TEKNOTURF

HTML

In this module you will learn

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- Introduction to web technology
- Introduction to HTML5
- HTML5 elements
- Table
- List
- Working with Links
- Image Handling

Introduction to Web Technology

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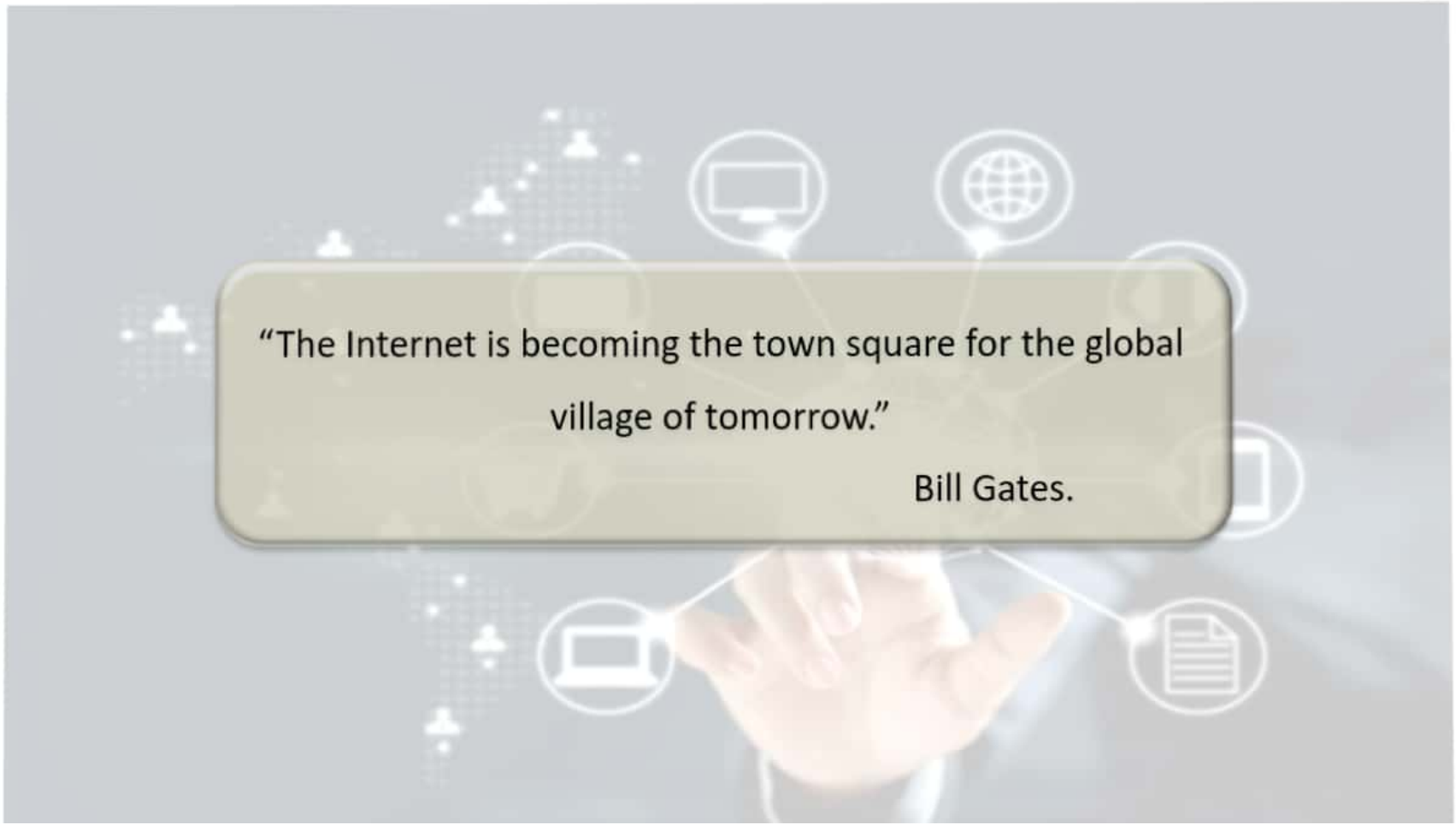

Web Technology

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The ***INTERNET***, sometimes called simply "the Net," is a worldwide global system of interconnected computer networks.

It is also defined as an ***Information super Highway***, to access information over the web.

It is a network of networks, so the users can share resources and communicate with each other.

Terminologies

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HTML – It is said to be **Hyper Text Markup Language** for creating web pages and web applications and it called as text formatting language.

Web Pages - A Web Page is a single html document displayed as a single page in a browser and it can be connected to other pages.

Web Sites - A Web site is a collection of several web pages all connected together that may contain text, images, audio and video. and usually at the same internet address. The first page of a website is called home page.

Static Web Page

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A static web page Static website is the basic type of website whose content will be static

It is the one that is usually written in plain HTML

Prebuilt content is same every time the page is loaded because it sends exactly the same response for every request

The content is only changes when someone publishes and updates the file (sends it to the web server)

Flexibility is the main advantage of static website

Dynamic Web Page

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- **Client side scripting** generates content at the client computer on the basis of user input. The web browser receives the web page from the server and processes the code within the page to render information to the user.
- In **server side scripting**, the software runs on the server, processes the code and once completed, the pages are sent to the client.

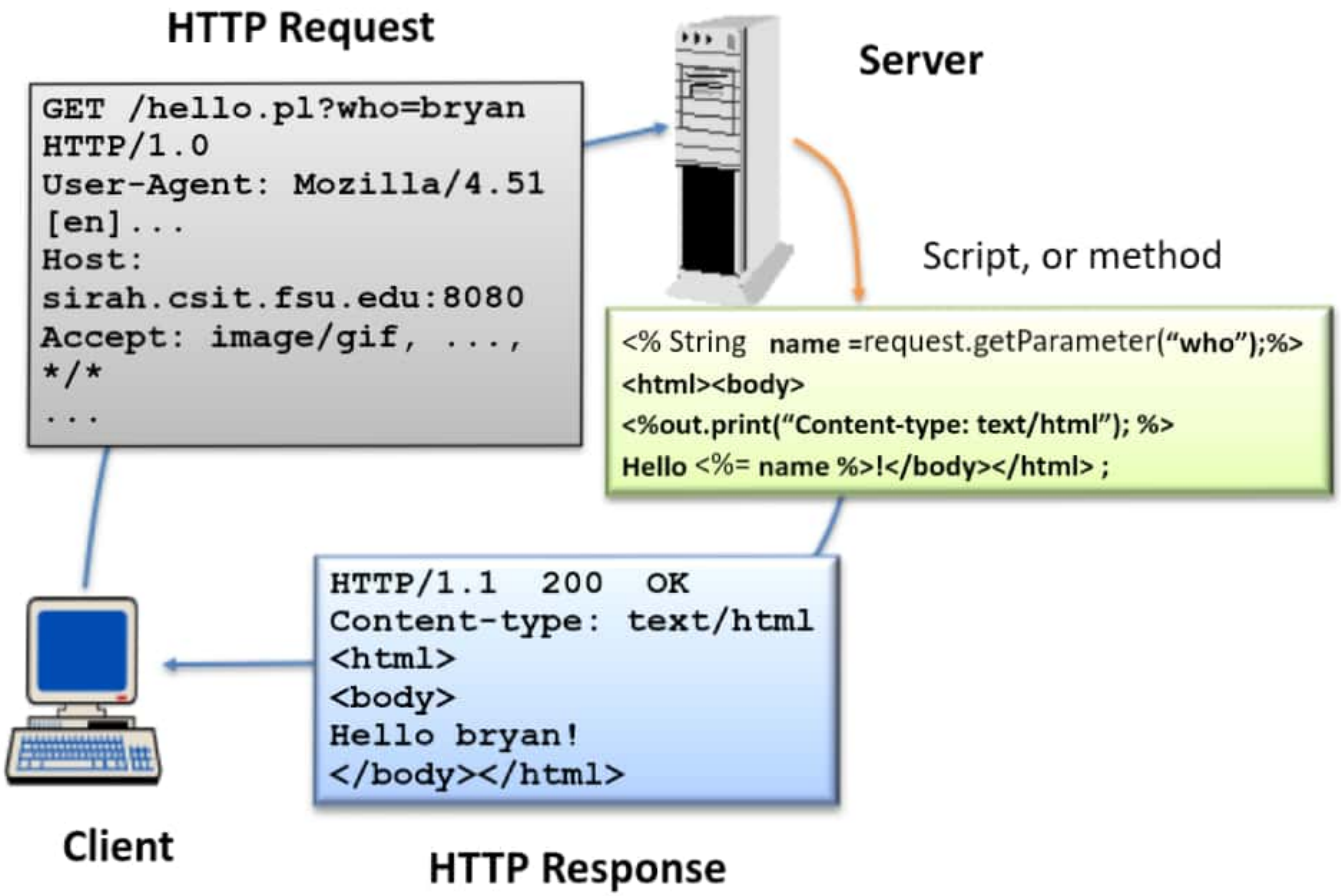
Dynamic website uses client-side scripting or server-side scripting, or both to generate dynamic content.

Dynamic web page is a page whose content changes dynamically. It shows different information at different points of time.

It may generate different HTML for each of the requests.

It accesses content from a database or **Content Management System** (CMS). When you alter or update the content of the database, the content of the website is also altered or updated.

Dynamic Generation of HTML



Introduction to HTML

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HTML stands for **Hyper Text Markup Language.**

Hyper Text - Refers to the way web pages are linked to each other

Markup - Usage of tags to structure the web page

HTML is used for developing web pages for applications. Web pages are text files containing HTML.

Normal text" surrounded by bracketed *tags* that tell browsers how to display web pages

Pages end with ".htm" or ".html"

HTML Editor – A word processor that has been specialized to make the writing of HTML documents more effortless

Basic HTML Tags

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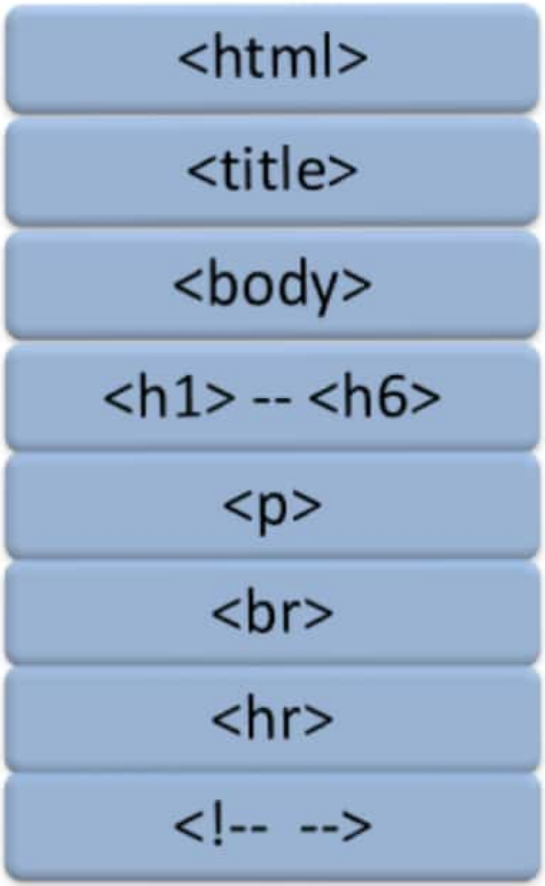

Basic HTML Tags

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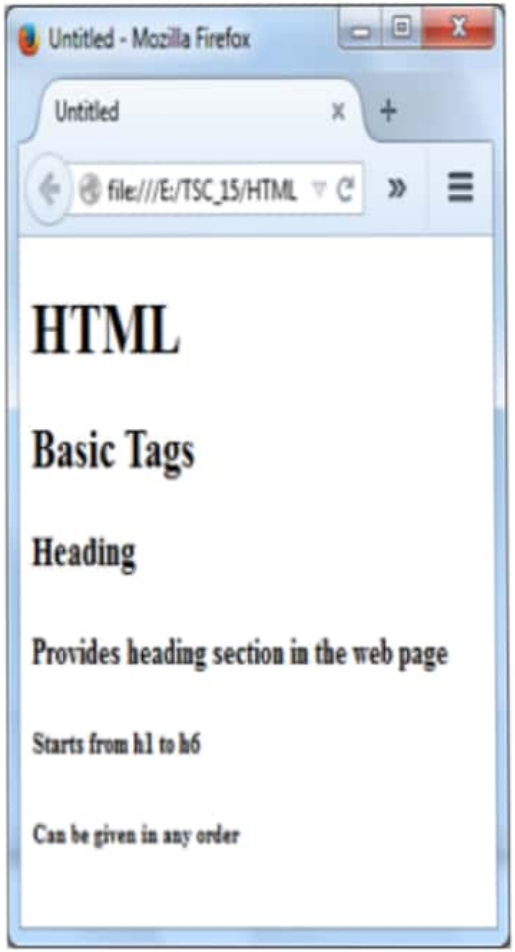
Heading Tag

Used to provide headings in HTML file

Heading tags start from **<h1>** to **<h6>**

```
<html>
<body>
        <h1>HTML</h1>
        <h2>Basic Tags</h2>
        <h3>Heading</h3>
        <h4>Provides heading section in the web page</h4>
        <h5>Starts from h1 to h6</h5>
        <h6>Can be given in any order</h6>
</body>
```



Basic HTML Tags cont …

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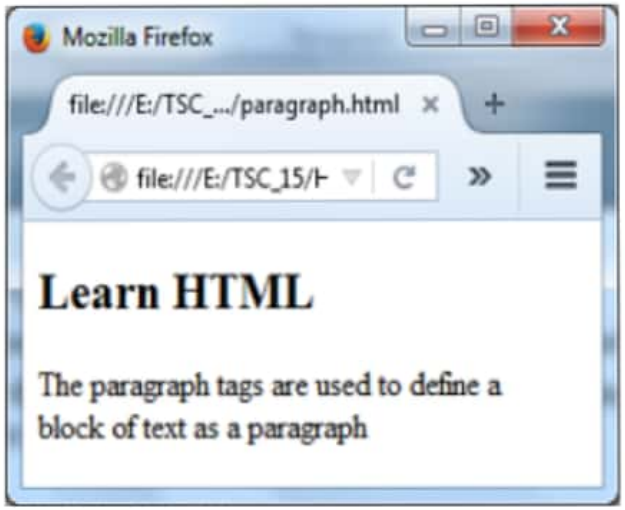
Paragraph tag

The **<p>** tag defines a paragraph.

Browsers automatically add **space** before and after each **<p>** element.



Break tag

```
<body>
    <p><h2>Learn HTML</h2> </p>
    <p>The paragraph tags are used to define a  <br>block of text as a paragraph</p>
</body>
```

Basic HTML Tags cont …

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Horizontal Rule

The **<HR>** element causes the browser to display a horizontal line (rule) in your document.

```
<html>
<body>
        <p><h2>Learn HTML</h2> </p>
        <p>The paragraph tags are used to define a
        <br>block of text as a paragraph</p>
        <hr>
        <p>The tag HR gives a horizontal line </p>
</body>
</html>
```

Basic HTML Tags cont …

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<!DOCTYPE>

- Gives instruction to the web browser about the version of HTML used
- Doctype must be the first line of the web page

```
<!DOCTYPE html>
<html>
<body>
    Contents of Web Page
        </body>
</html>
```

Represents HTML5

Basic HTML Tags cont …

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Comments

- Tag used to add information to the html page, which will not be displayed in the browser
- Tag : **<!-- -->**

```
<!DOCTYPE html>
<html>
<body>
<!-- body tag contains the details that is to be displayed in the web page -->
    Contents of Web Page
        </body>
</html>
```

Will not be displayed in browser

Choose the correct answer in each drop-down list:

In the login page, the user does not enter the password and gets an error "Password cannot be empty". This scenario is an example for: Static Page

Correct

That's right! You selected the correct response.

_____ can be referred as an HTML document displayed as a single page in a browser.

- ( ) Form designed using HTML
- (✓) Web page
- ( ) Web form
- ( ) Animated page

Correct

That's right! You selected the correct response.

Which of the following is true about Client Side Scripting?

- [x] Generates content based on the user input in client machine
- [ ] It shows different information at different points of time
- [ ] It may generate different HTMLs for each of the request
- [ ] Processes the code and sends output to the client machine

Correct

That's right! You selected the correct response.

_____ is called as an area of the WWW that is identified by its own address.

- URL
- Website
- Browser
- Webpage

Incorrect

You did not select the correct response.

The term "Internet" is also called as "Internet Super Highway". State True or False

- [x] True
- [ ] False

Correct

That's right! You selected the correct response.

HTML5

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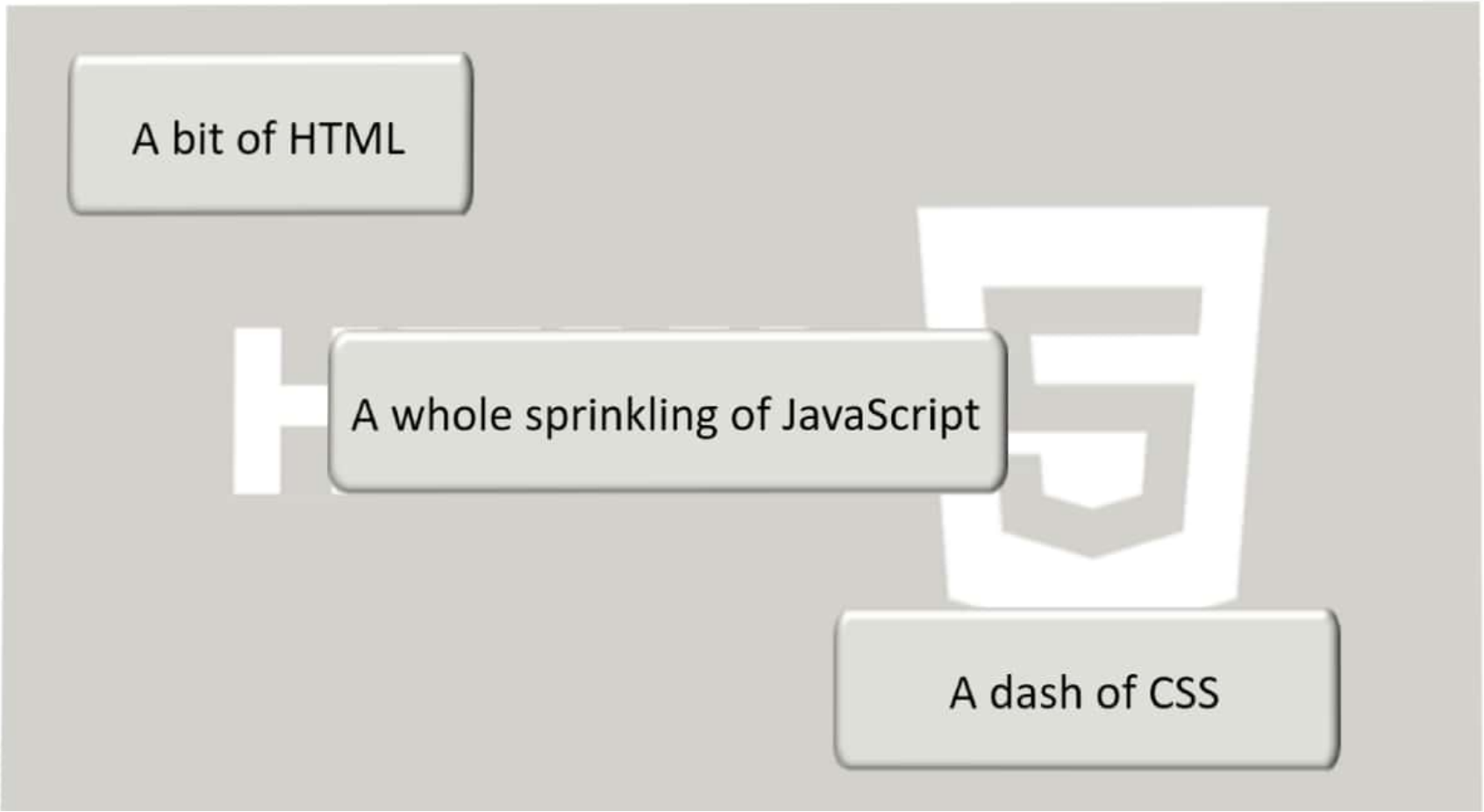

