

MODULE 1 HTML/BOOTSTRAP

INTRODUCTION

HTML, which stands for HyperText Markup Language, is the **most basic** building block of a web page. Almost every website that you have ever seen uses HTML to show you the stuff that you see on their web pages. HTML dictates every website's look, but not its functionality.

When you are browsing a website, your browser (Firefox, Chrome, Internet Explorer etc.) reads an HTML file in the background, understands the code written in the file and accordingly displays the webpage.

Just like you read a page in a book written in English and your brain automatically understands what it means, a browser also reads a webpage written in HTML and understands what it needs to show to the user.

Ok, enough of theory, let's get started with your first piece of code already! Following is a simple code in HTML.

```
<!DOCTYPE HTML>
<html>
  <body>
    <p>This is a paragraph</p>
  </body>
</html>
```

In the above code, <DOCTYPE> specifies the type of the document.

The entire webpage content is inserted between the <html> and the </html>tags. The text between the <body> and </body> describe the visible page content. The text between the <p> and </p> is the main content of the webpage. This webpage is designed to output the following text "This is a paragraph".

Remember, HTML is the most widely used markup language in the world. A markup language is a system in which we are able to clearly distinguish the language markers from the actual text. There exist thousands of HTML markers, also known as tags, available to web developers to define the looks of a website. We shall learn more of these markers in the next few topics.

TEST YOURSELF

Q1. What does HTML stand for?

Ans. HTML stands for HyperText Markup Language. It is the most widely used markup language in the world.

TAGS & ELEMENTS

In the previous tutorial, we had an outline on what markers, or tags are. Now let's explore and understand more about tags. Technically, tags are used to format HTML Documents. Tags are always enclosed in angular brackets (< and >) and are generally used in pairs, the first of which is called a start and the other, the end tag.

Note that all HTML content is added between these tags. An element is everything from the start tag to the end tag. To have a clear understanding of this concept, consider the following code:

```
<h1>h1 is a 'header' tag.</h1>
```

In the above code, <h1> is the start tag, </h1> is the end tag and the whole content i.e. '<h1>h1 is a 'header' tag.</h1>' is the element.

TIP

HTML tags are not case sensitive. However, usage of lowercase is recommended.

Tags which are labelled as h1, h2, h3, h4, h5 or h6 are header tags and are used to display the headers in any page. '<h1>' refers to the header tag with the maximum size while '<h6>' outputs the smallest header.

Try changing the element of the code to something like this - 'I started coding already'. Also, replace <h1> with each of the following - <h2>, <h3>, <h4>, <h5> and <h6>. What do you infer? Did you notice that size of output decreases as the header tag's number increases? That was all about header tags. But what if you have to start a new paragraph? <p> tags are paragraph tags and are used to display paragraphs. Have look at the example :

```
<p> This is the first paragraph.</p> <p> This is the second paragraph.</p>
```

Write your own code using the paragraph tags, and test the output in the interactive box.

HTML elements with no content are called empty elements. For example,
 is an empty element. It has no closing tag. The
 tag defines a line break. Try using the
 tag in between the paragraph content that you wrote and see what happens. Try using multiple
 tags.

TEST YOURSELF

Q1. What is the significance of a tag in HTML?

Ans. Tags are used to format a HTML document.

Q2. What is an element?

Ans. An element is everything between the start tag and the end tag.

Q3. What is an empty HTML element? Give an example.

Ans. HTML elements with no content are called empty elements. Example :

There exist thousands of HTML tags such as <body>, <table>, <div>, <button> etc. We will learn about all these in the next few topics.

ATTRIBUTES

In the previous tutorial, we had seen how tags and elements give structure to a HTML document. Often these elements need extra specifications, which are called attributes. Basically, an attribute is used to define the characteristics, such as width, height, color etc. of an element.

The attribute of an HTML element is specified in its start tag. Attributes are always specified in name/value pairs such as 'height = "10px"'. Note that, attribute values(10px) should always be enclosed in quotes.

It is not always necessary to specify the attribute for every element. Some attributes are not required, while some have default values. However, when we want an element to be very specific, we must define attributes.

