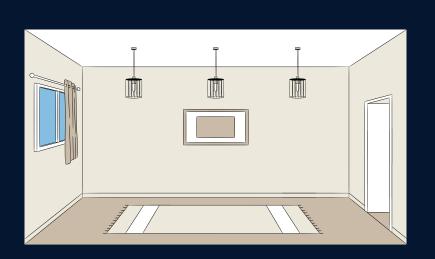
HTML

CSS

JS

Structure/layout



APIA Style C E E



Logic



Level

APNA COLLEGE

CSS

Cascading Style Sheet

It is a language that is used to describe the style of a document.



Basic Syntax

```
h1 {
    color: red;
}
Property Value
```

Including Style

• Inline

</style>

```
<h1 style="color: red"> Apna College </h1>
<style> tag
   <style>
          h1 {
             color: red;
```

Including Style

External Stylesheet

Writing CSS in a separate document & linking it with HTML file



Color Property

Used to set the color of foreground

color: red;

color: pink;

color: blue;

color: green;



Background Color Property

Used to set the color of background

background-color: red;

background-color: pink;

background-color: blue;

background-color: green;

Color Systems

• RGB

color: rgb(255, 0, 0);

color: rgb(0, 255, 0);



Color Systems

Hex (Hexadecimal)

color: #ff0000;

color: #00ff00;



Selectors

Universal Selector

* { }

• Element Selector

h1 { }

• Id Selector

#myld { }

Class Selector



Practice Set 1

Q1: Create a simple div with an id "box".

Add some text content inside the div.

Set its background color to blue.

Q2: Create 3 headings with h1, h2 & h3.

Give them all a class "heading" & set color of "heading" to red.

Q3: Create a button & set its background color to:

- green using css stylesheet
- blue using <style> tag
- pink using inline style

text-align

text-align: left / right / center

text-decoration

text-decoration : underline / overline / line-through

font-weight

font-weight : normal / bold / bolder / lighter

font-weight: 100-900

font-family

font-family: arial

font-family: arial, roboto



- Generic font families: Generic font families are determined by font family properties
 such as serifs—which are decorative strokes on the ends of letters—or cursive
 strokes. The generic font family name will specify the attribute that all fonts within that
 family share, like serif, sans-serif, or monospace.
- Specific font families: Specific font families are specific fonts with different styles
 within the one font family name, such as Arial, Times New Roman, and Tahoma.

5 Generic Font Families

Here is an overview of the generic font families found in many word processing programs:

- 1. **Serif**: Serif fonts are traditional typefaces using characters that have serifs which are small winged or flared tips extending off the tips of a letter. Serif fonts are typically used in printed books, newspapers, and magazines. Some popular serif fonts include Times New Roman, Garamond, Palatino, and Georgia.
- 2. **Sans-Serif**: Sans-serif fonts use characters without serifs and are more commonly seen in digital formats. A sans-serif font will typically be the default font in digital word processing programs. Sans-serif fonts include Arial, Helvetica, Verdana, Trebuchet MS, and Gill Sans.
- 3. **Cursive**: Cursive fonts use characters that have connective strokes which give the font a handwritten appearance. Cursive fonts include Comic Sans MS, Adobe Poetica, Sanvito, and Zapf-Chancery.
- 4. **Fantasy**: Fantasy fonts are stylized fonts that still maintain the characteristics of non-cursive, traditional alphabet glyphs. Examples include Cottonwood, Critter, and Alpha Geometrique.
- 5. **Monospace**: Fonts in the monospace font family have characters that are all the same width, giving text the appearance of a manual monospaced typewriter. Examples of monospaced fonts include Courier New, Monaco, Lucida Console, Consolas, and Everson Mono.



Units in CSS Absolute

pixels (px)

96px = 1 inch

font-size: 2px;



line-height

line-height: 2px

line-height: 3

line-height: normal



text-transform

text-tranform : uppercase / lowercase / capitalize / none

Practice Set 2

Q1: Create a heading centred on the page with all of its text capitalized by default.

Q2: Set the font family of all the content in the document to "Times New Roman".