HTML5 cont …

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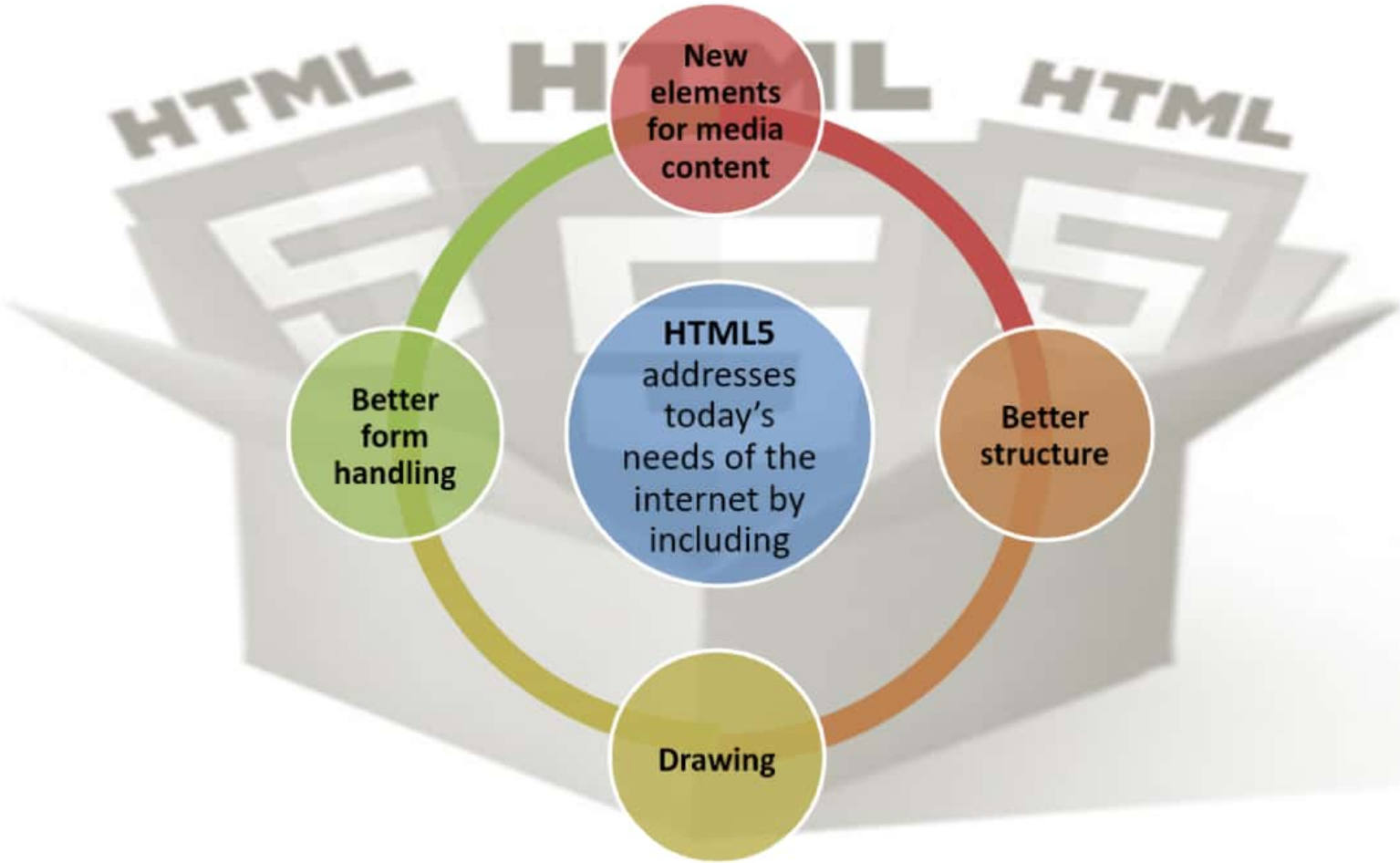

HTML5 cont …

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Browser Support

The latest versions of
- Apple Safari
- Google Chrome
- Mozilla Firefox
- Opera

All support many HTML5 features

The mobile web browsers that come pre-installed on iPhones, iPads, and Android phones all have excellent support for HTML5.

New Features

Better support for local offline storage

New form controls like: calendar, date, time, email, url, search, etc.

The canvas element for sketching

The video and audio elements for media playback

- Allows video and audio to be tagged easier
- (like images)… such as
- <video src=…> and <audio src=…>

New content specific elements such as

- article, footer, header, navigation, section, etc.

Forms 2.0 and client-side validation

Native browser support for audio and video

Tables

```
<table border="1">
    <colgroup>
        <col span="2" style="background-color:#81D5D9">
        <col style="background-color: #DDDB5F">
    </colgroup>
<tr>  <caption>Employee Details</caption> </tr>
<thead>
 <tr>
<th>ID</th>
<th>NAME</th> <th>AGE</th> <th>Address</th></tr>
</thead>
<tbody>
<tr> <td>101</td> <td>Johan</td> <td>20</td> <td rowspan="2">Ganapathy</td>
    </tr>
    <tr>    <td>102</td> <td>Mini</td> <td>19</td>  </tr>
    <tr>    <td>103</td> <td>Ivan</td> <td>23</td> <td>Coimbatore</td>   </tr>
    </tbody>
    <tfoot>
    <tr>
    </tfoot>
</table>
```

<td colspan="3">The total Employees</td> <td> 3 </td>

Employee Details

ID	NAME	AGE	Address
101	Johan	20	Ganapathy
102	Mini	19	
103	Ivan	23	Coimbatore
The total Employees			3

HTML List Tags

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Creates an ordered or unordered list for the contents of the web page

Ordered list

- Tag for defining the list item :
- Attribute : type
  - 1 -- numbered with number
  - A -- numbered with Capital case alphabets
  - a -- numbered with smaller case alphabets
  - I -- numbered with upper case roman letters
  - i -- numbered with lower case roman letters

Example for List Tags

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```
<html>
<body>
    basic Tags
    <ol type="1">
        <li>paragraph</li>
        <li>heading</li>
        <li>line break</li>
        <li>horizontal break</li>
    </ol>
    formatting tags
       <ul style="list-style-type: square">
        <li>bold</li>
        <li>strong</li>
        <li>del</li>
        <li>code</li>
       </ul>
</body>
</html>
```

Example for List Tags

```
<html>
<body>
    basic Tags
        <li>paragraph</li>
        <li>heading</li>
        <li>line break</li>
        <li>horizontal break</li>
    </ol>
    formatting tags
        <ul style="list-style-type: square">
        <li>bold</li>
        <li>strong</li>
        <li>del</li>
        <li>code</li>
        </ul>
</body>
</html>
```

basic Tags

1. paragraph
2. heading
3. line break
4. horizontal break

formatting tags

- bold
- strong
- del
- code

Unordered list :

- list-style-type:disc -bullets (default)
- list-style-type:circle- circles
- list-style-type:square-squares
- list-style-type:none – nothing will appear

Links

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Hyperlink, which helps in navigation from one page to another web page or from one part of the page to the other part of the web page

<a> - anchor tag

- The hyperlink can be a text or image which is clickable

Attributes

- href: Defines the destination location
- Target :Defines where the targeted page must be opened

```
<body>
<a href="paragraph.html">Click Here</a>
</body>
```

Links – Target Attribute

Target Value	Description
_blank	Opens the linked page in a new window or tab
_self	Opens the linked page in the same frame as it was clicked (this is default)
_parent	Opens the linked page in the parent frame
_top	Opens the linked page in the full body of the window
framename	Opens the linked page in a named frame

Internal links

- Links can also be created inside large documents to simplify navigation.

HTML5 Image Tag

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- Defines an image in HTML page
- Attributes
  - src – URL of the image
  - alt -- alternate text that is displayed, if the image is not displayed in the webpage
  - height – height of the image
  - width – width of the image

```
<html>
<body>
    <img src="E:\HTML5\Tag.jpg" alt="Image can not be displayed" />
</body>
</html>
```

Image map is a map with clickable area
The **<map>** tag is used to define a client-side image-map.

When the user clicks on a sign up image, the login page should be displayed in the same window. Which of the following options will do this?

- <img src="signup.png"></img>
- ✔ <img src="signup.png"></img>
- <img src="signup.png"></img>
- <img src="signup.png"></img>
- <img src="signup.png"></img>
- <img src="signup.png"></img>

Incorrect

You did not select the correct response.

Which of the following input controls is used for input fields that should contain a web address?

- email
- number
- range
- ✔ URL

Correct

That's right! You selected the correct response.

In the webpage, we have an image to be displayed on the left corner of the webpage. Certain browsers might not support the image, and in that case a message should be displayed as "Image cannot be displayed". Which of the following will suit the above requirement?

- ✔ <img src="image.png" alt="Image cannot be displayed"></img>
- <img src="image.png" altmsg="Image cannot be displayed"></img>
- <img src="phone.png">Image cannot be displayed</img>
- <img src="image.png" errmsg="Image cannot be displayed"></img>

Correct

That's right! You selected the correct response.

Which of the following is the comment line in HTML5?

- /* */
- <-- -->
- <!-- --> ✔
- /** **/

Correct

That's right! You selected the correct response.

Summary

TEKNOTURF

- Introduction to web technology
- Introduction to HTML5
- HTML5 elements
- Table
- List
- Working with Links
- Image Handling

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THANK YOU

In this module you will learn

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- Introduction to HTML Forms
- Form-Input Elements
- HTML5 Form elements
- HTML5 Attributes
- Video Tag
- Audio Tag

HTML Forms

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HTML forms enable web applications to collect information from users.

Used to interact between a user and a web site or an application.

To build a form, the following HTML elements are used

<form>
<label>
<input>
<textarea>
<button>

Form – Elements

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Syntax

HTML forms always start with a **<form>** tag

```
<form name="registration"  action="registered.html"  method="post"
      autocomplete="on"  novalidate="novalidate">
</form>
```

Form tag has the following elements,

Attribute	Description
Action	Specifies the destination on submission
Method	Specifies the HTML method to be used on sending the form Get : the data is sent along the URL Post : the data is sent via the message body
autocomplete	Specifies whether a form should have autocomplete on or off
novalidate	Specifies that the form should not be validated when submitted

Form-Input Elements

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Form element contains

- <input>
- <textarea>
- <button>
- <select>
- <option>
- <optgroup>
- <fieldset>
- <label>

Input - Attributes

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Attribute is used to display the type of **<input>** element

Different type values are

- text
- checkbox
- radio
- password
- button
- submit
- reset
- hidden
- file
- Image

The default type is **text**.

Example - 1

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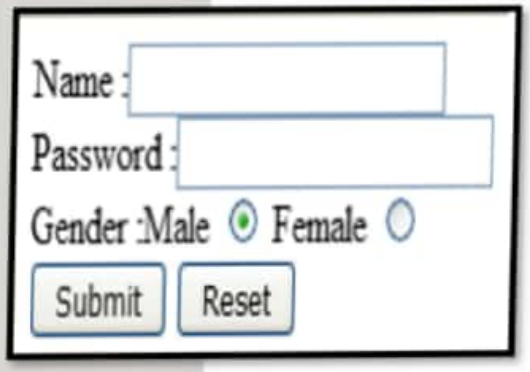
```
<html>
<body>
Name          :<input type="text" name="name"/><br>
Password   :<input type="password" name="password"/><br>
Gender       :Male <input type="radio" name="gender" value="male" checked="checked" />
Female <input type="radio" name="gender" value="female"/>     <br>
<input type="submit" value="Submit"/>
<input type="reset" value="Reset"/>
</body>
</html>
```



Example - 2

```
<html>
<body>
<select name="qual">
<option value="UG">UG</option>
<option value="PG">PG</option>
</select>
<input type="button" value="signin"/>
<input type="file" name="img"/>
</body>
</html>
```

Example - 3

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```
<html>
<body>
Certification Java <input type="checkbox" name="cert" />
                   Oracle <input type="checkbox" name="cert"/><br>
Address  <textarea name="address" cols="20" rows="5"></textarea><br>
<input type="reset" value="Reset"/>
<input type="submit" value="Submit" />
</body>
</html>
```

Which of the following input fields allow the user to select multiple values?

- [x] datalist
- [x] Checkbox
- [ ] none of these
- [ ] radio

Correct

That's right! You selected the correct response.

What is the difference between the input fields submit and button?

- [x] In submit, the name of the button will be either Submit or Submit Query.
- [x] Submit will submit or transfer the control to the next page.
- [ ] Both button and submit will submit or transfer the control to the next page.
- [ ] In button, the name of the button will be button.
- [ ] Button will submit or transfer the control to the next page.

Correct

That's right! You selected the correct response.

Which of the following statements are true, regarding the hidden input field?

- [x] Used to send data to another function or server
- [ ] The data stored in this field is not visible to the user, but it can be edited.
- [ ] The user can edit the value given in the hidden field
- [x] For the hidden field, the value attribute with some value is mandatory in order to send the value to the server.

Correct

That's right! You selected the correct response.

Which of the following form inputs is used to send information to the server?

- <input type="server">
- ✔ <input type="submit">
- <input type="send">
- <input type="mail">

Correct

That's right! You selected the correct response.

Consider the given code snippet:

```
<body>
<form action="success.html">
User Name <input type="text" name="uname"/>
Password <input type="password" name="password"/>
<input type="submit" value="Login"/>
<input type="reset" value="reset"/>
</form></body>
```

What is the use of form tag in HTML?

- [x] to collect user's input
- [ ] to display contents of email
- [ ] to display animation effect
- [ ] None

Correct

That's right! You selected the correct response.

HTML5 Form

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HTML5 web forms have introduced

- Form elements
- Input types
- Attributes
- And other features

Features done using HTML mark up are:

- form validation
- combo boxes
- placeholder text

Attributes

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Input Attributes:

- autocomplete
- autofocus
- formaction
- formmethod
- formnovalidate
- height and width
- list
- min and max
- multiple
- pattern (regexp)
- placeholder
- required
- step

Form Attributes:

- autocomplete
- novalidate

Form Attributes

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Autocomplete

- Specifies whether a form or input field should have autocomplete on or off.
- Automatically completes values based on values that the user has entered before.

Novalidate

- Boolean attribute.
- Specifies that the form-data (input) should not be validated when submitted.

Form Attributes

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FormAction

- Specifies the URL of a file that will process the input control when the form is submitted.
- Overrides the action attribute of the <form> element.

FormMethod

- This attribute defines the HTTP method for sending form-data to the action URL.
- The formmethod attribute overrides the method attribute of the <form> element.

Formnovalidate and Autofocus

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FormNoValidate

- The formnovalidate attribute is a boolean attribute.
- It specifies that the <input> element should not be validated when submitted.
- Overrides the novalidate attribute of the <form> element.

Autofocus

- The autofocus attribute is a boolean attribute.
- It specifies that an <input> element should automatically get focus when the page loads.
- Only one form element can have autofocus in a given page.

Required

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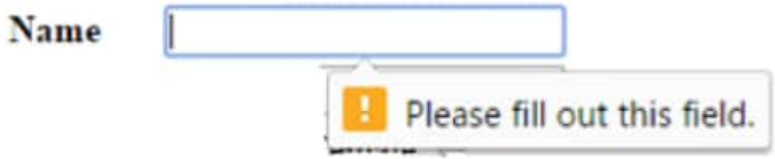
Required

- The Boolean required attribute tells the browser to submit the form only if the field in question is filled out correctly.
- If a required field is empty or invalid, the form will fail to submit, and focus will move to the first invalid form element.
- The required attribute can be set on any input type except button, range, color, and hidden, all of which generally have a default value.



List and Datalist

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List

- Used to bind to the datalist created with the input type

Datalist

- The <datalist> tag specifies a list of pre-defined options for an <input> element.
- The <datalist> tag is used to provide an "autocomplete" feature on <input> elements. Users will see a drop-down list of pre-defined options as they input data.

```
<html>
<body>
Data List Example
<datalist id="names">
        <option value="Ivan"></option>
        <option value="Johan"></option>
        <option value="Teena"></option>
 </datalist>
 <input list="names" name="name" />
</body>
</html>
```

Placeholder

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The placeholder attribute allows a short hint to be displayed inside the form element, telling the user what data should be entered in that field

The placeholder text disappears when the field gains focus, and reappears on blur if no data was entered.

Multiple

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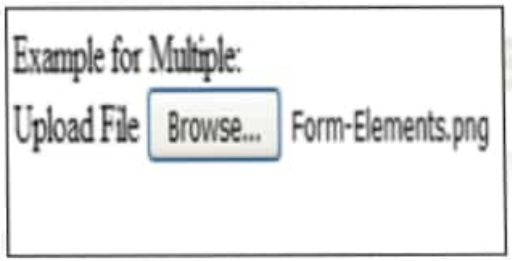
Multiple

- If present, the user can select more than one file, or include several comma-separated email addresses.
- While it has been available in previous versions of HTML, it only applied to the select element.
- In HTML5, it can be added to email and file input types as well.

```
<html>
<body>
Example for Multiple: <br>
 Upload File <input type="file" name="img" multiple="multiple"/>
</body>
</html>
```



Values of Type Attribute

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HTML5 gives us input types that provide for more data-specific UI elements and native data validation.

HTML5 has a total of 13 new input types:

- Search email
- url tel
- Datetime date
- Month week
- Time datetime-local
- Number range
- color

Values of Type Attribute

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search

- The search type is used for search fields
- Search type is only supported in Chrome, Opera, and safari

```
Search <input type="search"/>
```

Values of Type Attribute

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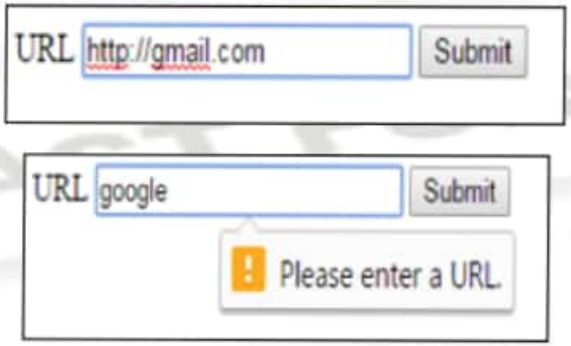
url

- The url type is used for input fields that should contain a URL address.
- The value of the url field is automatically validated when the form is submitted.

```
URL   <input type="url" />
      <input type="submit" />
```



Values of Type Attribute

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email

- The email type (type="email") is used for specifying one or more email addresses
- Supports the Boolean multiple attributes, allowing for multiple, comma-separated email addresses

```
Email <input type="email" />
      <input type="submit" />
```

Values of Type Attribute

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tel

- (type="tel") is used to accept telephone numbers
- Unlike the url and email types, the tel type doesn't enforce a particular syntax or pattern
- Letters and numbers—indeed, any characters other than new lines or carriage returns—are valid

```
contact no : <input type="tel" />
<input type="submit" value="submit" />
```

Values of Type Attribute

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number

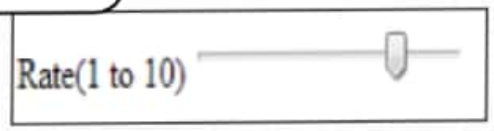
- Restricts the user to input numbers only

```
Mark <input type="number" />
```

range

- Input within a range

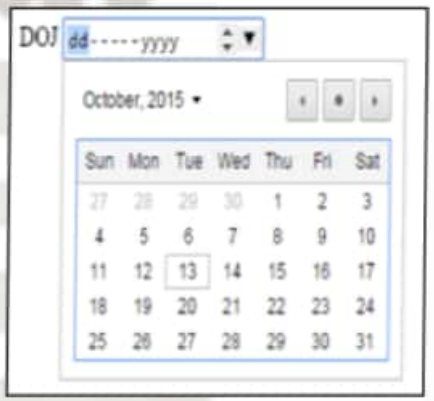
```
Rate(1 to 10) <input type="range" min="1" max="10"/>
```



Values of Type Attribute

date

```
DOJ <input type="date"/>
```



time

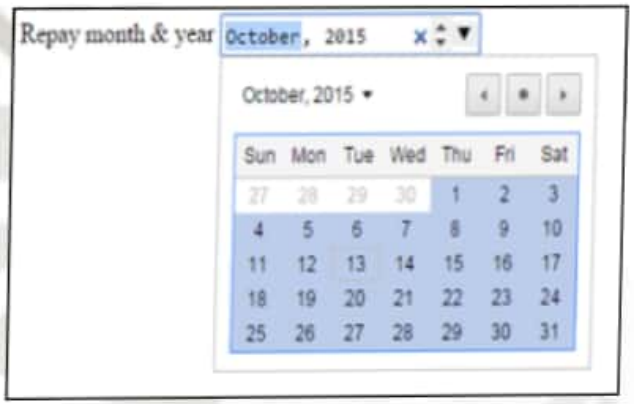
```
Time Allotted <input
type="time"/>
```