The following snippet of code demonstrates the use of attributes.

```
<a href="http://www.internshala.com">This is a link to Internshala website.</a>
```

Well. That looks big, but it is very easy to understand. The above code is that of an anchor tag which is used to define links to other webpages (<a> is the start tag and is the end tag). Here, href is an attribute which refers to the location to which the link points to. In this case, the link points to 'http://www.internshala.com'. Hence, clicking the link takes the user to the website 'http://www.internshala.com'

Before you go further, take some time out to understand what actually happens here.

There are plenty of attributes. For instance, with the <style> attribute you can add styling to your website, say background colour.

TIP

When the attribute value itself contains quotes, it is necessary to use single quotes: e.g. name='The "Magic" Wand'.

The four important attributes that can be used on the majority of HTML elements: <class> specifies one or more class names for an element. <id> specifies a unique id for an element. <style> specifies an inline CSS style for an element. <title> specifies extra information about an element.

TEST YOURSELF

Q1. Where do we specify the attribute of an element?

Ans. The attribute of an element is always specified in the start tag of the element.

Q2. Is it necessary to specify the attribute of every element?

Ans. No. It is not always necessary to specify the attribute for every element. Some attributes are not required, while some have default values.

Q3. Name the attribute that is used to distinguish an element from other.

Ans. The 'id' attribute is used to distinguish an element from the other.

FORMATTING

Formatting refers to the presentation of web pages. Formatting is done to modify the appearance or the structure of the text on your web page. The HTML tags which are used for this purpose are called formatting tags.

Lets say, you want to make a webpage. So, you would obviously want to give it a proper look where you may highlight few sentences or change the font in order to capture user's attention. Consider the following code :

```
<i> This text is in italics </i>.  
<b> This text is in bold </b>.
```

You must have guessed the output. The first line appears in italics, while the second line appears in bold. There are four tags you can use for bold and italics:

 and for bold

 and <i> for italics.

Also, the <u> tag is used to underline certain text.

```
<u>This text is underlined </u>.
```

The <sup> tag is used to print superscript and the <sub> tag is used to print subscript.

```
2<sup>3</sup> = 8.
```

The <hr/> creates a line from the current position in the document to the right margin and breaks the line accordingly. 'size' and 'width' are two important attributes of the <hr/> tag.

TEST YOURSELF

Q1. What is the use of formatting?

Ans. Structuring the existing text.

MORE EXERCISES

I am *My_Name*

HINT

Note that My_Name is both italic and bold.

2. Use <strike> tag instead of <u> tag in the example shown above and see the output.

3. Display "H₂O".

LINKS

Links are used to navigate to documents/ webpages/ websites. The existence of web is itself because of its connectivity, which is made possible through the use of links.

The HTML `<a>` tag (anchor tag) defines a hyperlink. The destination of the link is defined in the href attribute of the anchor tag. A link can be a word or an image. If the link is a word, then the word should be written in between the start and end anchor tags. If it is an image, the image should be inserted between the anchor tags. You can even have a whole paragraph as a link. Think about how you can do this.

A link can be absolute or relative to the current page. An absolute link is shown below. Note that the href value of an absolute link starts with 'http://'.

```
<a href="http://vtc.internshala.com">VTC</a>
```

A relative link is shown in the code below. IMPORTANT: Remember that the following relative link will only work if the target page (sample.php) exists in the same folder as the current page. When you work on your project website, practice links as much as possible, so that you get comfortable with them.

```
<a href="sample.php">VTC</a>
```

TIP

By default, when you move the cursor over a link in a Web page, the arrow turns into a little hand.

The target attribute specifies whether to open the linked document/ webpage in the same tab or in a different tab.

```
<a href="http://www.internshala.com/" target="_blank">Internshala</a>
```

The above code sets target as `_blank` which opens the linked document/ webpage in a new tab.

TEST YOURSELF

Q1. Which attribute specifies where the destination link has to be opened?

Ans. The target attribute.

HEAD TAG

The HTML head element is a container for global information about the document. It is placed at the top of the document, inside the html element but before the HTML body element. Some of the tags that can be used in the head tag have been discussed below.

The <title> tag defines the title of the document (This is the text that you see written in the tab).

```
<head>
  <title>Title - Head Tag</title>
</head>
```

The <style> tag is used to define style information for an HTML document. We will learn a lot more about this tag in the CSS tutorial.

```
<style type="text/css">
  body {background-color:black;}
</style>
```

The tag provides metadata about the HTML document. Metadata is data about data. For example,

```
<head>
  <meta http-equiv="refresh" content="10">
</head>
```

TEST YOURSELF

Q1. What do you understand by a head tag?

