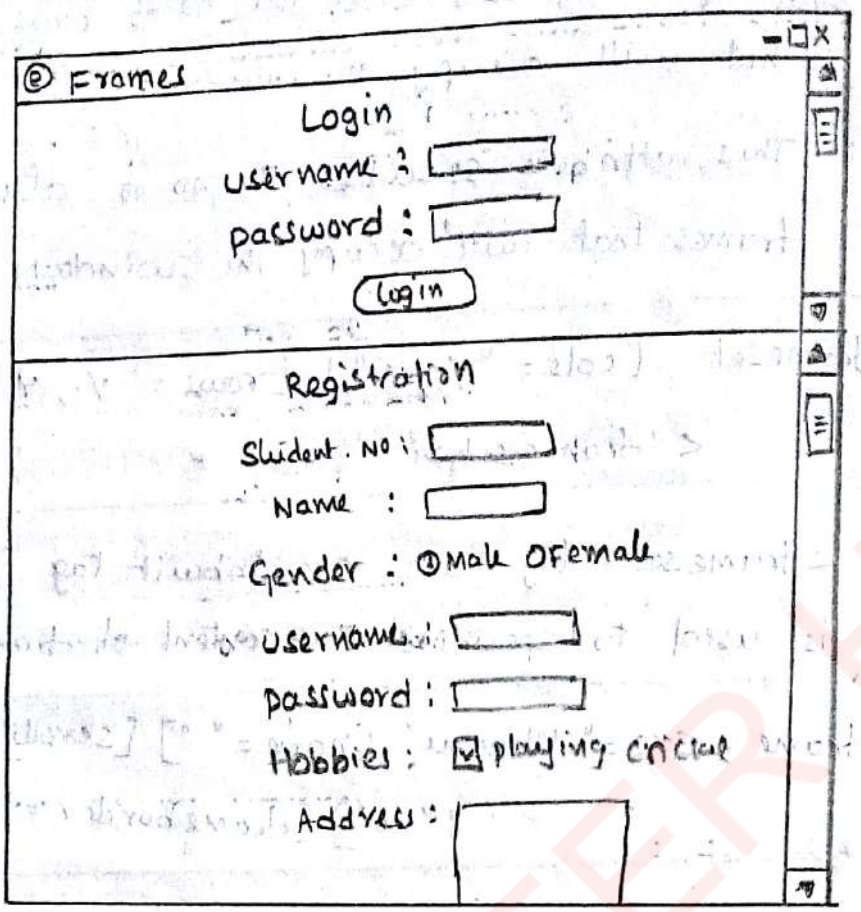
src :- It specifies source for frame.

name :- It specifies the name of the frame.

Example :-

```
<html>
<head>
<title> Frames </title>
</head>
<frameset rows = "25%, 50%" >
<frame name = "login" src = "login.html" />
<frame name = "Registration" src = "Registration.html" />
</frameset>
</html>
```

O/P:-



Nested frames:-

We can create a frame within the frame by using nested frames.

Example:-

```
<html>
<head>
<title> Nested Frames </title>
</head>
<frameset rows = "25%, 50%">
<frame name = "login" src = "login.html" />
<frameset cols = "25% 75%">
<frame name = "welcome" src = "welcome.html" />
<frame name = "Registration" src = "Registration.html" />
</frameset>
</frameset>
</html>
```