Values of Type Attribute

TEKNOTURF

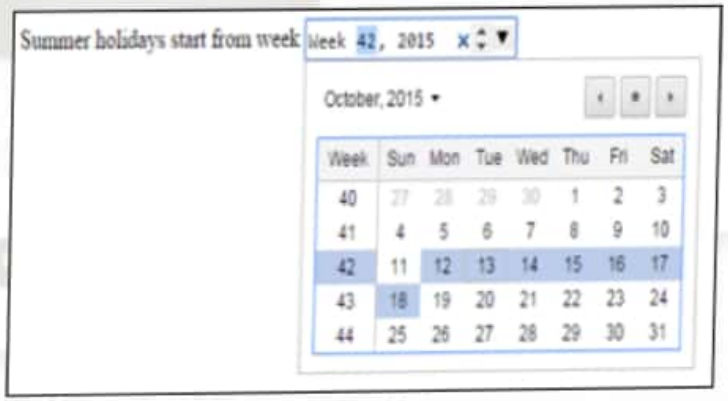
month

Repay month & year <input type="month"/>



week

Summer holidays start from week <input type="week"/>



Values of Type Attribute

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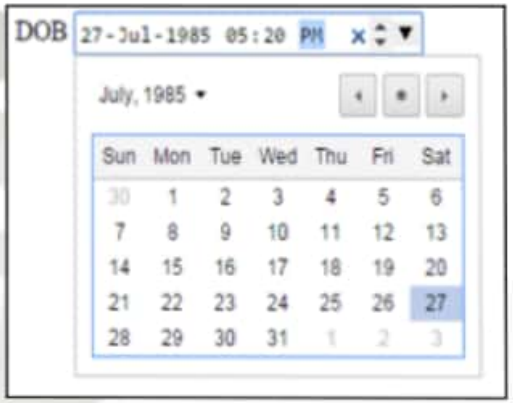
datetime-local

allows the user to select a date and time

```
DOB <input type="datetime-local"/>
```



color

allows the user to select a color

```
color <input type="color"/>
```

Input Type Restriction

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Restrictions that can be given on input type

Attribute	Description
disabled	Specifies that an input field should be disabled
max	Specifies the maximum value for an input field
maxlength	Specifies the maximum number of characters for an input field
min	Specifies the minimum value for an input field
pattern	Specifies a regular expression to check the input value against
readonly	Specifies that an input field is read only (cannot be changed)
required	Specifies that an input field is required (must be filled out)
step	Specifies the legal number intervals for an input field
value	Specifies the default value for an input field

Input Type Restriction

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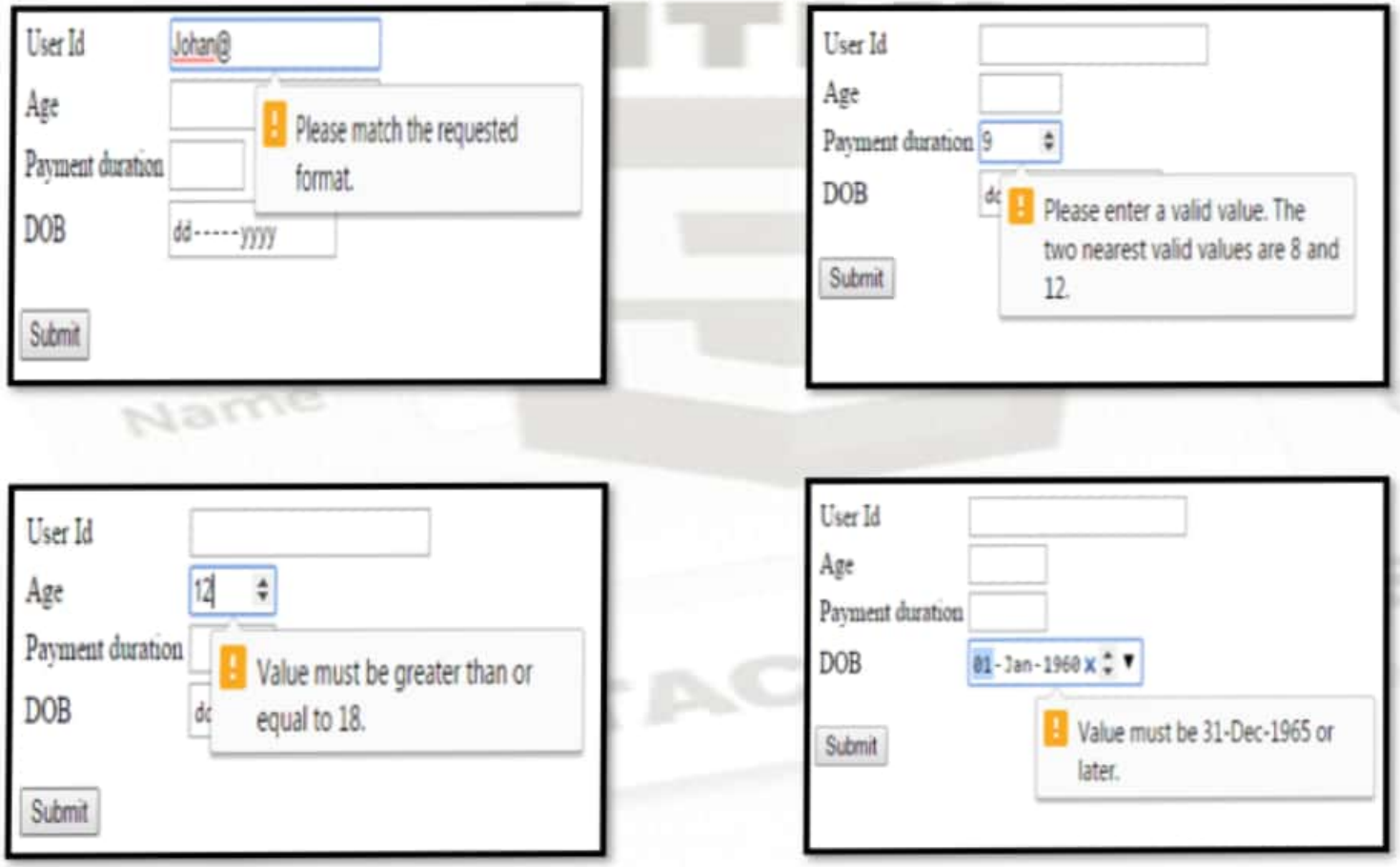
```
<table>
      <tr><td>User Id </td><td> <input type="text"
       pattern="[A-Ba-b0-9_]" /></td></tr>

      <tr><td>Age </td><td> <input type="number" min=18 max=58/></td>

      <tr><td> Payment duration </td><td><input type="number" step="4"
            min="4" max="12"/> </td>

    <tr><td>DOB</td><td><input type="date" min="1965-12-31"
       max="1995-01-31" /></td></tr>
</table>
```

Input Type Restriction

TEKNOTURF



Audio Tag

TEKNOTURF

<audio>

- Audio files are played through a plug-in.
- HTML5 defines a new element which specifies a standard way to embed an audio file on a web page: the <audio> element.

```
<audio
src="http://songserver/english/batman3/song1.mp3">
</audio>
```

Currently, there are 3 supported file formats for the <audio> element: MP3, Wav, and Ogg:

Browser	MP3	Wav	Ogg
Internet Explorer 9	YES	NO	NO
Firefox 4.0	NO	YES	YES
Google Chrome 6	YES	YES	YES
Apple Safari 5	YES	YES	NO
Opera 10.6	NO	YES	YES

Video Tag

TEKNOTURF

<video>

- Most video files are played through a plug-in (like flash). However, different browsers may have different plug-ins.
- HTML5 defines a new element, which specifies a standard way to embed a video file on a web page: the <video> element.

```
<video  src="http://songserver/english/song1.mp3">
</video>
```

Currently, there are 3 supported video formats for the <video> element: MP4, WebM, and Ogg:

Browser	MP4	WebM	Ogg
Internet Explorer 9	YES	NO	NO
Firefox 4.0	NO	YES	YES
Google Chrome 6	YES	YES	YES
Apple Safari 5	YES	NO	NO
Opera 10.6	NO	YES	YES

Select the Doctype that should be specified at the top of all HTML5 documents.

- ○ <!doctype html5>
- ○ <!DOCTYPE html PUBLIC "-//W3C//DTD HTML 5.0 Transitional//EN">
- ○ <!DOCTYPE5 html PUBLIC "-//W3C//DTD HTML 5.0 Transitional//EN">
- ✔ ◉ <!doctype html>

Correct

That's right! You selected the correct response.

Select the correct element to show a video on a web page

- <autoplay src="filename.ext" controls="controls"> </autoplay>
- ✔ <video src="filename.ext" controls="controls"> </video>
- <plugin src="filename.ext" controls="controls"></plugin>
- <movie src="filename.ext" controls="controls"> </movie>

Correct

That's right! You selected the correct response.

Which attribute allows you to specify your browser to complete the input based on what you may have been entered in the browser previously?

- autofill
- ✔ autocomplete
- autoplace
- autofocus

Correct

That's right! You selected the correct response.

Which of the following is true about 'audio' tag in HTML5?

- The current HTML5 draft specification does not specify the types of audio formats that browsers should support in the audio tag.
- ✔ Both
- None of these
- HTML5 supports <audio> tag which is used to embed sound content in an HTML or XHTML document.

Correct

That's right! You selected the correct response.

HTML5 is compatible with older browsers. State True or False

- ✔ ○ True
- ◉ False

Incorrect

You did not select the correct response.

Summary

TEKNOTURF

- Introduction to HTML Forms
- Form-Input Elements
- HTML5 Form elements
- HTML5 Attributes
- Video Tag
- Audio Tag

TEKNOTURF

THANK YOU

TEKNOTURF

INTRODUCTION TO CASCADING STYLE SHEETS 3.0

In this module you will learn

TEKNOTURF

- Introduction to CSS3
- CSS Syntax
- CSS Styling
- Text and Fonts properties
- CSS Selectors
- Different color schemes
- CSS Border
- CSS Margin
- CSS Background
- Multi column Layout

Introduction to CSS

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CSS is the acronym for 'Cascading Style Sheets'

CSS is an extension to basic HTML that allows to style the web pages

CSS can control many elements of the web pages like colors, fonts, alignment, borders, backgrounds, spacing, margins, and much more

Create a custom style and set all its properties, give it a unique name and then 'tag' HTML to apply these stylistic properties

CSS3 is backward compatible with its earlier versions

CSS Syntax

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The styles for each element, ID, or class used on the HTML page are defined in a CSS document.

Styles are wrapped with curly brackets.

Elements are declared with the element (HTML) tag

```
h1 { }
```

IDs are declared with a pound sign and the ID name

```
#title{     }
```

Classes are declared with a period and the class name

```
.text{     }
```

Styles are written under <style> tag which is the child tag of <head>

CSS Syntax

What is inside the curly brackets?

The style font-size applies to all <p> tag inside the HTML page. The text inside the tag appears with 12px in size.

Example

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```
<!DOCTYPE HTML>
<html>
<head>
<style type="text/css">
   h1{
        color: #60A216;
    }
</style>
</head>
<body>
        <h1>Welcome to CSS</h1>
        This web page gives an introduction to CSS
</body>
</html>
```

CSS Styling

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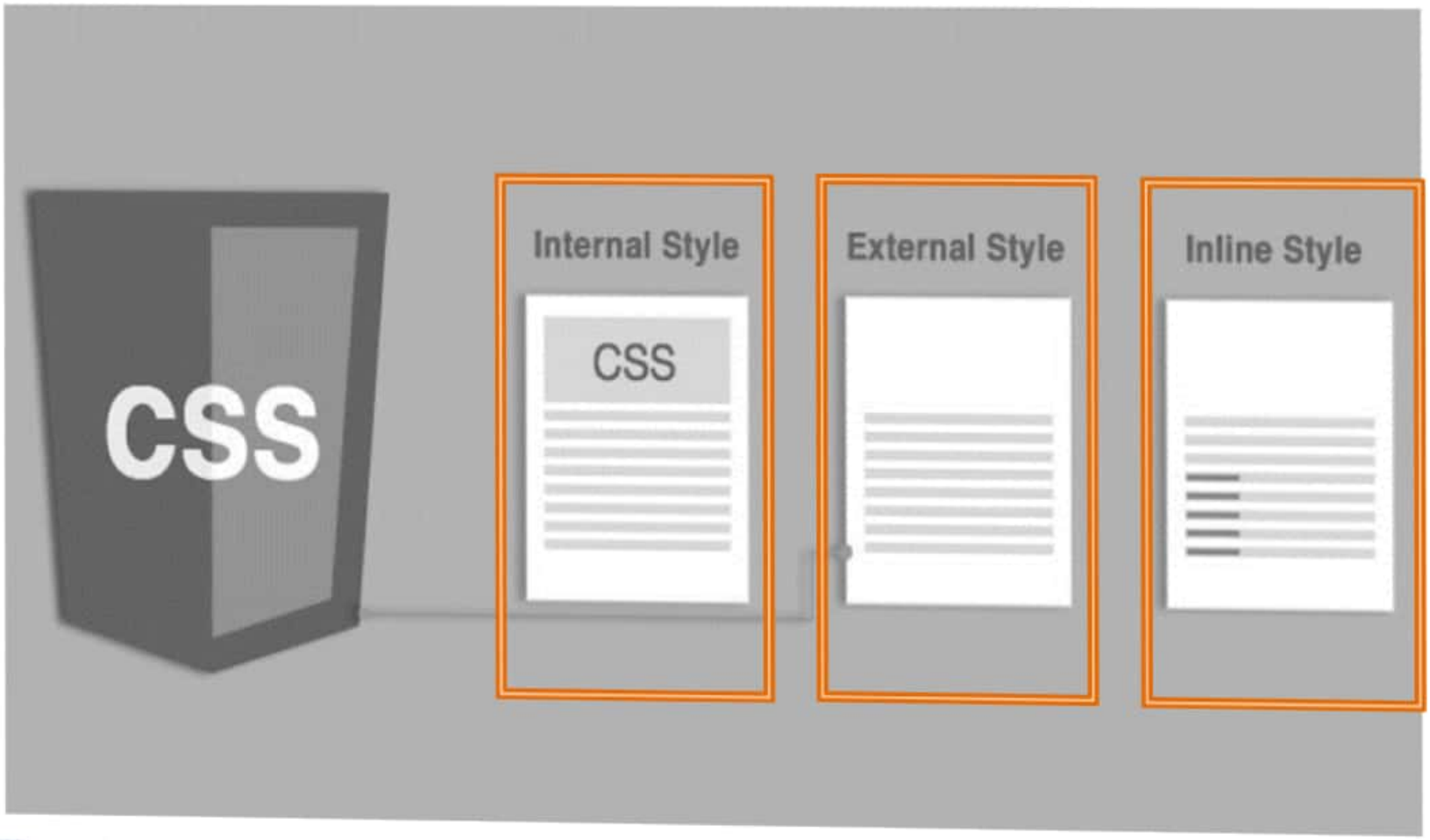

Inline Style

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The Style is declared inline in the html tag.

```
<!DOCTYPE HTML>
<html>
<head>
<style type="text/css">
   h1{
        color: #60A216;
    }
</style>
</head>
<h1 style="color: red;">Red Heading </h1>
 <body style="background-color: lightblue;"> A Paragraph </body>
</html>
```

Internal Style

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The styles are defined within the **<style>** tag present inside the **<head>** tag of the HTML page

```
<head>
<style>
body {
     background-color: linen;
}
h1 {
     color: maroon;
     margin-left: 40px;
}
</style>
</head>
<body>
      <h1>HTML Page</h1>
        This is a paragraph
</body>
```

External Style

Inline Style

HTML Page

This is a paragraph

External Style

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The CSS Styles are written in a separate file with a .css extension

The file can be written in any text editor

It cannot have any html tags

The CSS file is linked to the html page using the <link> tag under the < head> tag

Advantage of having external style is : A single file can be used to change the look of all the web pages of the application

MyCss.css

```
body {
   background-color: linen;
}
h1 {
   color: maroon;
   margin-left: 40px;
}
```

Index.html

```
<head>
<link rel="stylesheet" type=
"text/css"
      href="MyCss.css">
</head>
```

Text Formatting

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```
<head>
    <style type="text/css">
        #heading{
            color: #D62B00;
            text-align: center;
            text-decoration: underline;
            text-shadow: 5px 0px 3px #808080;
            word-spacing: 20px;
        }
        #content{
            text-indent: 20px;
            text-transform: capitalize;
            direction: ltr;
        }
    </style>
</head>
```

Text Formatting

TEKNOTURF

Helps in manipulating texts in the HTML page

Properties

- **color :** Used to set the color of a text
- **direction :** Used to set the text direction
- **letter-spacing :** Used to add or subtract space between the letters that make up a word
- **word-spacing :** Used to add or subtract space between the words of a sentence
- **text-indent :** Used to indent the text of a paragraph
- **text-align :** Used to align the text of a document
- **text-decoration :** Used to underline, overline, and strikethrough text
- **text-transform :** Used to capitalize text or convert text to uppercase or lowercase letters
- **white-space :** Used to control the flow and formatting of text
- **text-shadow :** Used to set the text shadow around a text

CSS3 Text Effects

TEKNOTURF

CSS3 Text Effects

- text-overflow
- word-wrap
- word-break

CSS3 is an extension to CSS. It contains additional features.

Text Overflow

- It shows how overflowed content not displayed in the page can be signaled to the user
- It can be clipped or rendered as an ellipsis

Word-wrap

- It allows long words to be broken and to be taken to next line

```
p {word-wrap: break-word;}
```

Word Breaking

- It specifies the rules for breaking lines

```
p.x1 {word-break: keep-all;}
p.x2 {word-break: break-all;}
```

Fonts

TEKNOTURF

Sets fonts to the contents of the web page

Properties

- **font-family :** Used to change the face of a font
- **font-style :** Used to make a font italic or oblique
- **font-variant :** Used to create a small-caps effect
- **font-weight :** Used to increase or decrease how bold or light a font appears
- **font-size :** Used to increase or decrease the size of a font
- **font :** Used as shorthand to specify a number of other font properties

CSS Selectors

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It selects any element in a page that matches the selector regardless of their position in the document tree.

Element { property : value }

Syntax

h2 { color : green }

Example to apply green color to all <h2> elements on the page

ID Selector

Selects the id attribute of the HTML element based on its value. ID value will be preceded by '#'

#id_value{ style properties }

Syntax

rollno { background-color: red }

Example

Universal and Class Selector

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- **Universal selector** is denoted by **(*)**
- It applies styles to each element in a page
- Specific CSS selectors matching an element will replace the styles applied by '*'

Example:

1. For applying specific font to all the elements in a page
2. Since body comes after (*), it overrides the universal selector

```
*{ font-family : Arial;}

body { font-family : Corbel;}
```

Example

Class selector – It selects HTML elements having a specific class attribute. It is denoted by **'.'** followed by the class name.

```
.magenta
{
  color : magenta
}
```

Example for applying style for all class attributes named *magenta*

Id Versus Class in CSS

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IDs and classes function the same way – they can both provide the same styling functionality to an HTML element, however…

- **IDs are unique.** Each element can only have one ID, and that ID can only be on the page once.
  - IDs can be used to style elements that are different from anything else on the page.
- **Classes are not unique**; an element can have multiple classes, and multiple elements can have the same class.
  - Classes can be used to style multiple elements on a single page that have things in common, like font size, color, or style

Adding Id And Class To HTML TAG

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The id and class attributes are used along with the html tag

```
<html> <head>
<style>
 #intro{
     color: green;
     margin-left: 40px;
    }
 .bordered{
              width: 300px;
           border: 1px solid #000;
           }
    </style> </head>
<body>
    <h1 id="intro">HTML Page</h1>
    <p class="bordered"> Example to explain usage of id and class in CSS</p>
</body>
</html>
```

HTML Page

Example to explain usage of id and class in CSS

```
<html>
<head>
<style type="text/css">
    .id{
        color:#CC0000 ;
    }
</style>
  <title>Untitled</title>
</head>
<body>
        <h1 class="id">Welcome to CSS</h1>
        <p>This web page gives an introduction to CSS</p>
        <p class="id">CSS provides styles to the HTML page</p>
</body>
</html>
```

Welcome to CSS

This web page gives an introduction to CSS

CSS provides styles to the HTML page

Apply Styles

TEKNOTURF

Styles mapped to a specific element.

```
<html>
<head>
<style type="text/css">
    p.id{
        color:#CC0000 ;
    }
</style>
  <title>Untitled</title>
</head>
<body>
        <h1 class="id">Welcome to CSS</h1>
        <p>This web page gives an introduction to CSS</p>
        <p class="id">CSS provides styles to the HTML page</p>
</body>
</html>
```

Welcome to CSS

This web page gives an introduction to CSS

CSS provides styles to the HTML page

Applying same styles to many Elements

```
<html>
<head>
<style type="text/css">
h1,p {
    color: #FF3300;
}
</style>
</head>
<body>
        <h1>Welcome to CSS</h1>
        <p>This web page gives an introduction to CSS</p>
        CSS provides styles to the HTML page<br>The second line font will not change
</body>
</html>
```

Welcome to CSS

This web page gives an introduction to CSS

CSS provides styles to the HTML page
The second line font will not change

Choose the appropriate inline CSS font style to display the given text in Cursive.

- ○ <h1 style="font-weight:cursive">Welcome</h1>
- ○ <h1 style="font:cursive">Welcome</h1>
- ○ <h1 style="font-style:cursive">Welcome</h1>
- ✔ ◉ <h1 style="font-family:cursive">Welcome</h1>

Correct

That's right! You selected the correct response.

CSS Selectors are used to select element(s) to apply different styles. State True or False.

- ✔ (●) True
- ( ) False

Correct

That's right! You selected the correct response.

To display the text as in default font style, which of the following styles should you apply?

- font-style:default;
- ✔ font-style:normal;
- font-style:italic;
- font-style:bold;

Correct

That's right! You selected the correct response.