Ans. The HTML head element is a container for global information about the document.

MORE EXERCISES

1. Make a code for html document which has background in green, header text in yellow and paragraph text in red.

CSS

CSS (Cascading Style Sheets) defines various ways to style HTML elements. We can use CSS with html in 3 ways:

1. External
2. Internal or Embedded
3. Inline

For the scope of this tutorial (and this course), we will learn how to use the external CSS property.

In order to learn about the CSS margin and padding properties, let us examine the CSS box model. Every element follows the following model.

Ways

Internal or Embedded - using the `< style >` element in the `< head >` tag.

```
< style type="text/css" >
.myNewStyle {
font-family: sans-serif;
font-weight: bold;
color: #FF0000;
}
< /style >
```

Inline - using the style attribute in HTML elements. An inline style can be used if a unique style is to be applied to one single occurrence of the element. E.g.

```
< h1 style="background-color:grey;"> Text is Green.</h1>
< h2 style="background-color:red;" > Text is Yellow.</h2>
```

External - using an external CSS file and then link it to the page you want to apply the code to. This external file can be linked with any number of web pages to style the web page in same manner.

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

Explanation:

link tag is used to link the css file.

href attribute specifies the name and path of the file where the css code is written in.

type attribute is used for the browser to interpret the code in the file to be CSS code.

rel attribute specifies the relation of file to be linked with the web page. E.g.

Web Page

```
< html >
< head >
< title > Example < /title >
< link rel="stylesheet" href="index.css" type="text/css"/ >
```

```
</head>
<body>
<div class="wrapper"> This is the first div </div>
<div id="container"> This is the second div </div>
</body>
</html>
```

For classes, dot operator is used.

For index.css code

```
.wrapper{
background-color:#fff;
width:100px;
height:100px;
--more--
}
#container{
width:100px;
height:100px;
background-color:#000;
color:#fff;
--more--
}
-- and so on --
```

Now, we shall discuss some of the most widely used CSS properties.

The margin property clears an area around the border.

The border envelops the element.

Padding clears an area around the content within the border (e.g. padding:10; clears an area of 10 pixels around the element's border. padding:10px 5px 7px 3px clears an area of 10 pixels, 5 pixels, 7 pixels and 3 pixels around the border on the top, right, bottom and left sides respectively.

Content is that area of the element where the text and images appear.

The color property indicates the color of the text to be used.

The background-color property indicates the background color of the element.

```
<h1 style="background-color:grey;color:green;">Text is Green.</h1></br>
<h2 style="background-color:red;color:yellow;">Text is Yellow.</h2>
```

The font-family property indicates the text font that needs to be used.

The font-size property indicates the text size that needs to be used. The units used for font-size can be either px(pixels) or em(ems)

```
<h1 style="font-family:georgia;font-size:0.9em;">This text is smaller and of a different
font.</h1></br>
```

The text-align property indicates the alignment of the text. It can take the values left, right, center or justify.

The text-decoration property indicates the decoration that needs to be added to the text. It can take the values none, overline, underline or line-through among others.

```
<h2 style="text-align:center;text-decoration:underline;">This text is centered and underlined.</h2>
```

The position property indicates the position of the HTML element. position:absolute indicates that the element is globally positioned with respect to the browser. position:relative indicates that the element is positioned relative to its normal position.

The float property allows us to horizontally push an element to the left or right and wrap other elements around it. A floated element will move as much to the left or right as it can. The following code illustrates this.

```
 <p>Internshala</p>
```

The clear property specifies which sides of an element other floating elements are not allowed. The values that can be used with the clear property are left, right or both. When you use clear:both; on any element, that element is not allowed to be either to the left or to the right of any floating element. It appears in a new line under the floating element.

```
 <p style="clear:both;">Internshala</p>
```

Try out ALL the above codes (only inline CSS) and understand how they work. These CSS properties are very important and will be used often.

TEST YOURSELF

Q1. What is CSS used for?

Ans. CSS is used to style the HTML elements.