Q3: Create one div inside another div.

Set id & text "outer" for the first one & "inner" for the second one.

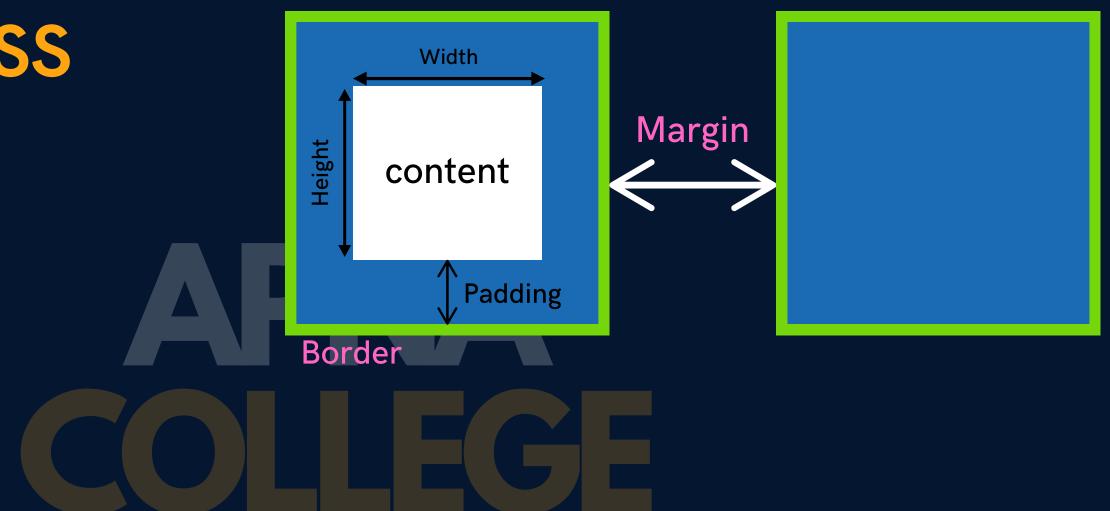
Set the outer div text size to 25px & inner div text size to 10px.

Level 2

APNA COLLEGE

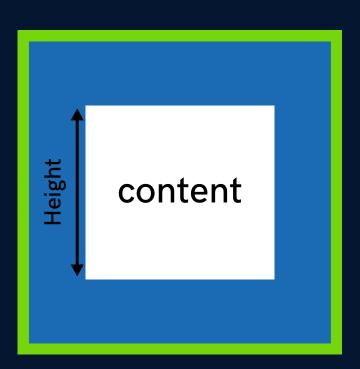
Box Model in CSS

- Height
- Width
- Border
- Padding
- Margin



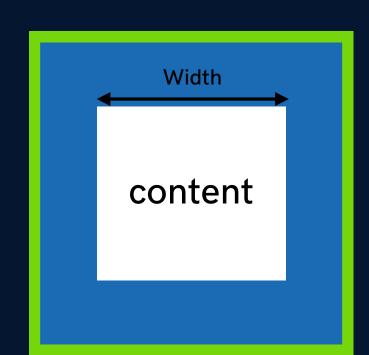
Height

By default, it sets the content area height of the element



Width

By default, it sets the content area width of the element



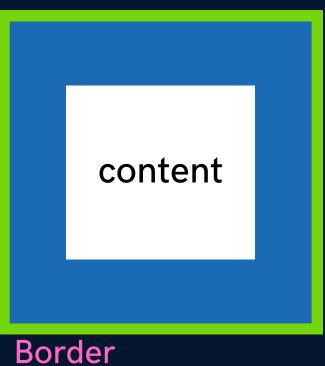
Border

Used to set an element's border

border-width: 2px;

border-style : solid / dotted / dashed

border-color : black;



Border

Shorthand

border : 2px solid black;