Consider the given code snippet:

```
<style type="text/css">
*{ color: yellow;}
p{ color:blue;}
</style>
```

Which of the following statements are true with respect to the above code?

- [ ] None of these
- [x] The entire HTML page contents will be displayed in yellow color, expect the contents present inside <p> tag.
- [x] *{} is a universal selector and p{} is a type selector.
- [ ] The entir

Correct

That's right! You selected the correct response.

Which of following code snippets will display a square box in the webpage?

- <html><head><style type="text/css"> square{ background: blue; } </style> </head> <body> <square>My square</square></body></html>
- <html><head><style type="text/css">div{ height: 100px; width: -100px;background: blue; } </style></head><body> square </body></html>
- ✔ <html><head><style type="text/css">div{ height: 100px; width: 100px;background: blue; }</style></head><body> square </body></html>
- None of these

Correct

That's right! You selected the correct response.

CSS Background

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Gives the HTML page a change in the background

CSS Properties for background

- **background-color** - Sets the background color of the HTML element
- **background-image** - Sets the background of an element with an image
- **background-repeat** -Repeats the background image
- **background-attachment**- Sets whether background image should be scrolled or fixed.
- **background-position**-Sets the starting position of the background image.
- **Background-size** - Specify the size of background images

Example

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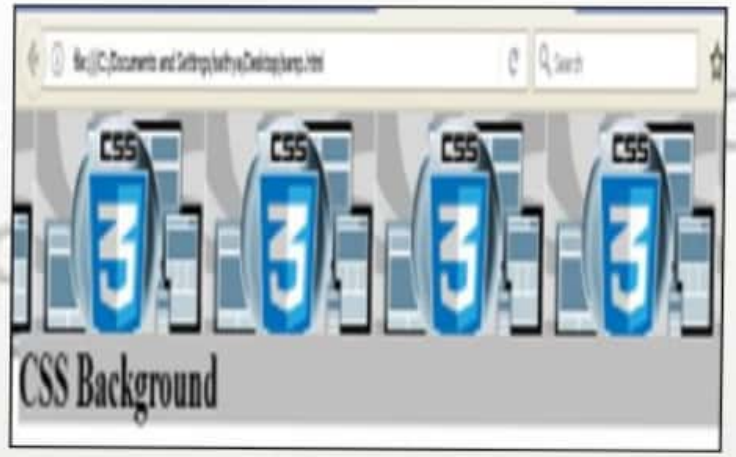
```
<html>
<head>
<style type="text/css">
    body{
        background-image: url("css3logo.jpg");
        background-repeat: repeat-x;
        background-position: right top;
        background-attachment: fixed;
        background-size: 200px 100px;
    }
    h1 { background-color:#c0c0c0; }


</style>
</head>
<body>
    <br><br>
    <br><h1>CSS Background</h1>
</body>
</html>
```



CSS3 Background

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There are new additions to the Background Category in CSS3

- background-size
  - It is used for creating scalable graphics
- background-origin
  - It offers three locations to position background images
- background-clip
  - It allows background colors to be clipped to the contents of the box

Multiple Backgrounds in CSS3

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Multiple Background images can be applied to elements

They are layered on top of each other

The background color can be included only in the last background, since it is listed in the back.

Multiple backgrounds can be specified using individual background properties or using background shorthand property

Multiple Background Using Individual Background Properties

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Multiple background images can be specified using **comma** separated list.

Example

```
Background-image: url(flower.jpg), url(marble.jpg)
```

A comma separated list can be used for other background properties like background-position, background-clip and so on.

Multiple backgrounds can be specified using the *background* shorthand property

Example

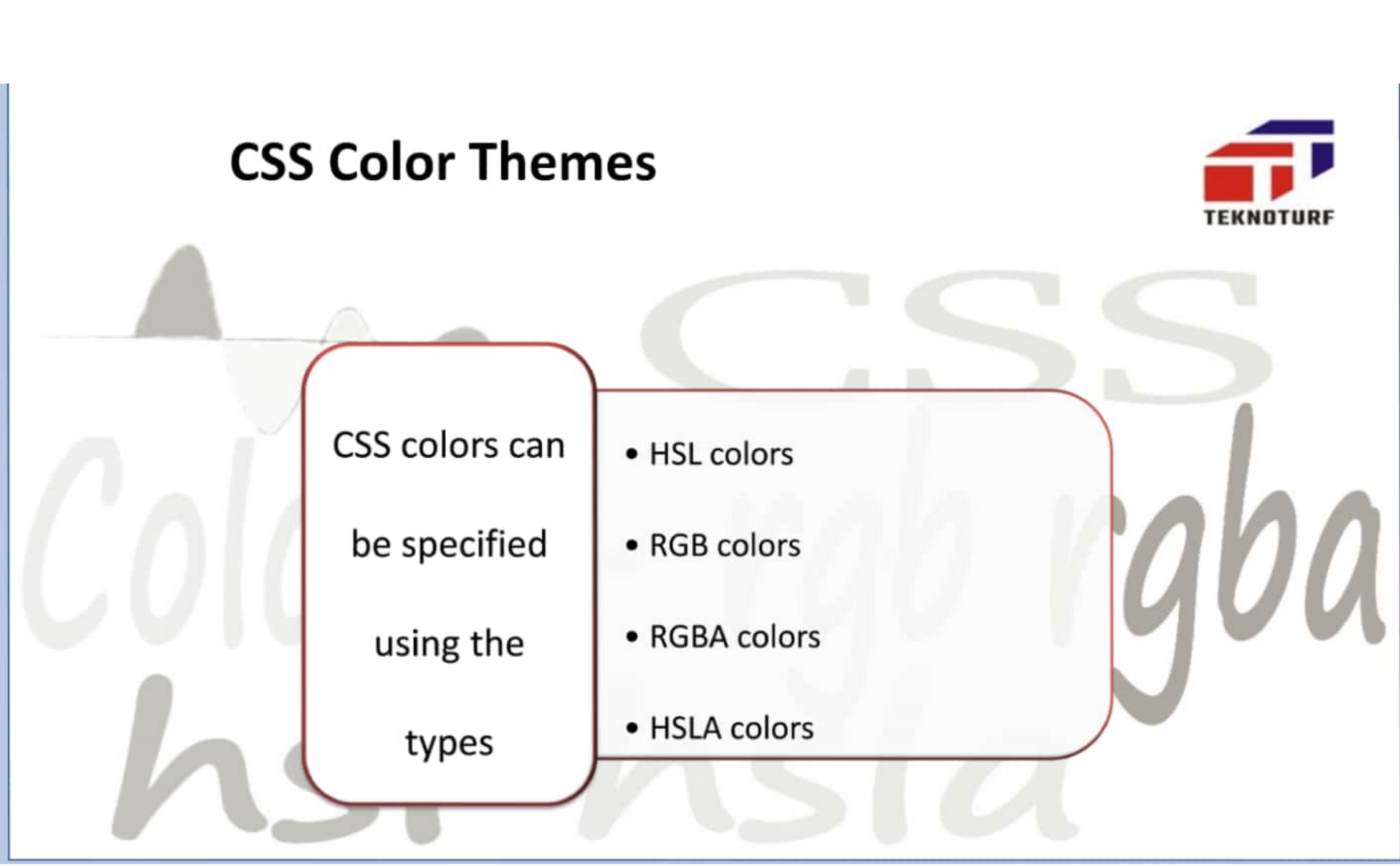
```
Background: url(bird.jpg) top left no-repeat
url(cat.jpg) center bottom no-repeat
```

Example

TEKNOTURF

```
<body>
    <div id="image2">
        content here
    </div>
</body>
<style>
    body{
        background-image: url(images/flower.png);
    }
    #image2{
        background-image:
url(images/Dove.png);
        background-repeat: repeat-x;
    }
</style>
```

CSS Color Themes



RGB Color

TEKNOTURF

- It is specified with rgb(red,green,blue)
- Each color defines the intensity of the color
- Each color can contain integer values from 0 to 255 or percentage from 0% to 100%
- RGB color is supported by all modern browsers
- To get blue color, red and green can be set to 0% and blue to 100%
- Example for setting blue color using RGB - **rgb(0%,0%,100%)**

RGBA Color

TEKNOTURF

The color transparency can also be set using RGBA

RGBA color values are supported in IE9+, Firefox 3+, Chrome, Safari, and in Opera 10+

Syntax:

rgba(red, green, blue, alpha);

Example:

background-color:
rgba(255, 0, 0, 1);

- Red, Green and Blue color values can be specified between 0 to 255 or between 0% and 100% so that the desired color can be set
- Alpha value can be specified between 0.0 and 1.0 so that the color's opacity/transparency can be set. Out of which 0.0 represents fully transparent and 1.0 represents fully opaque

RGBA Color

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Converting Percentage to Integers

- To get the Integer equivalent, multiply the percentage value by 255 and then divide by 100%
- For example, rgba(100%,64.7%,0,1) can also be written as rgba(255,165,0,1), which ultimately displays yellow color

Converting Integers to Percentages

- To get the Percentage equivalent, divide the integer by 255 and then multiply by 100%
- For example rgba(255,0,0,1) can also be written as rgba(100%,0%,0%,1%), which ultimately displays red color

HSL Model

TEKNOTURF

Colors can be defined in HSL(Hue-Saturation-Lightness) model using hsl() notation

Syntax : **background-color: hsl (hue, saturation, lightness)**

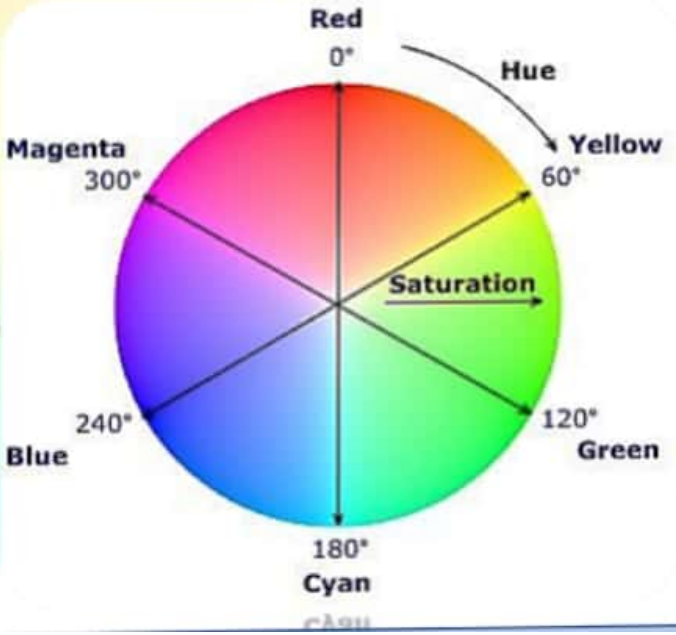
There are six major colors in the HSV color model
- Yellow, Cyan, Blue, Magenta, Red and Green

These colors are spaced by 60 degrees

Example :

background-color: hsl (120, 100%, 50%)

background-color: hsl (285, 100%, 50%)



HSL Model

TEKNOTURF

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Syntax : **background-color: hsl (hue, saturation, lightness)**

There are six major colors in the HSV color model

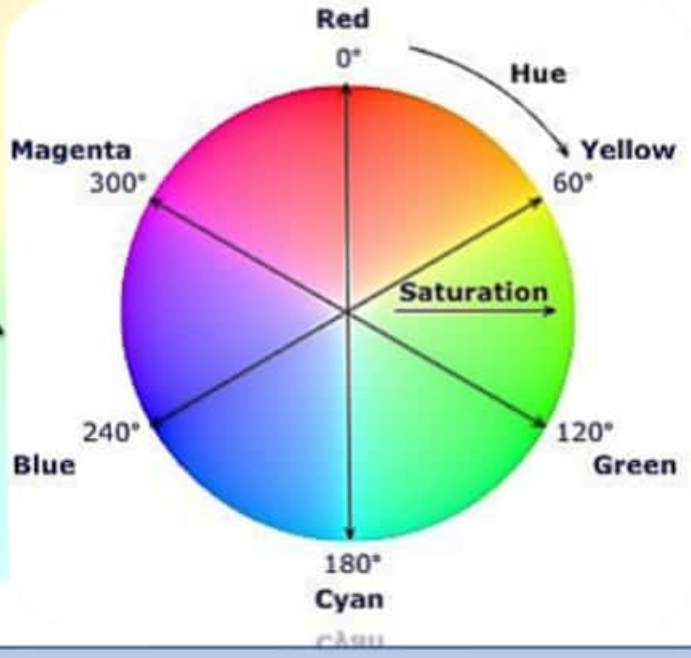
- Yellow, Cyan, Blue, Magenta, Red and Green

These colors are spaced by 60 degrees

Example :

background-color: hsl (120, 100%, 50%)

background-color: hsl (285, 100%, 50%)



HSLA Model

TEKNOTURF

Colors can be defined in HSLA (Hue-Saturation-Lightness-Alpha) Model

HSLA model can be represented using hsla() notation

It is an extension of HSL model with an alpha channel

Example :

```
h1 {
    color: hsla(360,80%,50%,0.5);
  }
p {
    background-color: hsla(480,60%,30%,0.3);
  }
```

CSS Borders

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Defines the style for the borders

Properties

- border-color
- border-style
- border-width
- border-image
- border-radius

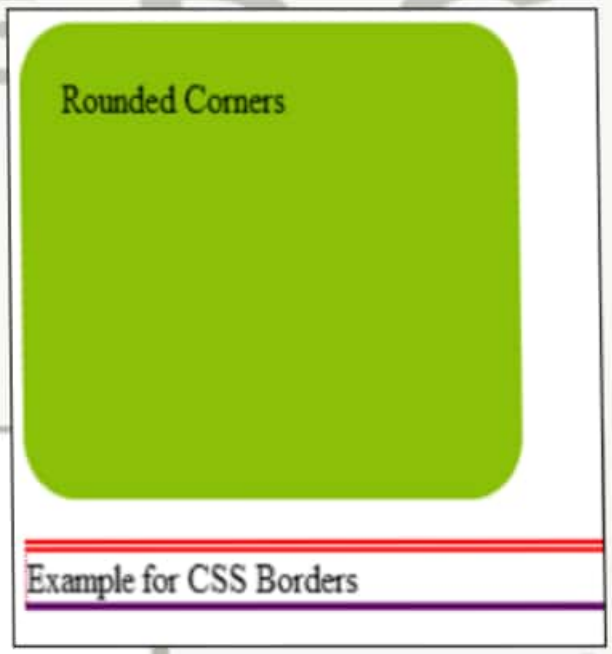
Every property of the border can be separately defined for

- top
- left
- right
- bottom
- positions of the border

Example

```
<html>
<head>
<style type="text/css">
#r1 {
            border-radius: 25px;
            background: #8AC007;
            padding: 20px;
            width: 200px;
            height: 150px;
        }
#r2{
            border-bottom-style: solid;
            border-left-style: dotted;
            border-right-style: dashed;
            border-top-style: double;
            border-bottom-color: #660066;
            border-left-color: #FF0066;
            border-right-color: #003300;
            border-top-color: #FF0000;
            border-bottom-width: medium;
            border-left-width: thin;
            border-right-width: medium;
            border-top-width: thick;
        }
</style>
</head>
<body>
<p id="r1"> Rounded Corners </p>
<p id="r2"> Example for CSS Borders </p>
</body>
</html>
```

Output:



Applying Shadows In Border

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The box-shadow property can have comma separated list of values

Horizontal offset, vertical offset, optional blur distance, optional spread distance of the shadow

Example

box-shadow: 10px 10px;
box-shadow: 10px 10px 5px #888;

CSS Margins

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CSS margin properties are used to generate space around elements.

Margin properties

- margin-top
- margin-right
- margin-bottom
- margin-left

To set different margins for all four sides of a <p> tag:

```
div {
    margin-top: 150px;
    margin-bottom: 150px;
    margin-right: 200px;
    margin-left: 100px;
}
```

Multi-column Layout

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CSS3 has introduced the multi-column layout module for creating multiple column layouts in an easy and efficient way.

Create layouts like we see in magazines and newspapers without using the floating boxes.

Multi-column Layouts

Multi-column Properties:

- column-count
- column-gap
- column-rule-style
- column-rule-width
- column-rule-color
- column-rule
- column-span
- column-width

Multi-column Properties:

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The **column-count property** specifies the number of columns that an element should be divided into.

The below example will divide the text in the <p> element into 3 columns:

```
p {
-webkit-column-count: 3; /* Chrome, Safari, Opera */
-moz-column-count: 3; /* Firefox */
column-count: 3;
}
```

The **column-gap property** specifies the gap between the columns.

```
p {
-webkit-column-gap : 40px; /* Chrome, Safari, Opera */
-moz-column-gap: 40px; /* Firefox */
column-gap: 40px;
}
```

column-rule Property

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column-rule-style property specifies the style of the rule between columns.

column-rule-width property specifies the width of the rule between columns.

column-rule-color property specifies the color of the rule between columns.

To set the width, style, and color of the rule all together between columns.

```
p {
  -webkit-column-rule: 1px solid lightblue;
  -moz-column-rule: 1px solid lightblue;
  column-rule: 1px solid lightblue;
}
```

Example :

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```
<html> <head> <style type="text/css">
p {
    -webkit-column-count: 3;
    -moz-column-count: 3;
    column-count: 3;

    -webkit-column-gap: 40px;
   -moz-column-gap: 40px;
    column-gap: 40px;

    -webkit-column-rule: 1px solid lightblue;
    -moz-column-rule: 1px solid lightblue;
    column-rule: 1px solid lightblue;