MORE EXERCISES

1. Analyse and understand the following code to change the background colour.

```
<body style="background-color:black;">  
<p style="color:white;background-color:red;">Text in white colour.</p>
```

COLORS

HTML colors can be used to impart background colors to elements or color to text. They are defined using a hash symbol (#) succeeded by the hexadecimal notation (HEX) for the combination of Red, Green, and Blue color values (for example, #0915A6 indicates that the color should have 09 Red component, 15 Green component and A6 Blue component. Note that 09, 15 and A6 are hexadecimal values)

The lowest value that can be given to one of the colors (Red, Green or Blue) is 0 (in HEX:00), indicating no color, and the highest value is 255 (in HEX:FF), indicating maximum color.

The following table demonstrates various color codes.

There are more than 16 million colors that can be specified using this method.

IMAGES

Images are defined using the tag in HTML. The tag is empty, which means that it contains attributes only, and has no closing tag.

The most commonly used attribute is 'src', meaning source. Hence, the value assigned to src attribute is the location of the image that has to be displayed.

We also often use the 'width' and 'height' attributes to size the image.

The following code shows how to embed an image in a webpage.

```

```

The above code asks the browser to display the image called 'internshala.jpg', which is located in the same folder as the source code of this page (which is why, we have not used 'http://'. This is an example of relative linking). Also, we specify that the width and height of image displayed should be 300px and 100px respectively.

The tag may also have an 'alt' attribute, which specifies an alternate text to be displayed in place of the image, in case the image cannot be displayed.

TEST YOURSELF

Q1. Name the attribute of tag that is used to specify the location of an image.

Ans. src

MORE EXERCISES

1. Write a code snippet where in the 'Internshala' image acts as a hyperlink to the Internshala website.

BACKGROUND IMAGES

The CSS background-image property sets a background image for an element. We can set a background image for the entire page by setting the background image for the body.

```
<body style="background-image:url('internshala.jpg');">
```

The background-repeat property sets if and how a background image will be repeated. This property accepts the values repeat (repeat both in x and y directions), repeat-x (repeat only in x direction), repeat-y (repeat only in y direction) and no-repeat (don't repeat in any direction). By default, if the image is smaller than the container element, the background-image is repeated both vertically and horizontally.

Consider the following code for better understanding.

```
<body style="background-image:url('internshala.jpg');background-repeat:repeat-y;">  
  <p><font color="red">Demo of Background Images</font></p>  
</body>
```

Test the code for better understanding. Try all values for background-repeat property.

TIP

Background-image will repeat if the image is smaller in size than the background. To avoid this use CSS "background-repeat:no-repeat;background-size:100%"

TEST YOURSELF

Q1. What is the purpose of background-repeat property?

Ans. The background-repeat property indicates if and how the background image will be repeated.

MORE EXERCISES

1. Upload an image from your computer and make it the background image of a html document.

TABLES

Tables are used when information needs to be presented logically in the form of rows and columns or for defining the layout of a page. In HTML, tables are defined using the `<table>` tag. The `<tr>` element defines a table row, while the `<td>` element defines a data cell. These data cells must be enclosed in `<tr>` tags. A `<td>` tag can contain text, links, images etc.

The following code demonstrates how to define a 2x2 table in HTML. Note that the `border="1"` attribute is used to show the border. If this is not used, the border will be hidden.

```
<table border="1">
<tr>
<td>Row1Col1</td>
<td>Row1Col2</td>
</tr>
<tr>
<td>Row2Col1</td>
<td>Row2Col2</td>
</tr>
</table>
```

Important Attributes

The following attributes are very important while working with tables:

- `align`: `align` attribute aligns the table with its parent element. It takes the values left, center and right.
- `width`: `width` attribute indicates the width of the table or the data cell for which the attribute is defined.
- `border`: `border` attribute indicates whether or not to display the border of the table. This attribute is particularly useful while debugging alignment problems.

Layout using a table

A simple way of creating layouts is by using the HTML `<table>` tag.

The following example demonstrates a layout using a table with 3 rows and 2 columns - the first and last rows span both columns. Notice how the `colspan` attribute has been used.

```
<table width="500" border="0">
<tr>
<td colspan="2" style="background-color:#012060;color:#FFFFFF">
<h1>Internshala VTC</h1>
</td>
</tr>
<tr>
<td align="top" style="background-color:#E0E0E0;width:100px;">
<b>HTML</b><br>
Introduction<br>
```

```

Tags<br>
Attributes
</td>
<td align="top" style="background-color:#FFFFFF;height:200px;width:400px;">
HTML, which stands for HyperText Markup Language, is the most basic building block of
a web page.
</td>
</tr>
<tr>
<td colspan="2" style="background-color:#012060;color:#FFFFFF;text-align:center;">
Internshala
</td>
</tr>
</table>

```

Try it out yourself. First try to create a simple table. Try to change the various parameters and observe the changes in output.