Border

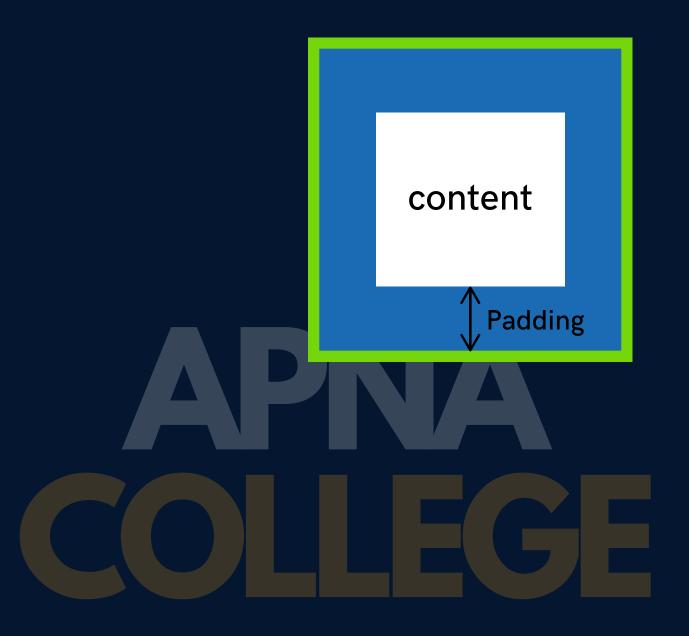
Used to round the corners of an element's outer border edge

border-radius: 10px;

border-radius: 50%;

Padding

- padding-left
- padding-right
- padding-top
- padding-bottom



Padding

Shorthand

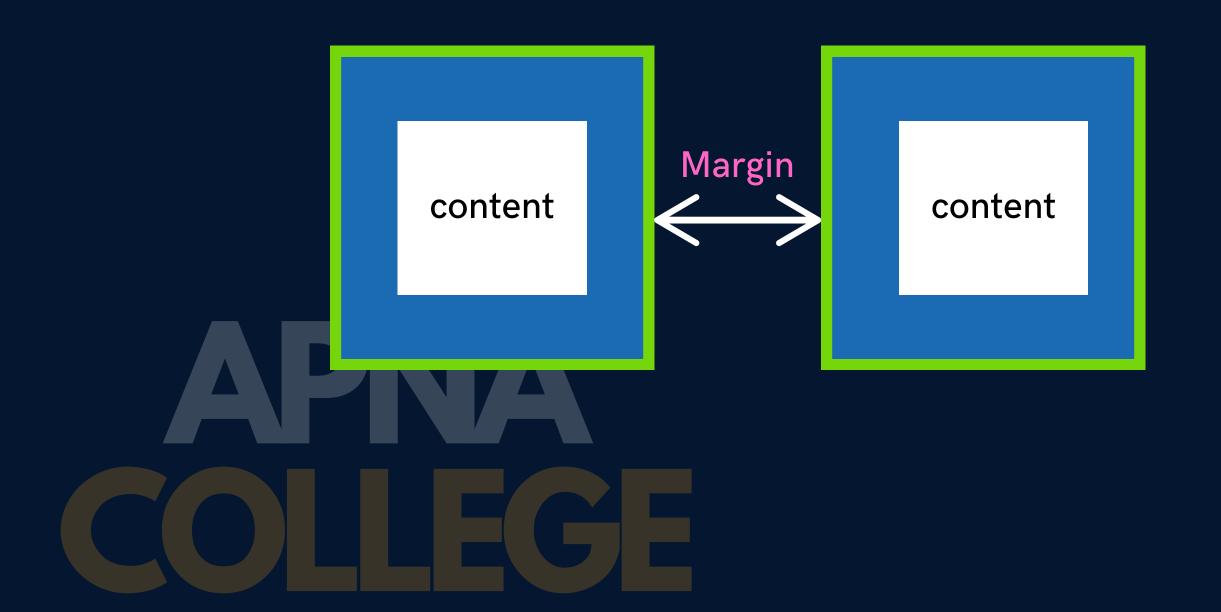
padding: 50px;

padding: 1px 2px 3px 4px;

top | right | bottom | left -> clockwise

Margin

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



Margin

Shorthand

margin: 50px;

margin: 1px 2px 3px 4px;