    -webkit-column-span: all;
    column-span: all;
}
</style> </head> <body> <p>
C-37 was a largely commercial flight as all but three passenger satellites,
small nanosats, belonged to six other countries.
The 29-minute launch went off precisely as planned; it took just 11 minutes from
the release of the primary Cartosat-2 series spacecraft to
the last launch of a client satellite, ISRO said after the mega-payload launch.
The PSLV, in the category of launch vehicles that can lift relatively light loads to space,
 now marks 38 successful missions in a row out of a total of 39 flights
This time, it took to space a total of 1,378 kg, of which
 the primary satellite was 714 kg.The latest Cartosat is the
fifth in the series of six Cartosat-2 spacecraft, starting from
Cartosat 2 in 2007 and followed by what were earlier marked A, B, C, D and E. The last one is due.
</p> </body> </html>
```

Output

C-37 was a largely commercial flight as all but three passenger satellites, small nanosats, belonged to six other countries. The 29-minute launch went off precisely as planned; it took just 11 minutes from the release of the primary Cartosat-2 series spacecraft to the last launch of a client satellite, ISRO said after the mega-payload launch. The PSLV, in the category of launch vehicles that can lift relatively light loads to space, now marks 38 successful missions in a row out of a total of 39 flights This time, it took to space a total of 1,378 kg, of which the primary satellite was 714 kg.The latest Cartosat is the fifth in the series of six Cartosat-2 spacecraft, starting from Carto 2007 and followed by what were earlier m A, B, C, D and E. The last one is due.

_____ layout allows to set multiple columns of text like in newspapers.

- ○ multiple-column
- ○ You can't do it using CSS3
- ✔ ◉ multi-column
- ○ multi

Correct

That's right! You selected the correct response.

Each parameter of rgb() defines the intensity of colors between 0 to 256.
State True or False.

- ○ True
- ✔ ◉ False

Correct

That's right! You selected the correct response.

A HSLA color type is specified with _____.

- hue, saturation, lightness, aqua
- ✔ hue, saturation, lightness, alpha
- hue, saturation, light, aqua
- hue, saturation, light, alpha

Correct

That's right! You selected the correct response.

Which of the following properties is used as a shorthand to specify a number of other background properties?

- background-attachment
- background-position
- background-repeat
- ✔ background

Correct

That's right! You selected the correct response.

State the given syntax as True or False. "background-repeat:no-repeat".

- ✔ (●) True
- ( ) False

Correct

That's right! You selected the correct response.

Summary

- Introduction to CSS3
- CSS Syntax
- CSS Styling
- Text and Fonts properties
- CSS Selectors
- Different color schemes
- CSS Border
- CSS Margin
- CSS Background
- Multi column Layout

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THANK YOU

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JAVA SCRIPT

In this module you will learn

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- Introduction to scripting Language
- Javascript - Introduction
- Execution of Javascript
- Scripts in head and body of HTML
- Functions in Javascript
- Internal and External Javascript
- Variables, Datatypes, Operators
- Programming Constructs in JavaScript
- Built-in methods in Javascript
- Javascript Statements, Block, Comments

Introduction to Scripting Language

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Computer language with a series of commands within a file.

Capable of being executed without being compiled.

Script provides changes to the webpage.

Two types of Scripting

- Server side scripting
- Client side scripting

Server Side Scripting

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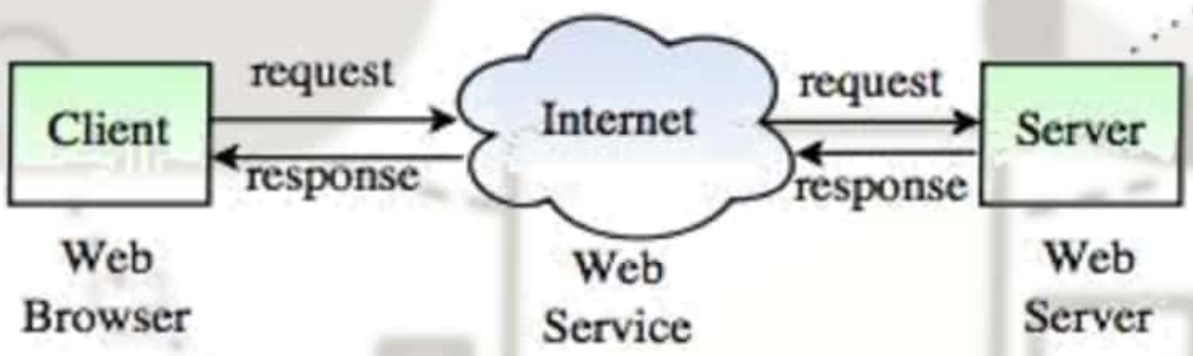

Client Side Scripting

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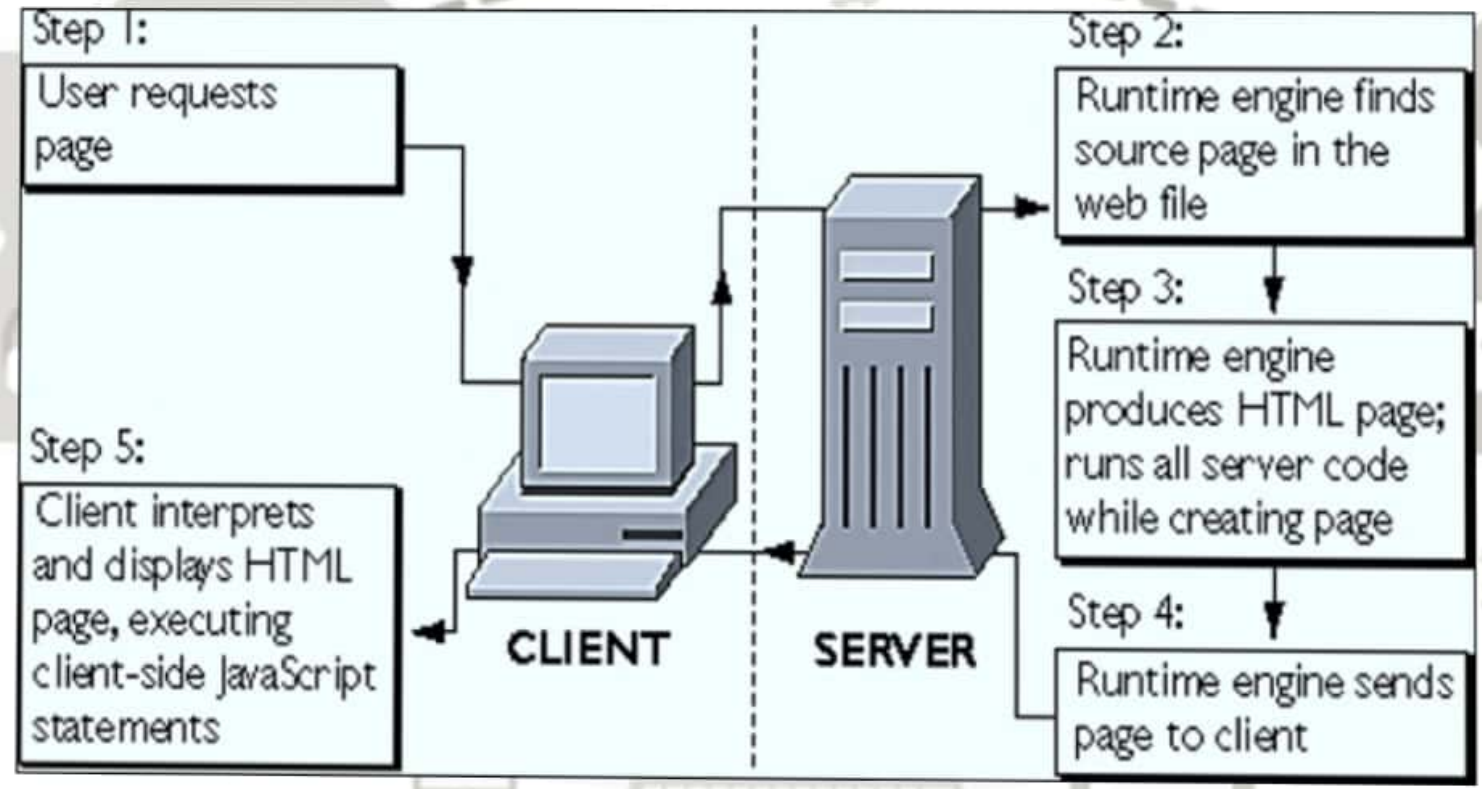

JavaScript Introduction

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- JavaScript can be used in **client and server side**.
- Traditionally on **client side**
  - processing user input
  - validations
- Latest Implementation
  - **Client-side/Single page application**
- On **Server-Side** using **Node JS**
  - It can create standalone application, Network application, Web Application
  - **REST services**, service layers
- From traditional validation module to
  - Javascript libraries like **JQuery, DOJO, React** and so on
  - Javascript frameworks **like Angular, Ember** and so on

Advantages of JavaScript

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- Improves transaction response time
- Reduces server load
- Less server interaction – Can validate user input before sending the page off to the server.
- Provides immediate feedback

Embedding JavaScript in HTML

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JavaScript is included in an HTML file with the help of <script> tag

There are two methods to embed javascript in to **HTML code.**

Internal Script

External Script

```
<script type="text/javascript">
    document.write("<h1>Hello World!</h1>");
</script>
```

```
<head>
<script type="text/Javascript">
    //   Javascript  Code
</script>
</head>
```

Inline JavaScript

```
<body>
<script type="text/Javascript">
    //   JavaScript  Code
</script>
</body >
```

External JavaScript

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- **JavaScript can be put in a separate .js file**
  - Includes the external java script file in a HTML file using the code

```
<script src="myJavaScriptFile.js">
</script>
```

  - An **external .js** file can be used in multiple HTML pages wherever necessary
  - The **external .js** file **cannot** itself **contain a <script> tag**
- **JavaScript can be put in an HTML form object, such as a button**
  - This JavaScript will be executed when the form object is used

Execution of JavaScript

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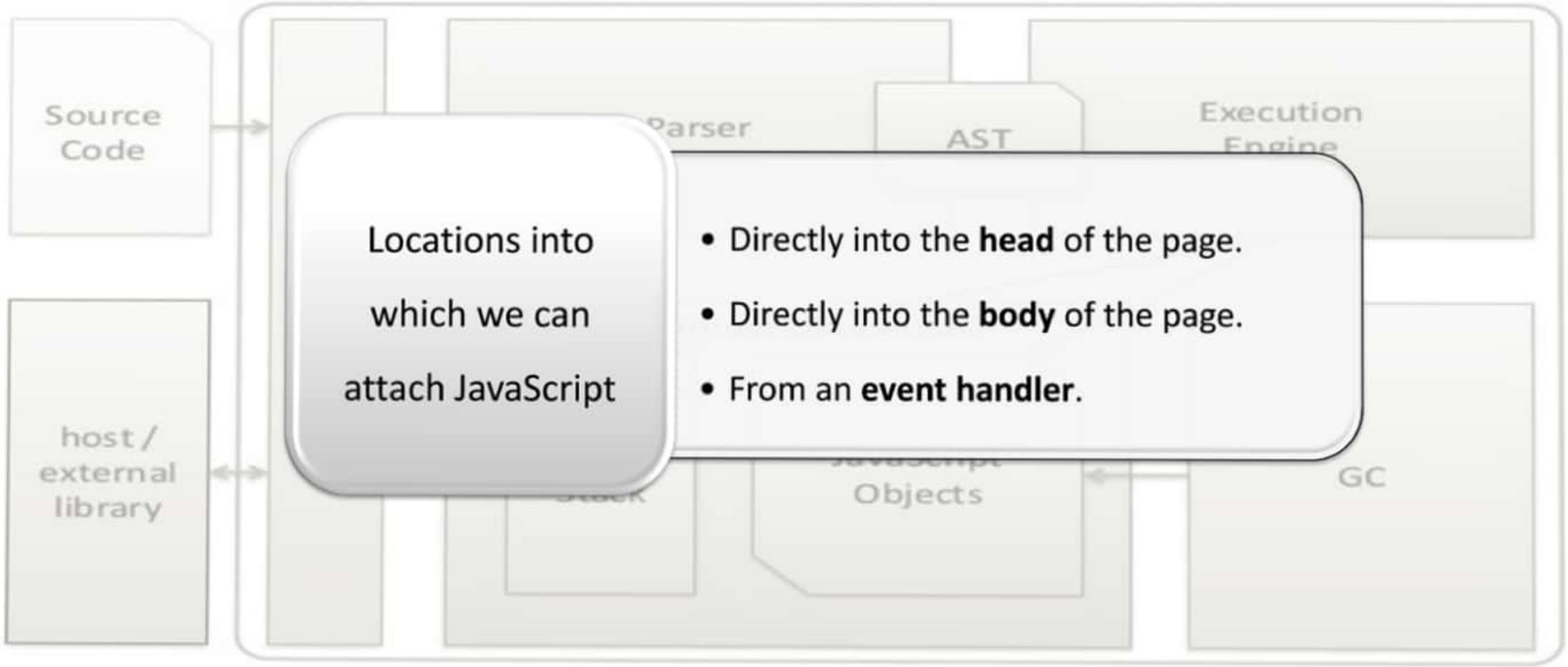

Data Types

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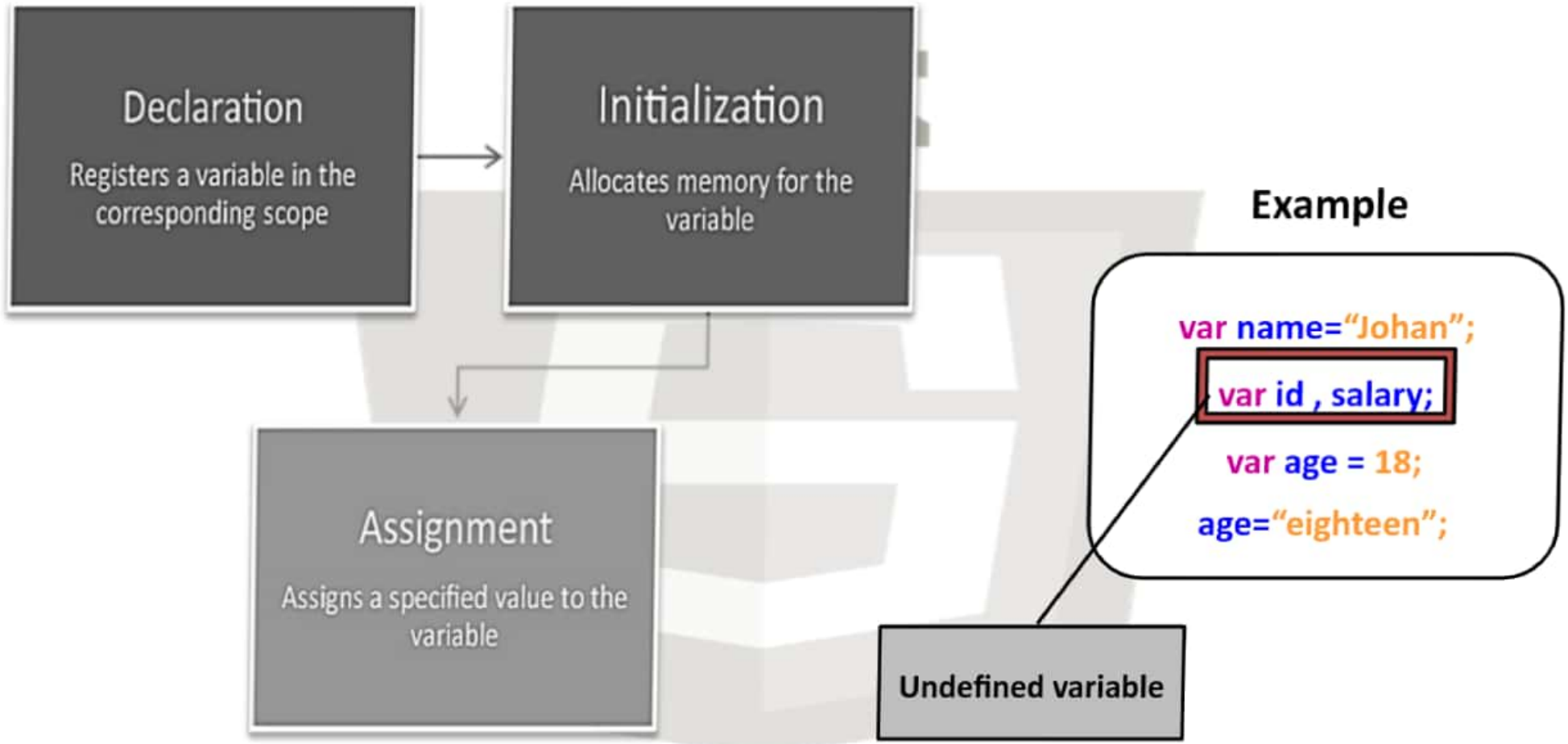
Javascript Datatypes

Primitive Type	Reference Type
1. String	1. Array
2. Number	2. Object
3. Boolean	3. Function
4. Undefined	4. Date
5. Null	5. Regex

```
var  age = 16;   // Number
var name = "John";    // String
var ids = [101, 102, 103];   // Array
var x = {id:101, name:"John", salary:40000}; //Object
```

JavaScript Variables



Scope of variables

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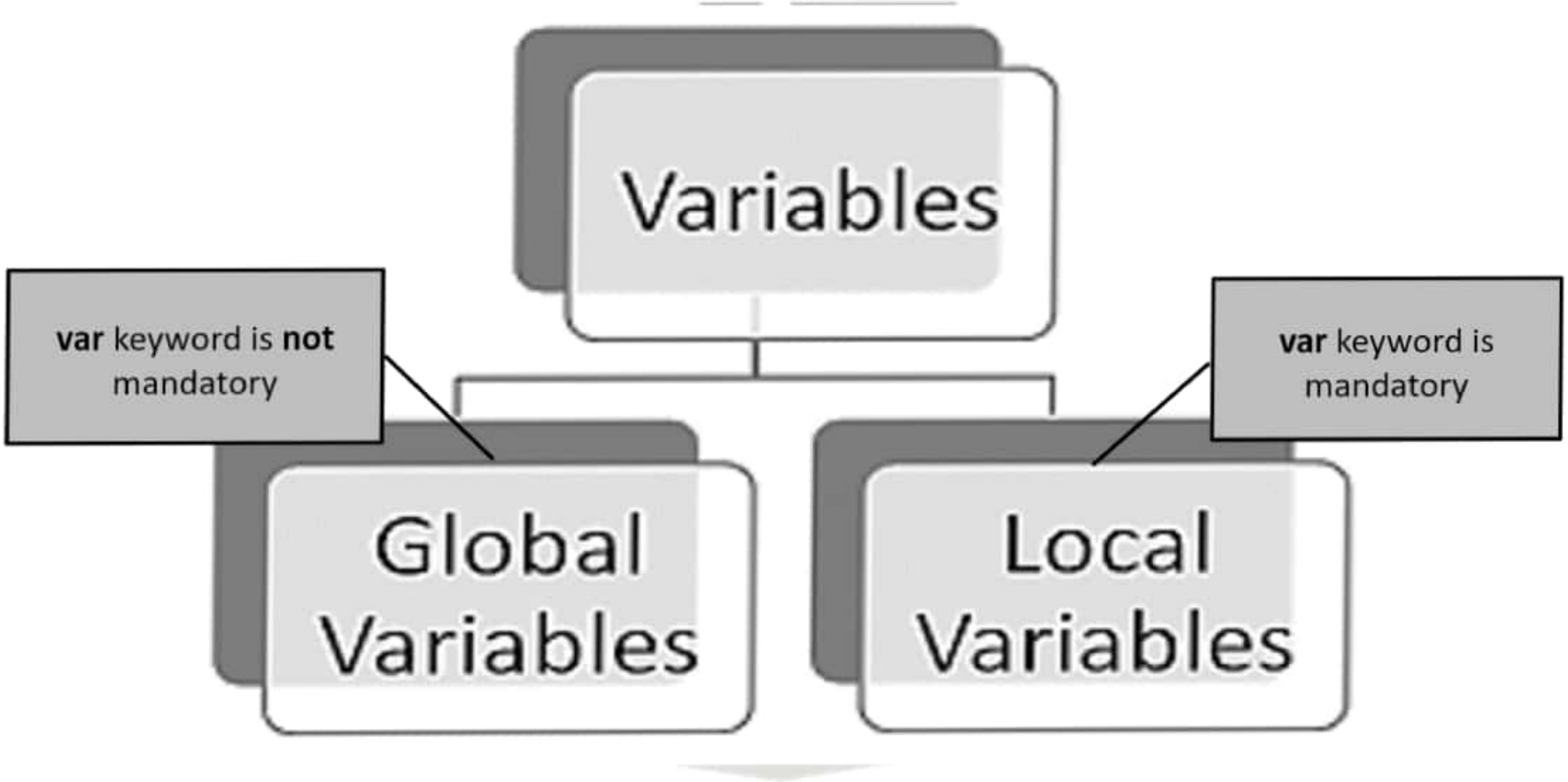

Scope of variables

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```
<body>
<p id="demo"></p>
<script>
   myCar();
   document.getElementById("demo").innerHTML = "My Car Name: " + carName;
   function myCar()
 {
       carName = "BMW";
  }
</script>
</body>
```

```
var a = 20;  ──────────→ Global Variable

function checkVariable(){
                          ──→ Local Variable
      var a = 23;
 }
```

Operators

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Arithmetic Operators

Operator	Description	Examples
+	Addition	var z = 5 + 2;
-	Subtraction	var z = 5 - 2;
*	Multiplication	var z = 5 * 2;
/	Division	var z = 5 / 2;
%	Modulus	var z = 5 % 2;
++	Increment	var x = 5; z = x++;
--	Decrement	var x = 5; z = x--;

Assignment Operators

Operator	Description	Examples
=	x = y	x = y
+=	x += y	x = x + y
-=	x -= y	x = x - y
*=	x *= y	x = x * y
/=	x /= y	x = x / y
%=	x %= y	x = x % y
=	x = y	x = y

Operators contd..

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Conditional Operators

Operator	Description	Example
? : (Conditional)	If Condition is true? Then value X : Otherwise value Y	var x=10 , y=20; var z=(x<y)?x:y;

Operators contd..

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typeof Operator

- The typeof operator is a unary operator
- It returns String

Example

```
var data=10;
var result = typeof data;
document.write(result);
```

Type	Return data
Number	"number"
String	"string"
Boolean	"boolean"
Object	"object"

Comments in JavaScript

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Comments are used to provide additional information about the JavaScript code, and make it more readable.

These statements will not get executed by the browser.

Single line comment

- **// Statements**

Multi line comment

- **/* Statements */**

Where can you write the script tag inside the html?

- ○ Only inside the <body> section
- ○ Only inside <head> section
- ○ In any tag in the html
- ✔ ◉ Both the <head> and <body>

Correct

That's right! You chose the correct response.

JavaScript is a _____ language.

- [x] Interpreted
- [ ] Compiled

Correct

That's right! You chose the correct response.

Which html tag is used to embed the javascript code?

- ○ <src>
- ✔ ◉ <script>
- ○ <javascript>
- ○ <scripting>

Correct

That's right! You chose the correct response.

Dynamic web pages are created using _____.

- client-side Scripting
- server-side Scripting

Incorrect

You did not choose the correct response.

JavaScript is an example for _____.

- [x] Client-Side Scripting
- [ ] Server-side Scripting

Correct

That's right! You chose the correct response.