TEST YOURSELF

Q1. Name the tag that is used to add header information for a table.

Ans. <th>

MORE EXERCISES

1. Write a code to change the colour of table and data cells.

LISTS

We can create lists in HTML. Two types of lists are most often used in HTML; ordered and unordered lists.

Unordered Lists

These lists are marked by bullets. The `` tag is used to define an unordered list. Each list element is written within a `` tag.

The following code demonstrates the use of unordered lists:

```
<p>Unordered List:</p>
<ul>
<li>Item 1</li>
<li>Item 2</li>
</ul>
```

Ordered Lists

These lists are marked by numbers. The `` tag is used to define an ordered list. As with the unordered list, each list element is written within a `` tag.

The following code demonstrates the use of ordered lists:

```
<p>Ordered List:</p>
<ol>
<li>Item 1</li>
<li>Item 2</li>
</ol>
```

TEST YOURSELF

Q1. Which tag is used to define an unordered list?

Ans. The `` tag is used to define an unordered list.

BLOCK ELEMENTS

HTML elements can be grouped together using two major tags, the <div> tag and the tag.

Inline elements, such as and <a> are normally displayed without starting a new line.

When we define block level elements, such as <p>, the browser automatically inserts a line break before and after it.

The element is an inline element that can be used as a container for text. These elements are particularly useful when we want to style only a part of a sentence. The example given below illustrates the use of the element.

```
<body>
  <p><span style="color:red">VTC</span> is aimed at <span
style="color:blue">meaningful</span> learning.</p>
</body>
```

The <div> is a block level element which is used as a container for grouping other HTML elements. It defines a division or a section in an HTML document. Look at the example below for better understanding.

```
<body>
  <p>This text is outside div element.</p>
  <div style="color:red" align="center">
    <h3>This heading is in div element</h3>
    <p>This text is in div element.</p>
  </div>
  <p>This text is outside div element.</p>
</body>
```

Layout using DIV Elements

DIV elements are often used for defining the layout of an HTML page.

The following example uses five div elements to create a simple layout, which is the same that we created in the 'Tables' tutorial

```
<div style="width:500px;">
  <div style="background-color:#012060;color:#FFFFFF">
    <h1 style="margin-bottom:0;">Internshala VTC</h1>
  </div>
  <div style="background-color:#E0E0E0;height:200px;width:100px;float:left;">
    <b>HTML</b><br>
    Introduction<br>
    Tags<br>
    Attributes
  </div>
  <div style="background-color:#FFFFFF;height:200px;width:400px;float:left;">
    HTML, which stands for HyperText Markup Language, is the most basic building block of
```

a web page.

```
</div>
```

```
<div style="background-color:#012060;color:#FFFFFF;clear:both;text-align:center;">
```

```
  Internshala
```

```
</div>
```

```
</div>
```

Try it out yourself. Try to change as many parameters as possible and observe the output.

TEST YOURSELF

Q1. Which elements are mostly used for defining the layout of a page?

Ans. The <table> or the <div> elements are mostly used for defining the layout of a page.

MORE EXERCISES

1. Write a code where you nest a element in a <div> element.

FORMS

HTML Forms collect data from users and pass it to the server. A form has several fields in which the user can enter data (for example; name, date of birth, contact number, email address etc.)

The `<form>` tag is used to create an HTML form. The most commonly used form element is `<input>`. The `<input>` element is used to select user information. It can be of different types. The most commonly used input types are text, password, checkbox, radio button, drop-down list and submit button.