top | right | bottom | left -> clockwise

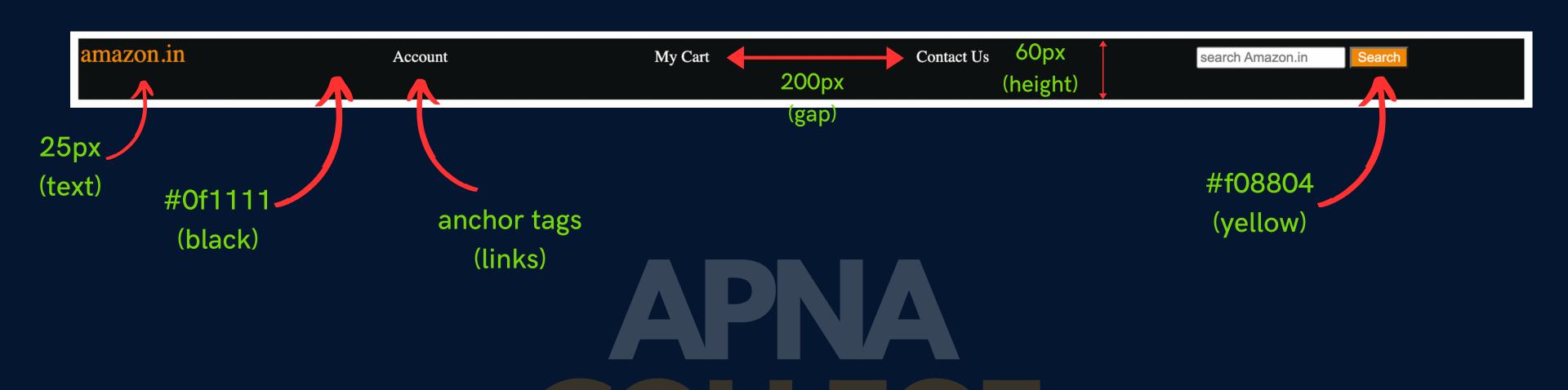
Practice Set 3

Q1: Create a div with height & width of 100px.

Set its background color to green & the border radius to 50%.

Q2: Create the following navbar.

amazon.in Account My Cart Contact Us search Amazon.in Search



Display Property

display: inline / block / inline-block / none

- inline Takes only the space required by the element. (no margin/ padding)
- block Takes full space available in width.
- inline-block Similar to inline but we can set margin & padding.
- none To remove element from document flow.

Visibility

visibility: hidden;

APNA COLLEGE

Note: When visibility is set to none, space for the element is reserved.

But for display set to none, no space is reserved or blocked for the element.

Alpha Channel

opacity (0 to 1)

• RGBA

color: rgba(255, 0, 0, 0.5);

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

Practice Set 4

Q1: Create a webpage layout with a header, a footer & a content area containing 3 divs.

Set the height & width of divs to 100px.

(add the previous navbar in the header)

Q2: Add borders to all the divs.

Q3: Add a different background color to each div with an opacity of 0.5

Q4: Give the content area an appropriate height.

Level 3

APNA COLLEGE

Units in CSS

Relative

%

em

rem



Percentage (%)

It is often used to define a size as relative to an element's parent object.

width: 33%;

margin-left: 50%;



Em

Unit	Relative to
em	Font size of the parent, in the case of typographical properties like <u>font-size</u> , and font size of the element itself, in the case of other properties like <u>width</u> .



Rem (Root Em)

Unit	Relative to
rem	Font size of the root element.



Others

vh: relative to 1% viewport height

vw : relative to 1% viewport width

vidth APILA COLLEGE

Position

The position CSS property sets how an element is positioned in a document.

position : static / relative / absolute / fixed

Position

• static - default position (The top, right, bottom, left, and z-index properties have no effect)

• relative - element is relative to itself. (The top, right, bottom, left, and z-index will work)

absolute - positioned relative to its closest positioned ancestor. (removed from the flow)

fixed - positioned relative to browser. (removed from flow)

• sticky - positioned based on user's scroll position

z-index

It decides the stack level of elements

Overlapping elements with a larger z-index cover those with a smaller one.

z-index : auto (0)

z-index : 1 / 2 / ...

z-index : -1 / -2 / ...