Programming Constructs in JavaScript

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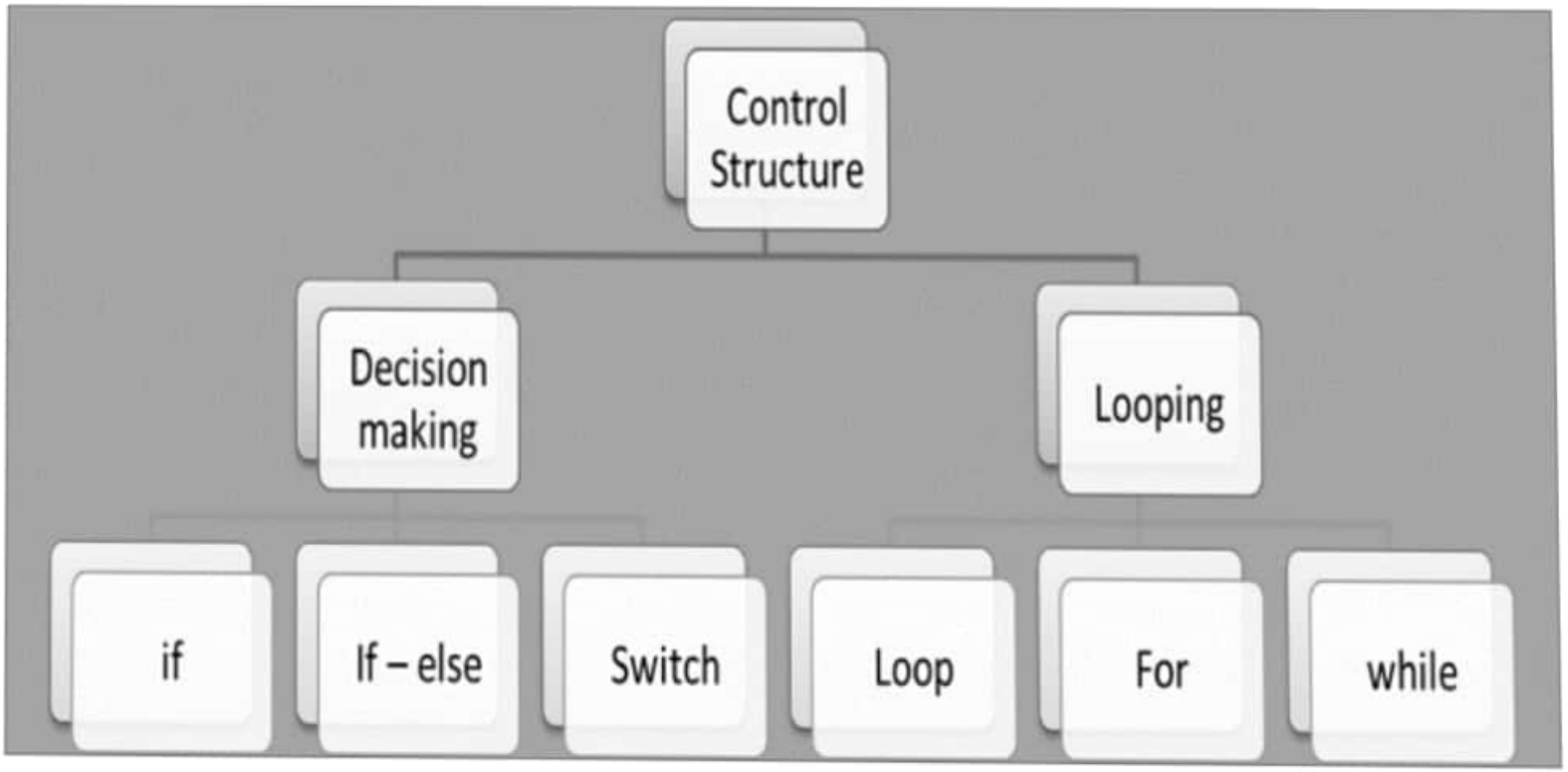
Decides the flow of execution of the JavaScript program.



if Statement

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Syntax

```
if (condition)
{
    //Statement(s)  to  be executed
       if the condition is true
}
```

Example

```
<script type="text/javascript">
    var num=10;
     if (num % 2 ==0)
    {
       document.write("num is Even");
    }
</script>
```

If..else statement

TEKNOTURF

Syntax

```
if (condition)
{
    //Statement(s)  to  be executed if the
        condition is true
}
else
{
    //Statement(s)  to  be executed if the
        condition is false
}
```

Example

```
<script type="text/javascript">
    var num=10;
    if (num % 2 ==0)
    {
        document.write("num is Even
");
    }
    else
    {
        document.write("num is Odd
");
    }
</script>
```

If..else if..else statement

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Syntax

```
if (condition1)
{
      //Statement(s)  to be executed if
          the condition1 is true
}
else if(condition2)
{
      //Statement(s)  to be executed if
          the condition2 is false
}
.....
else
{
    //statement to be executed
}
```

Example

```
<script type="text/javascript">
    var num=10;
    if (num  > 0)
    {
     document.write("num is Positive ");
    }
    else if(num < 0)
    {
      document.write("num is Negative
            ");
    }
    else
    {
       document.write("num is equal to
          zero ");
     }
</script>
```

Switch statement

TEKNOTURF

Syntax

```
switch(expression)
{
 case n:
          code block
          break;
 case n:
          code block
          break;
 default:
          code block
}
```

Example

```
<script type="text/javascript">
var exp = 0;
switch(exp)
{
    case 1 :
        document.write("the value is positive");
        break;
    case  -1 :
        document.write("the value is negative");
        break;
    default :
        document.write("the value is zero");
}
</script>
```

for Loop

TEKNOTURF

Syntax

```
<script type="text/javascript">
   var initvalue;
   for(initvalue=startvalue;initvalue condtion;inc/decvalue)
   {
            //Statements to be executed
   }
</script>
```

Example

```
<script type="text / javascript">
   var sum=0;
    for(var i=1 ; i<=5 ; i++)
    {
            sum=sum+i;
    }
    document.write("The sum is : "+sum);
</script>
```

while Loop

TEKNOTURF

```
while (expression)
{
        Statement(s) to be executed
        if expression is true
}
```

Syntax

Example

```
<script type="text/javascript">
   var sum=0;
   var i=1;
   while(i<=5)
  {
     sum=sum+i;
     i++;
  }
   document.write("the sum is :  "+sum);
</script>
```

do – while Loop

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Syntax

```
do
{
      Statement(s)
            to be executed;
} while (expression);
```

Example

```
<script type="text/javascript">
   var sum=0;
   var i=1;
   do
   {
            sum=sum+i;
            i++;
    }while(i<=5);
   document.write("the sum is :"+sum);
</script>
```

for .. in loop

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Syntax

```
for (variablename in object)
{
    statement or block to execute
}
```

Example

```
<script type="text/javascript">
    var ids = [101,102,103];
    var data;
for(data in ids)
{
  document.write(ids[data]+" ");
}
</script>
```

Built-in Functions

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- Array Methods
- String Methods
- Boolean Methods
- Math Methods
- Number Methods
- RegExp Methods
- Date Methods
- Date Static Methods
- String HTML wrappers

Built-in Functions

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Function	Description
isNan	Determines whether value is a legal number or not.
isFinite	To find whether a number is a finite legal number.
eval	Executes JavaScript source code.
number	Converts object to the corresponding number value.
string	Converts object to the corresponding string value.

Function	Description
parseInt	Converts string value to integer.
parseFloat	Converts string value to floating point number.
escape	Encodes the string value into world wide acceptable format.
encodeURI	To encode URI.
decodeURI	To decode URI.
encodeURIComponent	To encode URI component.
decodeURIComponent	To decode URI component.

Built-in Functions

TEKNOTURF

```
document.write(isNaN(0));
```

```
var obj2=new Boolean(0);
document.write(String(obj2));
```

```
document.write(escape("this is
javascript escape function!!"));
```

```
document.write(encodeURI("http://www.t
echstrikers.com/test.php?id=23&str=this is
test"));
```

```
isFinite("5678");
isFinite("isFinite");
isFinite("5678-34");
```

```
var obj1=new String("7893");
document.write(parseInt(obj1));
```

Example

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```
function functionname(parameter-list)
{
    statements
}
```

Syntax

Example

```
<script type="text/javascript">
function display()
{
    document.write("Welcome to
      JavaScript");
}
display();
</script>
```

Function call

JavaScript Functions

TEKNOTURF

Functions with Parameters

```
<script type="text/javascript">
function add(no1 , no2)
{
    var sum = no1 + no2;
    document.write(sum);
}
add(10,20);
</script>
```

Function with return data

```
<script type="text/javascript">
function add(no1 , no2)
{
    var sum = no1 + no2;
     return sum;
}
var sum =add(10,20);
document.write(sum);
</script>
```

When the variable scope is available only within the method where it is defined then that variable is called as _____.

- ✔ ◉ local variable
- ○ static variable
- ○ instance variable
- ○ global variable

Correct

That's right! You chose the correct response.

Which of the following is true about typeof in JavaScript?

- All the options are correct.
- typeof is not the operator
- The typeof is a binary operator
- ✔ Its value is a string that indicates the data type of the operand.

Correct

That's right! You chose the correct response.

What is the main use of javascript?

- [x] To provide interactivity to HTML Pages.
- [ ] To improve the aesthetics of the webpage
- [ ] To perform database operations
- [ ] To do server-side task

Correct

That's right! You chose the correct response.

Choose the correct JavaScript syntax to change the content of the HTML element below?

This is a demo statement of JavaScript.

- ○ #demo.innerHTML = "Hello World!";
- ○ document.getElementByName("p").innerHTML = "Welcome to the tutorial!";
- ✔ ◉ document.getElementById("demo").innerHTML = "Welcome to the tutorial!";
- ○ document.getElement("p").innerHTML = "Hello World!";

Correct

That's right! You chose the correct response.

What does the expression "2"+1+5 evaluate?

- ○ Error Statement
- ✔ ◉ 26
- ○ 2 1 5
- ○ None of these

Correct

That's right! You chose the correct response.

Summary

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- Introduction to scripting Language
- Javascript - Introduction
- Execution of Javascript
- Scripts in head and body of HTML
- Functions in Javascript
- Internal and External Javascript
- Variables, Datatypes, Operators
- Programming Constructs in JavaScript
- Built in methods in Javascript
- Javascript Statements, Block, Comments

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THANK YOU

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JAVA SCRIPT

In this module you will learn

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- Events
- Javascript event handling
- Java script validation
- Working with Form Object (Form elements properties, methods and events)

Event Handling

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- Event – an action that is fired (initiated) within a webpage.
- JavaScript is Single Thread.
- It is so useful in creating interactive web sites.
- JavaScript uses asynchronous callback.
- Simplest way to run .js code in response to an event is to use an event handler (function)

Event Handling

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Event	Description
onchange	Script runs when the element changes
onsubmit	Script runs when the form is submitted
onreset	Script runs when the form is reset
onselect	Script runs when the element is selected
onblur	Script runs when the element loses focus
onfocus	Script runs when the element gets focus
onkeydown	Script runs when key is pressed
onkeypress	Script runs when key is pressed and released
onkeyup	Script runs when key is released
onclick	Script runs when a mouse click
ondblclick	Script runs when a mouse double-click
onmousedown	Script runs when mouse button is pressed
onmousemove	Script runs when mouse pointer moves
onmouseout	Script runs when mouse pointer moves out of an element
onmouseover	Script runs when mouse pointer moves over an element
onmouseup	Script runs when mouse button is released

Event Handling

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Example :

```
<form>
    <input type="button" name="test" value="Click me"
                    onclick="inform()">
</form>
```

```
<script>
function inform()
{
   alert("You have activated me by clicking the grey
                                                button!")
}
</script>
```

When the user clicks the button, **"inform()"** will be called.

JavaScript Validation

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JavaScript data validation happens before form is submitted.

Server-side application validation happens after the form is submitted to the application server.

Form validation performs the following functions :

- Basic Validation
- Data Format Validation

JavaScript Validation

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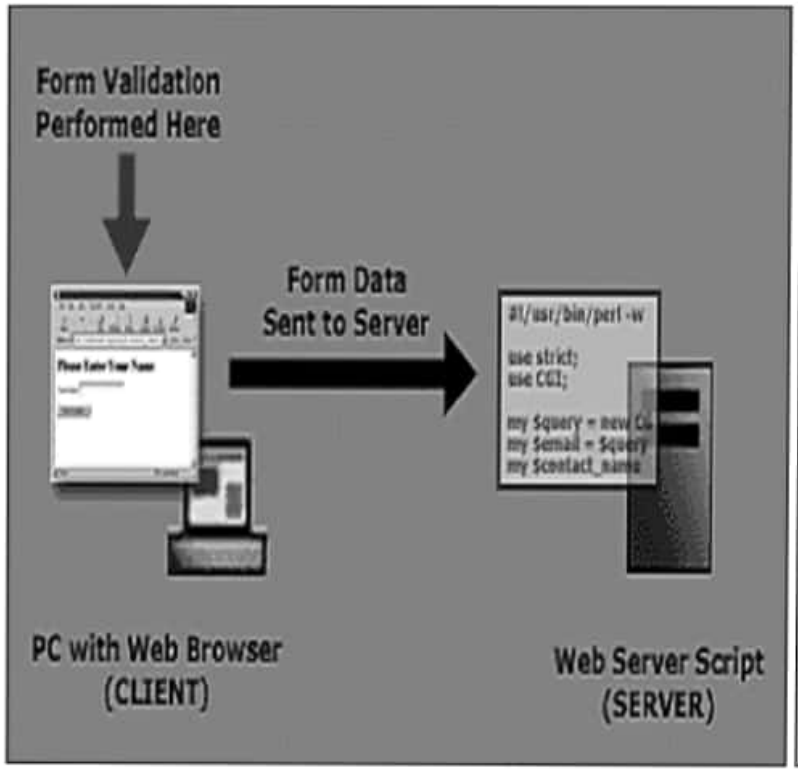

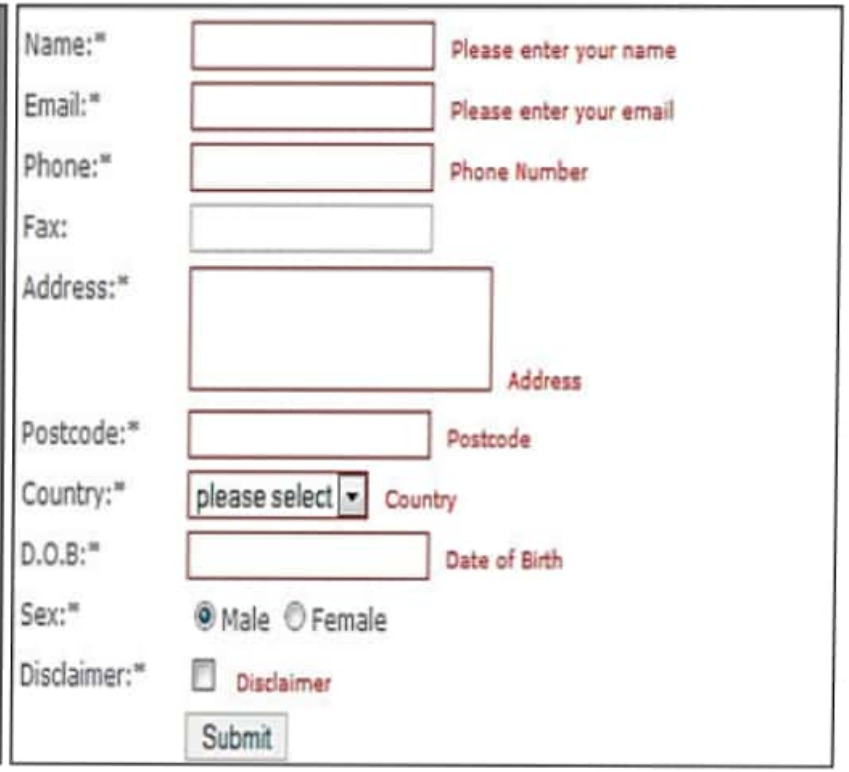

JavaScript Validation

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```
<form name="register" action="#" method="post">
First Name <input type="text" name="fname" > <br/>
Last Name <input type="text" name="lname" > <br/>
<input type="button" value="Register" onclick="validateData()">
<br/>
</form>
```

```
var fname=document.register.fname.value;
var lname=document.register.lname.value;

if(fname==null || fname== " "|| lname==null ||
lname.trim()=="")
{
    document.getElementById("msg").innerHTML +="Enter
value for name <br />";
}
```

JavaScript Validation

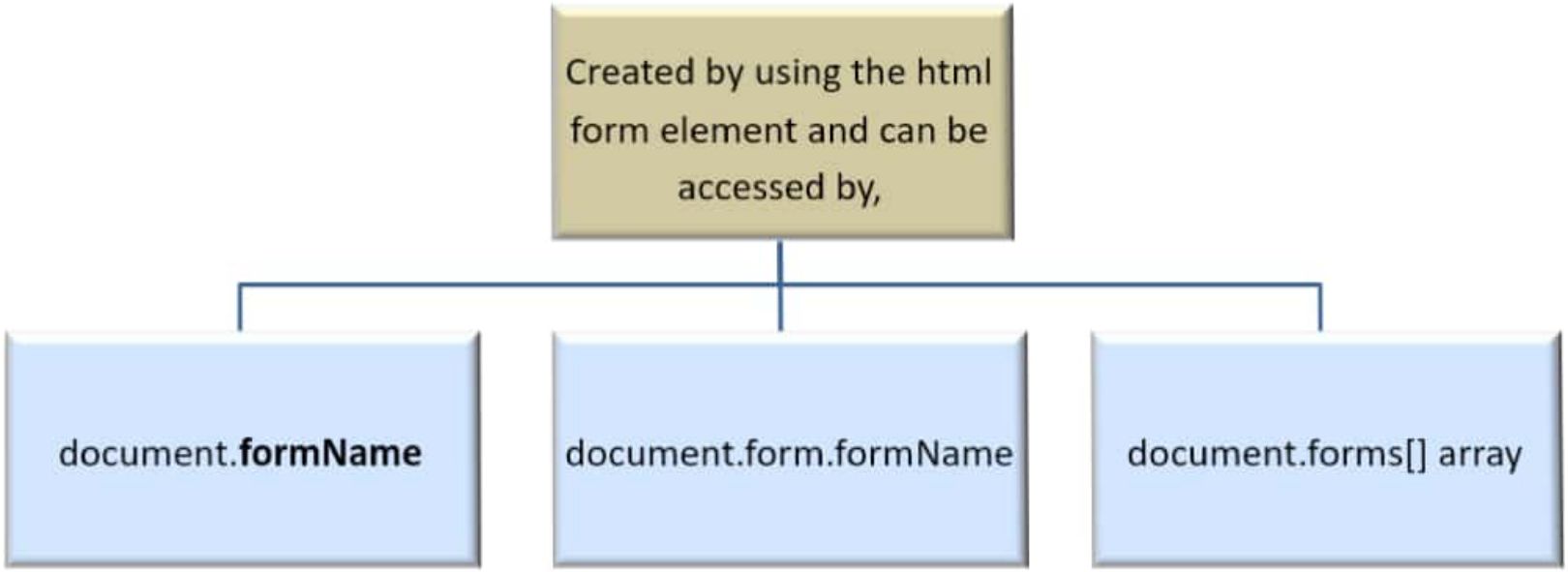
TEKNOTURF

The data entered in a form can be validated for its correct format.

Our code must include appropriate logic to test correctness of data.

```
<body>
 <form name="myForm" action="welcomePage.html" method="post" >
Email:<input type="text" name="email" id="email" onBlur="return validateEmail()"/>
<input type="submit" value="Submit" onsubmit="return validateEmail()">
</form>
```

Form Object



Form Object

TEKNOTURF

Property	Description
action	Presents the action attribute.
autocomplete	Presents the autocomplete attribute (on / off)
encoding	Presents the enctype attribute.
length	Presents the number of elements on a form.
method	Presents the forms method attribute.
name	Presents the name attribute of the form.
noValidate	Presents if form data needs to be validated or not (true / false)
target	Presents the target attribute of the form. It represents the name of the frame or window the form submission response is sent to by the server.

Form Object

TEKNOTURF

```
<form id="myForm" action="homepage.html" >
<table>
<tr><td>User name </td><td><input type="text" name="uname"></td></tr>
<tr><td>Password</td><td> <input type="password" name="pwd"></td></tr>
<tr><td colspan="2"><input type="button" value="Submit"  onClick = "changeAction()" >
</td> </tr>
</table>  </form>
<div id="msg" ></div>
<script>
      function changeAction()
      {
            document.getElementById("myForm").action = "form_action.asp";
            document.getElementById("myForm").autocomplete = "off;
            document.getElementById("msg").innerHTML = "The value of the action
               attribute was changed";
      }
</script>
```

_____ is an event that happens when the user moves the mouse away from an element.

- ○ onkeydown
- ✔ ◉ onmouseout
- ○ onclick
- ○ onmouseover

Correct

That's right! You chose the correct response.

Which of the following is true?

- If onKeyDown returns false, the key-up event is cancelled.
- ✔ If onKeyDown returns false, the key-press event is cancelled.
- If onKeyPress returns false, the key-down event is cancelled.
- If onKeyPress returns false, the key-up event is cancelled.

Correct

That's right! You chose the correct response.

Which of the following refers to an event handler?

- Variable
- Event
- handler
- Function

Incorrect

You did not choose the correct response.

Javascript is Single thread. State True or False.

- [x] True
- [ ] False

Correct

That's right! You chose the correct response.

Which is not an event handler attribute?

- onMouseOver
- onBlur
- ✔ parseInt
- onLoad

Correct

That's right! You chose the correct response.