The `<input type="text">` defines a single line input field where user can enter the text. The following code illustrates this. Here, the 'name' attribute is used in the name/value pair that is sent to the server.

```
<form>
  Name: <input type="text" name="yourname">
</form>
```

In order to accept passwords, `<input type="password">` is used. The characters in a password field are masked. Here is a sample code :

```
<form>
  Password: <input type="password" name="yourpsd">
</form>
```

Radio buttons are used in situations where only one option needs to be chosen among many. Radio buttons can be defined using the `<input type="radio">` tag. The 'value' attribute is used to indicate the value that will be sent to the server if this option is selected.

```
<form>
  <input type="radio" name="gender" value="M">Male
  <input type="radio" name="gender" value="F">Female
</form>
```

Checkboxes let a user select zero or more options out of many. The tag `<input type="checkbox">` defines a checkbox. The following code illustrates the use of a checkbox.

```
<form>
  <input type="checkbox" name="lang" value="E">I know English.
  <input type="checkbox" name="lang" value="H">I know Hindi.
</form>
```

The form's data (value of each field) is submitted to the server when a submit button is clicked. When the user clicks the submit button, the input goes to url that is provided in the 'action' attribute. We will learn more about forms and PHP in the PHP section.

```
<form >
  Name:<input type="text" name="name" >
  <input type="submit" value="Submit">
</form>
```

Tables can be used to structure forms to present a nice layout.

```
<table>
<form method="post" action="">
<tr> <td>
FirstName:
</td>
<td>
<input type="text" name="desc">
</td>
</tr>
<tr>
<td>
Email:
</td>
<td>
<input type="text" name="desc">
</td>
</tr>
</form>
</table>
```

Try out each of the above codes yourself and observe the output.

TEST YOURSELF

Q1. What is difference between radio button and check box in terms of their usage?

Ans. Radio button are used in situations where only one of the options can be chosen, whereas checkboxes are used to select zero or more options.

MORE EXERCISES

1. Write a code for a Registration Form using all the input elements covered in this tutorial.

IFRAMES

An iframe is used to display a web page within a web page. Consider the following code for an inline frame.

```
<iframe src="http://www.internshala.com"></iframe>
```

Note that the iframe is too small to view. The height and width attributes are used to specify the height and width of the iframe as shown below.

The frameborder attribute specifies whether or not to display a border around an <iframe>, 1 - Border on(default) and 0 - Border off.

```
<iframe src="http://www.internshala.com" width="200" height="200"
frameborder="0"></iframe>
```

Alternate the value of the frameborder to note the difference.

TEST YOURSELF

Q1. Why do we use iframes?

Ans. An iframe is used to display a web page within a web page

MORE EXERCISES

1. Write a code which aligns the iframe to desired position - left, right, center etc.
-

MEDIA QUERIES

Media queries is used to define different style rules for different media devices or types. Media queries is the name given to media types of CSS2 in CSS3. Media queries helps in making a responsive design that makes a site to respond according to the site and browser. Media queries can be used to check many things including width and height of the browser window, width and height of the device, orientation (landscape or portrait mode) etc.

Syntax:

```
@media media_type Logical_operator (media_feature) { CSS-Code; }
```

or

You can also have different stylesheets for different media:

```
< link rel="stylesheet" media="mediatype Logical_operator (media feature)"  
href="stylesheet.css"/ >
```

Recognized media types

all - Used for all media type devices

print- Used for printers

screen - Used for computer screens, tablets, smart-phones etc.

speech - Used for screenreaders that "reads" the page out loud

(Others are deprecated)

Logical_operator (or, not, and, only)

The or operator is used for executing the media queries if any one feature is true. Comma-separated lists behave like the logical operator or.

The and operator is used for combining multiple media features together into a single media query, requiring all the features to be true in order for the query to execute.

The not operator is used to negate a media query.

The only operator is used to apply a style only if the entire query matches.

media_feature

There are various media features. The most used are:

min-width - Specifies the minimum width of the display area, such as a browser window

min-height - Specifies the minimum height of the display area, such as a browser window

max-height - Specifies the maximum height of the display area, such as a browser window

max-width - Specifies the maximum width of the display area, such as a browser window

device-height - Specifies the height of the device, such as a computer screen

device-width - Specifies the width of the device, such as a computer screen

orientation Indicates whether the view-port is in landscape or portrait mode. e.g.

```
@media screen and (min-width:600px) {  
.links {  
float: left;  
width: 25%;  
}
```

```
}  
@media screen and (max-width:599px) {  
.links {  
display: inline;  
}  
}
```

Test Yourself

Q1. Which media features can be used for height constraints

Ans. 1 max-height

2 min-height

3 device-height

Some Useful links.

1. <https://www.youtube.com/watch?v=pQN-pnXPaVg>
2. <https://developer.mozilla.org/en-US/docs/Web/HTML>
3. https://www.w3schools.com/html/html_intro.asp