Background Image

Used to set an image as background

APNA

background-image : url("image.jpeg");

Background Size

background-size: cover / contain / auto

Practice Set 5

Qs: Create the following layout using the given html.

- Give the div a height, width & some background image.
- Use the appropriate position property for the div element to place it at the right end of the page. (The div should not move even on scroll)
- Use z-index to place the div on top of page.

```
lorem*5 </div><div> Love Nature </div> lorem*5
```

Level 4

APNA COLLEGE

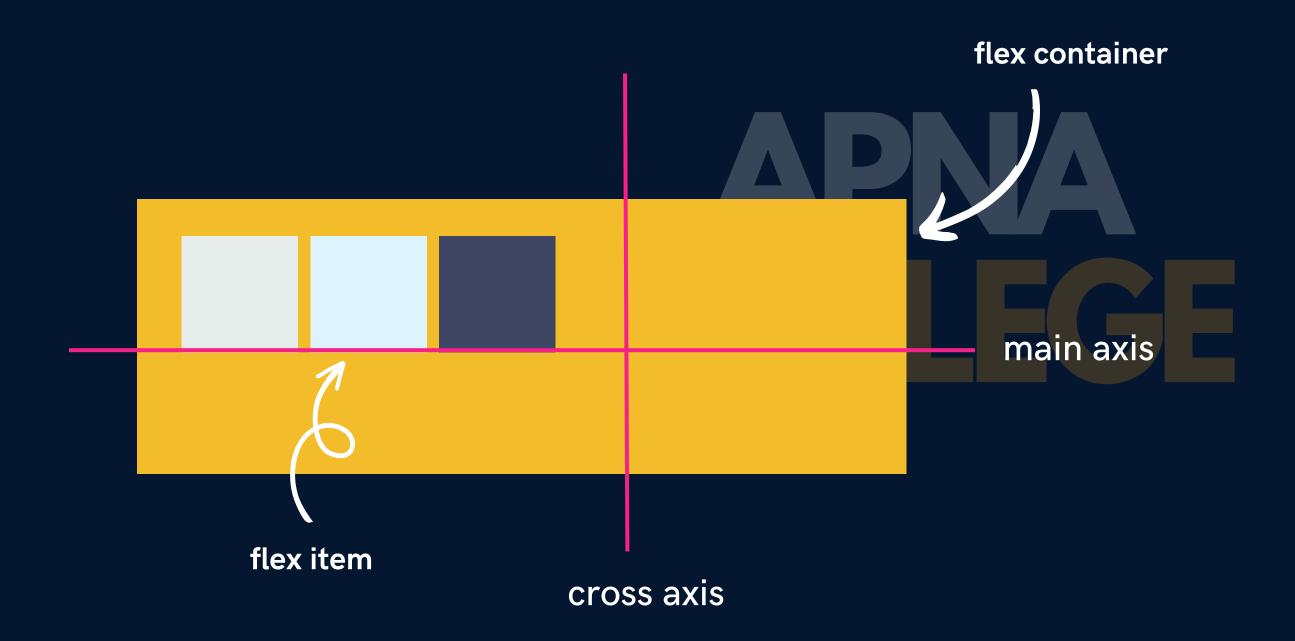
Flexbox

Flexible Box Layout

It is a one-dimensional layout method for arranging items in rows or columns.



The Flex Model



Flexbox Direction

It sets how flex items are placed in the flex container, along which axis and direction.

• flex-direction : row; (default)

flex-direction : row-reverse;

• flex-direction : column;

• flex-direction : column-reverse;

Flex Properties

for Flex Container

justify-content: alignment along the main axis.
 flex-start / flex-end / centre / space-evenly /

• flex-wrap : nowrap / wrap / wrap-reverse

align-items: alignment along the cross axis.

• align-content: alignment of space between & around the content along cross-axis

Flex Properties

for Flex Item

align-self: alignment of individual along the cross axis.