Form Object - Methods

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```
<body>
<form name="register" action="registerUser.html">
  First name: <input type="text" name="fname"><br>
  Last name: <input type="text" name="lname"><br>
  <input type="button" onclick="myFunction()" value="Submit form">
</form>
<script>
function myFunction()
{
   document.register.submit();
}
</script>
</body>
```

Form accessed as document.formName and form submission invoked using submit() method

Form Event Handler

TEKNOTURF

```
<body >

<form name="register" onreset="return display()" onsubmit="return
displayValues()">
 First name: <input type="text" name="fname" onblur = "alert(this.value)" ><br>
 Last name: <input type="text" name="lname"><br>
 <input type="submit" >
 <input type="reset" >
</form>

<script>

function display()
{
  document.register.fname.value="Pearson";
  document.register.lname.value="David";
  return false;
}
```

Form Events onset, onreset and onblur used

Accessing a textbox value from a form

Form Event Handler

TEKNOTURF

Executed when onsubmit event occurs

```
function displayValues()
{
var fname=document.register.fname.value;
var lname=document.register.lname.value;
alert("First name is "+fname+" Last name is "+lname);
return false;
}
</script>
</body>
```

Text Object

A property of the form object

```
<INPUT TYPE=TEXT NAME="firstname">
```

Properties

- defaultValue
- form
- name
- type
- value

Methods

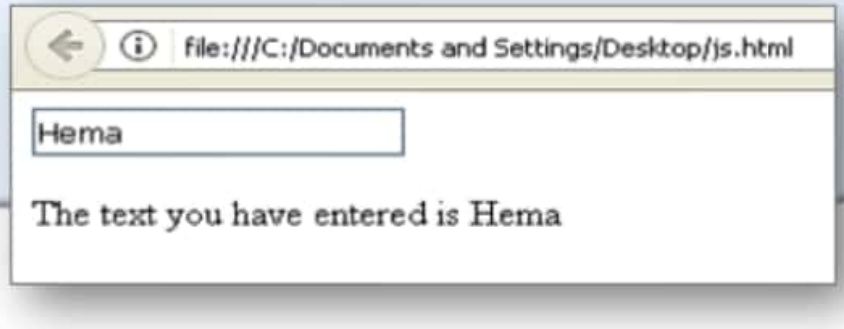
- blur()
- focus()
- select()

Events

- onBlur
- onChange
- onFocus
- onSelect

Text Object

```
<html>
<body>
<form>
<input type="text" onblur="display(this)"/>
<p id="demo"></p>
<script type="text/javascript">
function display(str)
{
    document.getElementById("demo").innerHTML  =  "The text you have entered is “
                                                  +str.value;
}
</script>
</body>  </html>
```



Button Object

TEKNOTURF

```
<INPUT TYPE="button" NAME="myButton" VALUE="Press This“ onClick="clickFunction">
```

The type may be one of "button", "submit", or "reset".

Properties

- disabled
- form
- name
- type
- value

Methods

- blur() - Takes the focus away from the radio button.
- click() - This function acts as if the user clicked the button.
- focus() - Gives the focus to the checkbox.

Events

- onBlur
- onClick
- onFocus

Checkbox Object

TEKNOTURF

```
<INPUT TYPE="checkbox" NAME="Name1" VALUE="1" CHECKED onClick="clickFunction">
```

The option "CHECKED" sets the button so it is selected when it is initially displayed.

Properties

- checked
- defaultChecked
- form
- name
- type
- value

Checkbox Object

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Methods	Events
• blur()	• onBlur
• click()	• onClick
• focus()	• onFocus

Radio Object

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Represents an HTML <input> element with type="radio“

Properties

- checked
- defaultChecked
- form
- name
- type
- value

Radio Object

TEKNOTURF

Events

- onBlur
- onClick
- onFocus

```
<body>
  <form name="form1">
  <p><input type=radio name="seats" value="sleeper">Sleeper</p>
  <p><input type=radio name="seats" value="semisleeper">Semi Sleeper</p>
  <p><input type=radio name="seats" value="normal">Normal</p>
  <p><input type=button value="Show Selected Seat"
     onClick="getSelectedSeat(this.form.seats)"></p>
  <p><div id="msg"></div></p>
  </form>
```

Select Object

TEKNOTURF

Represents HTML <select> element

Properties

- form
- length
- name
- option
- selectedIndex
- type

Select Object

TEKNOTURF

Represents HTML <select> element

Properties

- form
- length
- name
- option
- selectedIndex
- type

Methods

- blur()
- focus()
- add()
- remove()

Select Object

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Events

- onBlur
- onChange
- onFocus

```
<body>
<form>
<select id="technology“   onchange="selectMethodsDemo()" >
 <option>HTML</option>
 <option>CSS3</option>
 <option>Javascript</option>
 <option>JQuery</option>
</select>
</form>
```

Which of the following is not an object of form object?

- ✔ ○ submit
- ◉ text
- ○ button
- ○ radio

Incorrect

You did not choose the correct response.

Which of the following is not a property of select object?

- option
- ✔ size
- selectedindex
- length

Correct

That's right! You chose the correct response.

The name for all the Radio Objects must be the same. State True or False.

- [x] True
- [ ] False

Correct

That's right! You chose the correct response.

How do we access the elements of a form using form object?

- [x] document.formName
- [ ] document.getformName
- [x] document.form.formName
- [ ] document.formName[]

Correct

That's right! You chose the correct response.

Will reset() clear the contents of form elements?

- ○ Yes, it is equivalent to erasing the inputs given by the user.
- ✔ ◉ No, it resets the form elements to its default values.

Correct

That's right! You chose the correct response.

Summary

TEKNOTURF

- Events
- Javascript event handling
- Java script validation
- Working with Form Object (Form elements properties, methods and events)

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THANK YOU

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JAVA SCRIPT – DOM OBJECT

In this module you will learn

TEKNOTURF

- Document Object Model
- Working With Document Object (Its Properties and methods)

JavaScript Document Object Model -DOM

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- Every web page is displayed inside a browser window which can be considered as an object.
- JavaScript arranges objects in a Document Object Model or DOM.
- The DOM defines the logical structure of objects and the way an object is accessed and manipulated.

JavaScript Document Object Model -DOM

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Object	JavaScript Object Name
The browser window	window
A frame within the browser window	frame
The history list combining the Web pages the user has already visited in the current session	history
The Web browser being run by the user	navigator
The URL of the current Web page	location
The Web page currently shown in the browser window	document
A hyperlink on the current Web page	link
A target or anchor on the current Web page	anchor
A form on the current Web page	form

DOM Hierarchy

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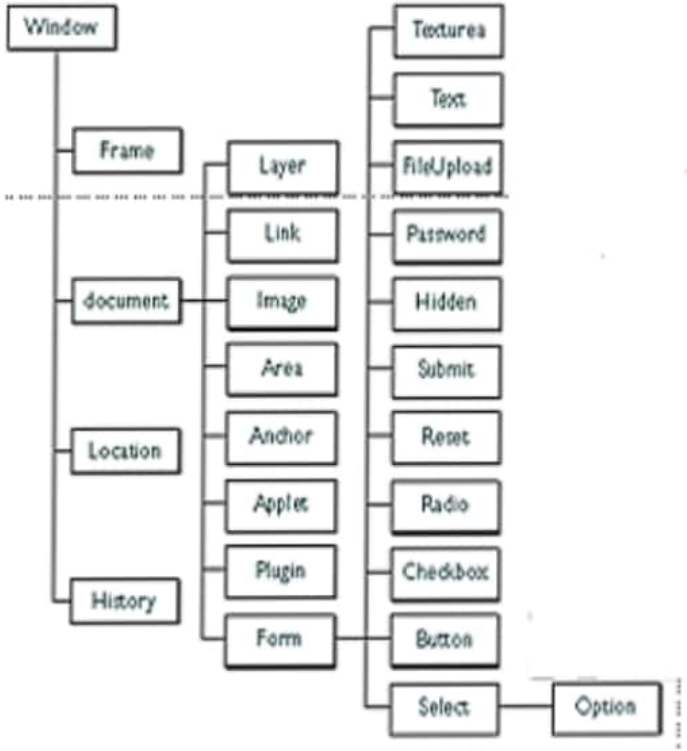
JavaScript uses Document Object Model(DOM) to navigate the HTML document in a hierarchy

The document object model can be thought of as a hierarchy moving from the most general object to the most specific.

Example:

To access the text field element :

document.form.text



DOM Properties

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There are several ways of working with properties.

- the value of a property can be changed
- store the property's value in a variable
- test whether the property equals a specified value in an If...then expression

Some properties are **read - only**, which means you can read the property value, but cannot modify it.

The syntax for changing the value of a property is
object.property = expression

Document Object - Properties

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Property	Description
cookie	Returns the value of the cookie
domain	Returns domain name of the document server
bgColor	Sets the background color Ex : document.bgColor="#FFFFFF"
fgColor	Sets the text color attribute in the <body> tag
title	Returns the title of the page
forms	Returns an array containing an entry for each form in the document

Note: The document is a part of the Window object and can be accessed as **window.document**

Document Object - Properties

```
<body>
    <h2>Learning Objects in JavaScript</h2>
      <script type="text/javascript">
          document.title="JavaScript Object
Example";
          document.bgColor="grey";
          document.fgColor="white";
 </script>
</body>
```

Document Object - Methods

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Method	Description
document.getElementById()	Finding an element by element id
document.getElementsByTagName()	Finding elements by tag name
document.getElementsByClassName()	Finding elements by class name
document.forms[]	Finding the form element with id passed as argument

```
<form name="userlogin">
    User name : <input type="text" id="userId" name="userName">
</form>
```

getElementById()

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getElementById() is a function that helps to access or set the document elements directly

To set the text between container tags like <p>, ,,<td> etc.

Syntax: document.geteEementById("elementId").innerText="value";

To get the text between container tags like <p>, ,,<td> etc.

Syntax: document.getElementById("elementId").value;

" **elementId**" represents the value of the **"id"** attribute of the form element like textbox, radio button, check box, text area etc.

getElementById()

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```
document.getElementById("userId").value;

or

document.userlogin.userId.value;

or

document.userlogin.username.value

or

document.forms[“userlogin”][“username”].value
```

Note:
field name should be unique

Access Form Element By Field name


```
<head>
 <script type="text/javascript">
   function getData(){
      var name  =  document.myForm.name.value;
      alert(name);
   }
 </script>
</head>
<body>
 <form name="myForm" onSubmit="getData()">
   <table>
      <tr><td>Name :</td><td><input type="text“ name="name"/></td></tr>
      <tr><td colspan="2"><input type="submit" value="Submit"/></td></tr>
    </table>
 </form>
</body>
```

Summary

TEKNOTURF

- Document Object Model
- Working With Document Object (Its Properties and methods)

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THANK YOU

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JQUERY

In this module you will learn

TEKNOTURF

- Introduction to jQuery
- Using jQuery Libraries
- Event Handling in jQuery
- jQuery by examples
- Handling User Scrolling
- Handling Resizing
- Images and Slideshows

Introduction to jQuery

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jQuery is a JavaScript Library created by John Resig in 2006.

JQuery is a lightweight, open-source JavaScript library that simplifies interaction between HTML and JavaScript.

jQuery simplifies HTML document traversing, event handling, animating, and Ajax interactions for rapid web development.

Why jQuery?

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Cross Browser Support

Extensibility through plug-ins

DOM manipulation

Event Handling.

AJAX Processing

Creating effects / animations

Using jQuery Libraries

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There are two ways to use jQuery:

Local Installation - Can download jQuery library on the local machine and include it into the HTML code

CDN Based Version - Can include jQuery library in the HTML code directly from Content Delivery Network (CDN)

Local Installation

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- Download the latest version of Jquery script file from the following URL

  https://jquery.com/download/

- Version used - **Jquery 3.1.1**
- Copy the **JS file** into the needed location and refer that file within the **html code** of a web page like:
- **<script type="text/javascript" src="jquery/jquery-3.1.1.js"></script>**

.js file is present inside the folder jquery (relative path)

CDN Installation

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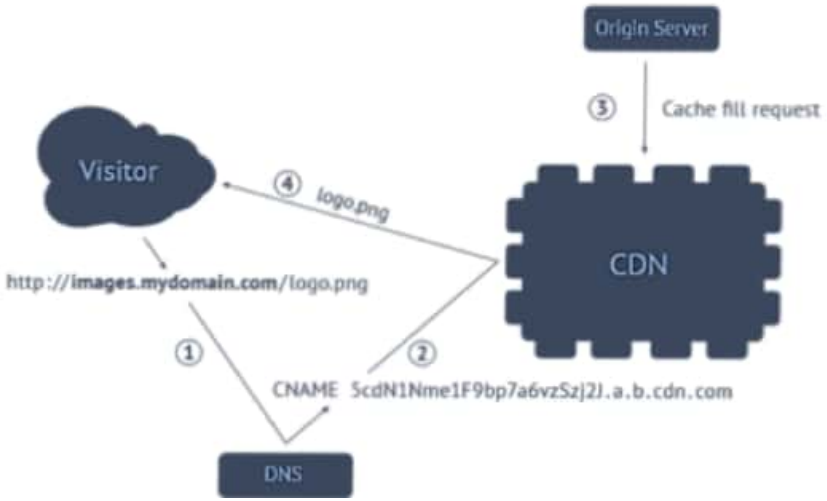
- You can refer the jQuery library within your HTML code directly from Content Delivery Network (CDN)
- Both Google and Microsoft host jQuery files

```
<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.1.1/jquery.min.js"></script>
```

```
<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.1.1/jquery.min.js"></script>
```



Production version (compressed): The production version is meant to be used in a working application.

we can download jquery.min.js and access it locally using relative address mode

Working with jQuery

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All the JavaScript works that need to be performed, happens after the document is ready.

Example - adding events

```
$(document).ready(function()
{
        //JavaScript code
} );
```

Everything inside it will load as soon as the DOM is loaded, and before the page contents are loaded.

Example

Here, **'document'** refers to the HTML element and **ready()** is the action on the selected element.

```
<html>
<head>
<script type="text/javascript" src="jquery/jquery-3.1.1.js"> </script>
<script type="text/javascript" >
$(document).ready(function()
{
        document.write("Welcome to JQuery");
});
</script>
</head>
<body>
</body>
</html>
```

Output

jQuery Selectors

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Selectors are used to select one or more HTML elements using jQuery.

jQuery selectors start with the dollar sign and parentheses – $()

Selectors can be

- **Tag name** - $('name of the tag') - $('p')
  - Selects all elements which match with the given element Name.
- **Id** - $('#p_id')
  - Selects a single element which matches with the given ID.
- **Class** - $('.p_class')
  - Selects all elements which match with the given Class.

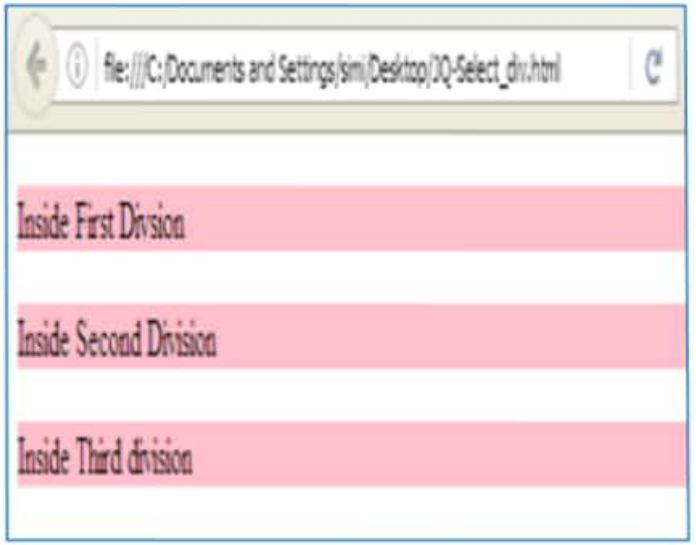
The factory function $() is a synonym of jQuery() function. You can use function jQuery() instead of $().

Using Tag Name Selector

```
<html>
<head>
<script type = "text/javascript"
src = "https://ajax.googleapis.com/ajax/libs/jquery/3.1.1/jquery.min.js">
</script>
<script type = "text/javascript"
language = "javascript">
$(document).ready(function()
{
    $("div").css("background-color", "pink");
});
 </script>
</head>
<body>
     <div class = "big" id = "div1">
         <p>Inside First Division</p>
      </div>
      <div class = "medium" id = "div2">
         <p>Inside Second Division</p>
      </div>
      <div class = "small" id = "div3">
         <p>Inside Third division</p>
      </div>
   </body>
</html>
```

This would select all the **div tags** in the html file

Output



Using #id Selector

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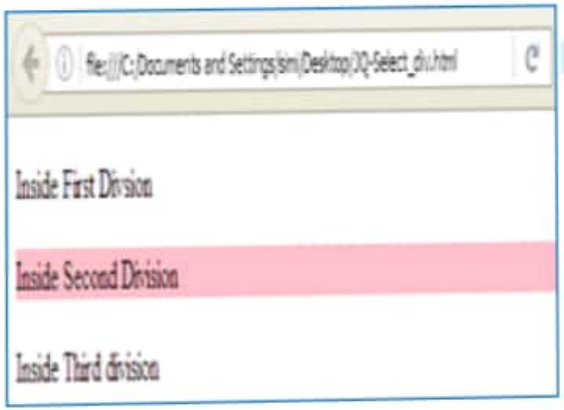
```
<html>
<head>
<script type = "text/javascript"
    src = "https://ajax.googleapis.com/ajax/libs/jquery/3.1.1/jquery.min.js">
</script>
<script type = "text/javascript" language = "javascript">
    $(document).ready(function()
    {
        $("#div2").css("background-color", "pink");
    });
 </script>
</head>
<body>
     <div class = "big" id = "div1">
         <p>Inside First Division</p>
      </div>
      <div class = "medium" id = "div2">
         <p>Inside Second Division</p>
      </div>
      <div class = "small" id = "div3">
         <p>Inside Third division</p>
      </div>
   </body>
</html>
```

This would select the **div** tag which has the **id div2**

Output



Using .class Selector

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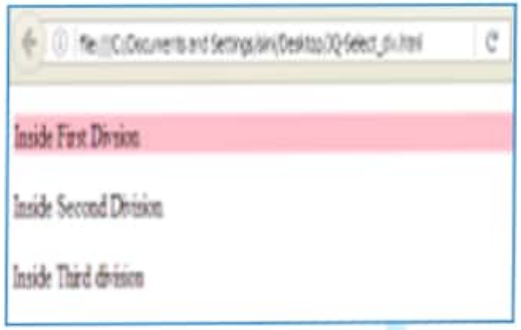
```
<html>
<head>
<script type = "text/javascript"
    src = "https://ajax.googleapis.com/ajax/libs/jquery/3.1.1/jquery.min.js">
</script>
<script type = "text/javascript" language = "javascript">
    $(document).ready(function()
    {
        $(".big").css("background-color", "pink");
    });
</script>
</head>
<body>
     <div class = "big" id = "div1">
         <p>Inside First Division</p>
      </div>
      <div class = "medium" id = "div2">
         <p>Inside Second Division</p>
      </div>
      <div class = "small" id = "div3">
         <p>Inside Third division</p>
      </div>
   </body>
</html>
```

This would select only the division which belongs to the class 'big'

Output



.css() is an action which sets the css attributes to the specified elements selected by the selector

jQuery Selectors

TEKNOTURF

Selector	Description
$('*')	This selector selects all elements in the document
$("p > *")	This selector selects all elements that are children of a paragraph element
$("li:not(.myclass)")	Selects all elements matched by ** ** that do not have **class="myclass"**
$("p a.specialClass")	This selector matches links with a class of specialClass declared within **<p>** elements
$("ul li:first")	This selector gets only the first ** ** element of the ** **.
$(":empty")	Selects all elements that have no children
$("p:empty")	Selects all elements matched by **<p>** that have no children
$("div[p]")	Selects all elements matched by ** ** that contain an element matched by **<p>**
$("input[@name=myname]")	Selects all elements matched by **<input>** that have a name value exactly equal to myname

Assume you have been assigned to develop a web site with lot of animations and effects, where you have to use jQuery libraries. But for applying certain effects, you will have to make some changes in the library files. If so, which version of the jQuery libraries should you use?

- ○ Beta version
- ✔ ◉ Development Version
- ○ Deployment version
- ○ Production version

Correct

That's right! You chose the correct response.

Here is a jquery code:
$(document).ready(function(){});
Why do we place all jQuery methods inside this code?

- [x] To prevent jQuery code from running before the document is fully loaded.
- [ ] To enable the DOM to load jQuery
- [ ] It shows where jQuery starts and ends
- [ ] Because jQuery is never compiled

Correct

That's right! You chose the correct response.

Look at the following jQuery selector: $("div #intro .head"). What does it select?

- [x] All div elements with id="intro" or class="head"
- [ ] The first element with id="head" inside any div element with class="intro"
- [ ] All elements with class="head" inside the first div element with id="intro"
- [ ] None of these

Correct

That's right! You chose the correct response.

$('#p_id') is used to _____.

- None of these
- selecting all elements which match the given id.
- ✔ selecting a single element which matches the given id.
- selecting a paragraph which matches the given id.

Correct

That's right! You chose the correct response.

A symbol “$” in jQuery selector denotes _____.

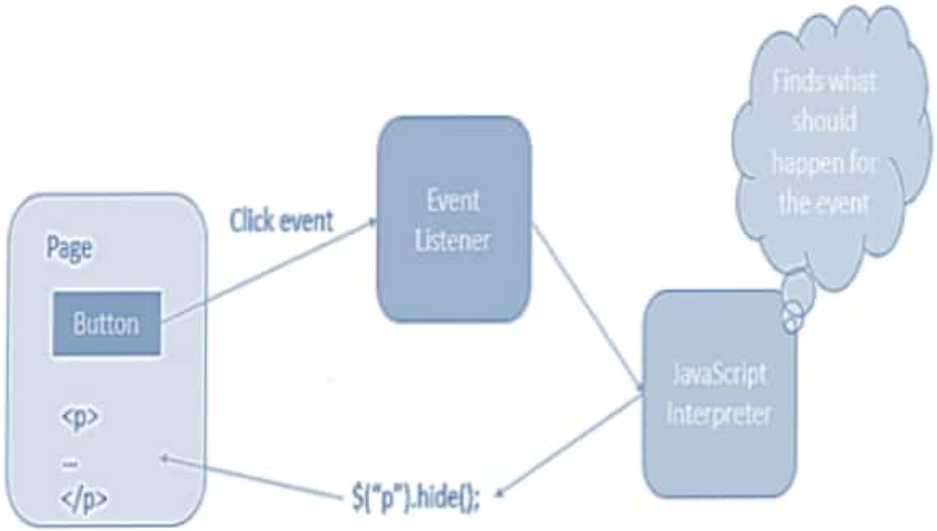
- a sign prefix with jQuery function call
- ✔ a jQuery function
- a name of a selector
- a separator

Correct

That's right! You chose the correct response.

Event Handling

- Events are user's actions.
- jQuery events are the actions that can be detected by your web application.
- The term "fires/fired" is often used with events.



"The **click event** is fired, the moment when you click a button".

Types of Events

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Here are some common **DOM** events

Mouse Events	Keyboard Events	Form Events	Document/Window Events
click	keypress	submit	load
dblclick	keydown	change	resize
mouseenter	keyup	focus	scroll
mouseleave		blur	unload

Mouse Events

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```
<script>
    $(document).ready(function()
    {
            $("button").click(function()
        {
                $("p").hide();
            });
    });
</script>
```

When click event is fired, **click()** will be executed

```
<script>
    $(document).ready(function()
    {
            $("h1,h2,h3").click(function(
        {
                $(this).hide();
            });
        });
</script>
```

When you click on h1 or h2 or h3 tag, the contents within those tags will be **hidden**

```
<script>
    $(document).ready(function()
    {
            $("#p1").mouseenter(function()
        {
                alert("You have Entered !!!");
            });
    });
</script>
```

When the mouse pointer enters into the paragraph , it shows the **alert box**

Mouse Events

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```
<script>
    $(document).ready(function()
    {
            $("p").on({
                    mouseenter: function(){
                    $(this).css("background-color", "lightgray"); },
                    mouseleave: function(){
                    $(this).css("background-color", "lightblue");},
                    click: function(){
                    $(this).css("background-color", "yellow");  },
                    });
    });
</script>
```

The **on()** method attaches one or more event handlers for the selected elements

```
<script>
    $(document).ready(function()
    {
            $("#p1").hover(function(){
                    alert("You entered into paragraph!");
                },
        function(){
                alert("Bye! You now leave the Praragraph");
            });
    });
</script>
```

hover() method takes two functions and is a combination of the **mouseenter()** and **mouseleave()** methods.

Form Events

```
<script type="text/javascript" >
    $(document).ready(function()
    {
        $('input').change(function(){
            var name=document.myForm.name.value;
            $('div').append("<h3>Welcome "+name+"</h3>");
        });
    });
</script>
```

When you type /change the **name** in the **input box**, it displays the word 'Welcome' along with that name.
Example- **"Welcome Olive"**

```
<script>
    $(document).ready(function(){
            $("input").focus(function(){
            $(this).css("background-color", "pink");
        });
            $("input").blur(function(){
                    $(this).css("background-color", "#ffffff");
        }); });
</script>
```

Focus() is executed when the form field gets focus.
blur() is executed when the form field loses focus.

When the mouse pointer focuses on the input field, it turns to **pink,** when it exits, it turns to **default color**

Scroll Events

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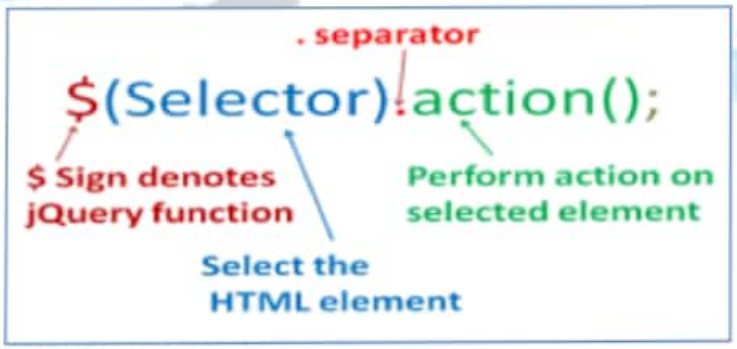
The scroll event occurs when the user scrolls the specified element.

The scroll event works for all scrollable elements and the window object (browser window).

The scroll() method triggers the scroll event, or attaches a function to run when a scroll event occurs.

Syntax



Example

$(selector).scroll()

or

$(selector).scroll(function)

Scroll Events

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```
<html>
<head>
<script src="http://code.jquery.com/jquery-3.1.1.min.js"></script>
<script>
    $(document).ready(function()
    {
        $(txtscroll).scroll(function(){
        alert ("Scroll event occured!");
    });
    x = 0;
    $("div").scroll(function(){
        $("span").text( x+= 1);
        }); });
</script>
</head>
<body>
<p><font color="Green"> TEXT AREA </font></p>
<textarea cols="20" rows="10" id="txtscroll">
 jQuery is a fast, small, and feature-rich JavaScript library.
<br><br>
    It makes things like HTML document traversal and manipulation,
    event handling, animation, and Ajax much simpler with an easy-to-use
    API that works across a multitude of browsers.
</textarea>
<P><font color="blue"> DIVISION AREA </font></p>
<div style="border:1px solid black;width:200px;height:100px;overflow:scroll;">
   JQuery is a fast, small, and feature-rich JavaScript library.
<br><br>
    It makes things like HTML document traversal and
    manipulation, event handling, animation, and Ajax
    much simpler with an easy-to-use
    API that works across a multitude of browsers.
</div>
<p><font color="red">Scrolled <span>0</span> times.</font></p>
</body>
</html>
```

The scroll event occurs when the user scrolls in the specified element

Output

Resize Events

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The **resize()** event is sent to the window element when the size of the browser window changes

Code in a resize handler should never rely on the number of times the handler is called.

As the **.resize()** method is just a shorthand for **.on("resize", handler),** detaching is possible using **.off("resize")**

Example

```
$(selector).resize()
or
$(selector).resize(handler function)
```

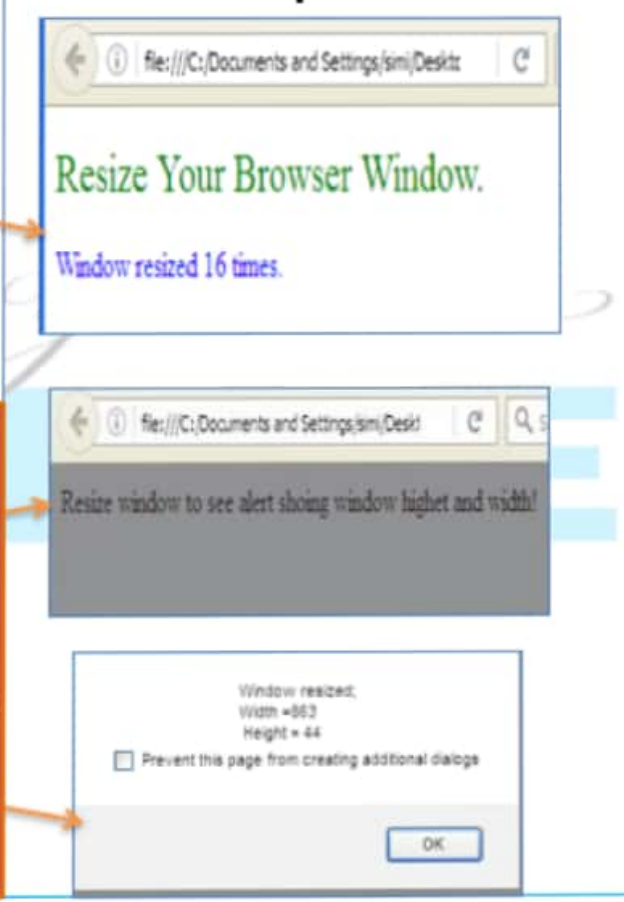
Resize Events - Example

TEKNOTURF

```
<script>
        x = 0;
        $(document).ready(function()
    {
            $(window).resize(function(){
                $("span").text(x += 1);
        });
         });
</script>
```

```
<script>
    $(document).ready(function()
    {
        $(window).resize(function(){
            alert ("Window resized;" + "\n" + "Width =" +
        $(window).width() + "\n" + " Height = " + $(window).height());
        });
    });
</script>
```

Output



jQuery Effects

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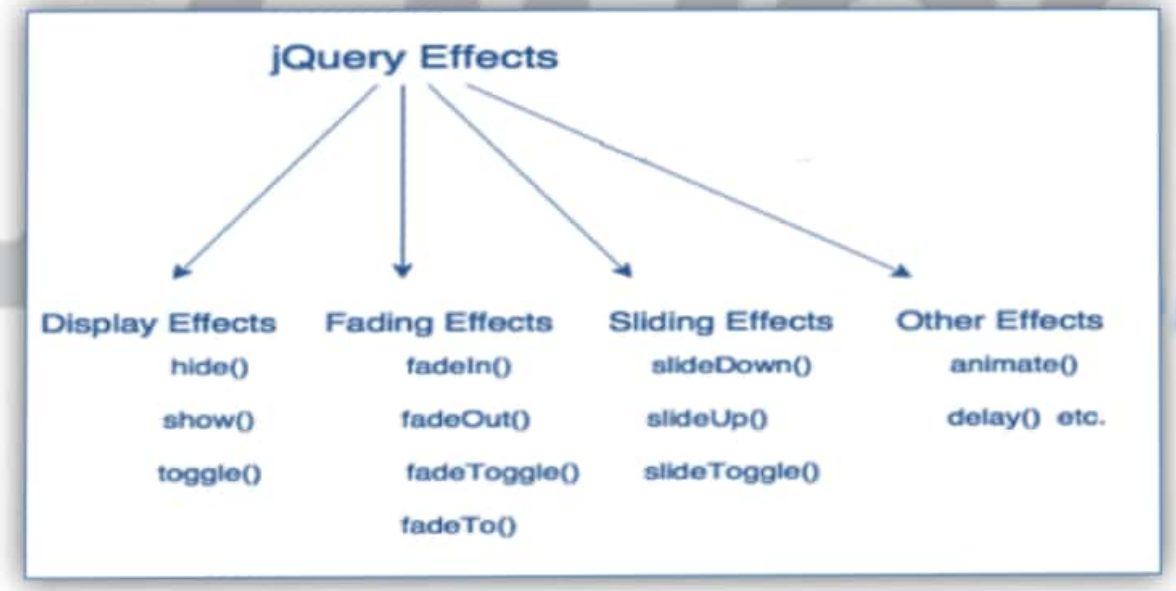
jQuery enables us to add effects on a web page.

jQuery effects can be categorized into display, fading, sliding, hiding/showing and other animation effects.



Display Effects

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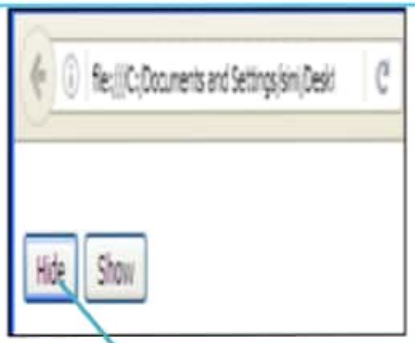
```
<script type="text/javascript" >
    $(document).ready(function()
    {
        $('#hide').click(function(){
            $('img').hide();
        });
        $('#show').click(function(){
            $('img').show();
        });
    });
</script>
```



After clicking the hide button, image is hidden

Hide and show can take an optional time in milliseconds to have transition

```
<script type = "text/javascript" language = "javascript">
    $(document).ready(function()
    {
                $(".clickme").click(function(event){
                    $(".target").toggle('slow', function(){
                });  }); });
</script>
```

toggles() method toggles between the **hide()** and **show()** methods.

Fading Effects

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fadeIn() - Syntax

```
$(selector).fadeIn([speed, callback]);
```

Specifies the duration of the effect

It is a function to be executed after fading completes

fadeOut() - Syntax

```
$(selector).fadeOut([speed, callback]);
```

fadeToggle() - Syntax

```
$(selector).fadeToggle([speed, callback]);
```

fadeTo() - Syntax

```
$(selector).fadeTo([speed, opacity, callback]);
```

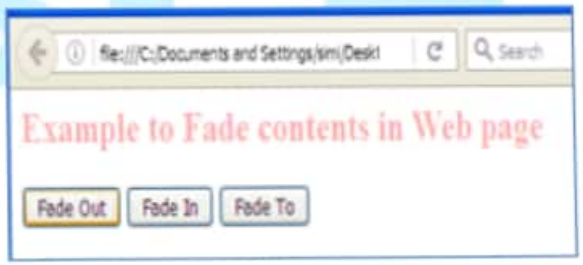
Opacity value between 0 and 1

Fading Effects - Example

TEKNOTURF

```
<script type="text/javascript" >
    $(document).ready(function() {
        $('#fadeout').click(function(){
            $('h3').fadeOut(1000);
        });
        $('#fadein').click(function(){
            $('h3').fadeIn(1000);
        });
        $('#fadeto').click(function(){
            $('h3').fadeTo(1000,.5);
        });
    });
</script>
```

Output



Sliding Effects

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slideDown() - Syntax

```
$(selector).slideDown([speed, callback]);
```

slideUp() - Syntax

```
$(selector).slideUp([speed, callback]);
```

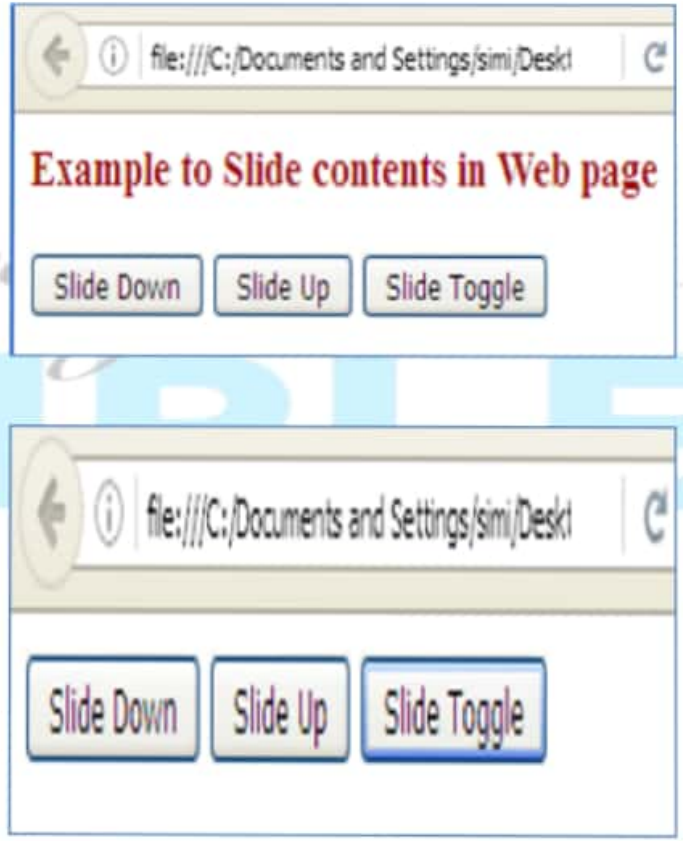
slideToggle() - Syntax

```
$(selector).slideToggle([speed, callback]);
```

Sliding Effects - Example

```
<script type="text/javascript" >
    $(document).ready(function()
    {
        $('#slidedown').click(function(){
        $('h3').slideDown("slow");
    });
    $('#slideup').click(function(){
        $('h3').slideUp("fast");
    });
    $('#slidetoggle').click(function(){
        $('h3').slideToggle(1000);
    });});
</script>
```

Output



animate() - Example

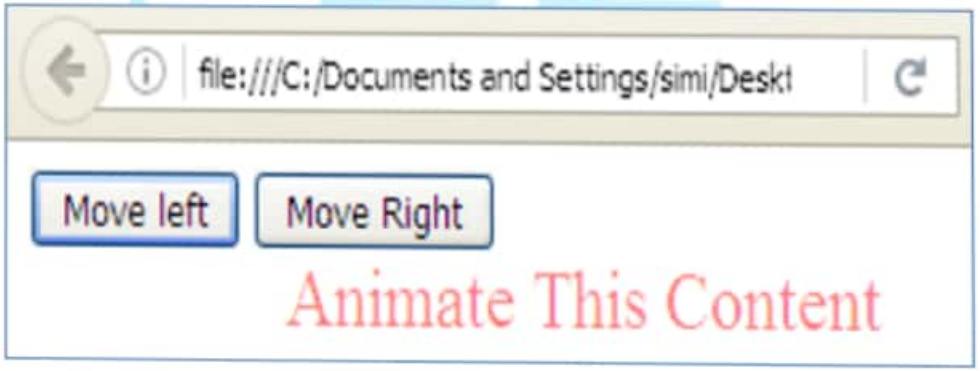
TEKNOTURF

```
<!DOCTYPE html>
<html>
<head>
<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.1.1/jquery.min.js"></script>
<script>
    $(document).ready(function()
    {
                $('#left').click(function()
        {
        $('div').animate( {left: "-=50px" , height:'toggle', opacity:0.5}, "slow");
            });
            $('#right').click(function(){
        $('div').animate( {left: "+=50px", width : 'toggle',opacity:1}, "slow");
    }); });
</script>
<head>
<body>
    <button id="left">Move left</button>
    <button id="right">Move Right</button>
    <div style="left: 100px ; position: absolute ">
          <font size=5 color="red">Animate This Content</font></div>
</body>
</html>
```

Syntax

```
$(selector).animate({params},
speed, callback);
```

Output



SlideShow - Example

TEKNOTURF

```
<html>
<head>
<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.1.1/jquery.min.js"></script>
<script>
function slideSwitch() {
    var $active = $('#slideshow IMG.active');
     if ( $active.length == 0 )
          $active = $('#slideshow IMG:last');
        var $next =  $active.next().length ? $active.next() : $('#slideshow IMG:first');
                    $active.addClass('last-active');
                    $next.css({opacity: 0.0}) .addClass('active') .animate({opacity: 1.0}, 1000,
        }
        $(function() {
                setInterval( "slideSwitch()", 1000 );
        });
</script>
<style type="text/css">
    .active{
        z-index:99;
    }
</style>
</head>
<body>
     <div id="slideshow">
        <img src="images/flower1.jpg" width=50% height=80%
            style="position:absolute;" class="active" />
        <img src="images/flower2.jpg" width=50% height=80%
                        style="position:absolute;"/>
          <img src="images/flower3.jpg" width=50% height=80%
                        style="position:absolute;"/>
          <img src="images/flower4.jpg" width=50% height=80%
                        style="position:absolute;" />
</div>
</body>
</html>
```

Output

Which JavaScript function is equivalent, when you refer an HTML element using # (pound or hash) at the beginning?

- None of these options
- getElementByTagName
- getElementByClassName
- ✔ getElementById

Correct

That's right! You chose the correct response.

Which event will help to prevent any jQuery code from running before the document is finished loading (is ready)?

- [x] $(this).ready(function(){ });
- [x] $(document).ready(function(){ });
- [ ] $(event).preventDefault(function(){ });
- [ ] $(function(){ });

Incorrect

You did not choose the correct response.

Which of the following methods helps us to attach one or more event handlers to a selected element?

- [x] on()
- [ ] ready()
- [ ] focus()
- [ ] hover()

Correct

That's right! You chose the correct response.

What is the correct jQuery code to set the background color of all p elements to red?

- $("p").layout("background-color","red");
- ✔ $("p").css("background-color","red");
- $("p").style("background-color","red");
- $("p").manipulate("background-color","red");

Correct

That's right! You chose the correct response.

Ron, a web page designer, is developing a web page, where he wants to display one message when the mouse pointer enters into a text field and display another message when the mouse pointer leaves the text box. Which event will help him to perform these two operations together?

- blur()
- ✔ hover()
- focus()
- on()

Correct

That's right! You chose the correct response.

Summary

- Introduction to jQuery
- Using jQuery Libraries
- Event Handling in jQuery
- jQuery by examples
- Handling User Scrolling
- Handling Resizing
- Images and Slideshows

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THANK YOU