• flex-grow: how much a flex item will grow relative to the rest of the flex items if space is available

• flex-shrink: how much a flex item will shrink relative to the rest of the flex items if space is available

Practice Set 6

Qs: Create a navbar with 4 options in the form of anchor tags inside list items. Now, use flexbox to place them all spaced equally in a single line.

Qs: Use flexbox to center one div inside another div.

Qs: Which has higher priority - align-items or align-self?

Media Queries

Help create a responsive website

```
@media (width : 600px) {
     div {
        background-color : red;
     }
}
```



```
@media (min-width : 600px) {
    div {
        background-color : red;
    }
}
```

Media Queries

```
@media (min-width: 200px) and (min-width: 300px) {
    div {
        background-color: red;
    }
}
```

Practice Set 7

Qs: Add a media query to implement the following:

- the color of a div changes to green for viewport width less than 300px
- the color of a div changes to pink for width between 300px & 400px
- the color of a div changes to red for width between 400px & 600px
- the color of a div changes to blue for width above 600px

Level 5

APNA COLLEGE

Transitions

Transitions enable you to define the transition between two states of an element.

- transition-property: property you want to transition (font-size, width etc.)
- transition-duration : 2s / 4ms ...
- transition-timing-function: ease-in / ease-out / linear / steps ...
- transition-delay: 2s / 4ms ...

Transition Shorthand

property name | duration | timing-function | delay

transition: font-size 2s ease-in-out 0.2s;

Used to apply 2D & 3D transformations to an element

rotate

transform: rotate(45deg);



• scale

```
transform: scale(2);
```

transform: scale(0.5);

transform: scale(1, 2);



transform: scaleX(0.5);

transform: scaleY(0.5);

translate

```
transform: translate(20px);
transform: translate(20px, 50px);
```

transform: translateX(20px);

transform: translateY(20px);

skew

transform: skew (30deg);

APNA COLLEGE

Animation

To animate CSS elements

```
@keyframe myName {
    from { font-size : 20px; }
    to { font-size : 40px; }
}
```

Animation Properties

- animation-name
- animation-duration
- animation-timing-function
- animation-delay
- animation-iteration-count
- animation-direction



Animation Shorthand

animation: myName 2s linear 3s infinite normal

% in Animation

Practice Set 8

Qs: Create a simple loader using CSS

Step1: create a div with circular shape & a thick border from one end (top/bottom/left/right)

Step2: To make it spin create an animation which transforms it from Odeg to 360deg

Step3: Add the animation property to the loader with infinite duration

HTML Codes

By Apna College

First HTML Script

Comments in HTML

```
<!-- This is a sample comment in HTML -->
```

Heading Tags (H1 to H6)

```
<h1>Heading 1</h1>
<h2>Heading 2</h2>
<h3>Heading 3</h3>
<h4>Heading 4</h4>
<h5>Heading 5</h5>
<h6>Heading 1</h6>
```

Paragraph Tag

```
Lorem ipsum dolor sit, amet consectetur adipisicing elit. A in dolorum incidunt recusandae eveniet, quia fuga odio itaque officia ex quos culpa necessitatibus debitis ea deserunt sed dolores cupiditate. Saepe.
```

Anchor Tag

```
<a href="https://google.com">Go to Google</a>
```

```
Image Tag
(img src="/image.jpeg" alt="relative url">
aGBqYGRqYHBoYGBqYGBqZGRqYGBqcIS4lHB4rIRqYJjqmKy8xNTU1GiQ7QDs0Py40NTEBDAwMEA8QHh
ISHjQkISs0NDQ0NDQ0NDQ0NDQ0NDQ0NDQxNDQ0NDQ0NDQ0NDQ0NDQ0NDQ0NDQ1NDQ0NDQ0NDQ0NDQ0NP/AA
EAPwCzTerDCqTAjNJUGxdaUVjlRa8qbaiQy8EzlVFdSNVIAuZMXIDnqBemAdz1AvQc5U2pq0bpixGa1
RLUd4Q3BFi1K7mKs+mr0IVUJ7BRRIRGJ8iIxqewtRSUM0p1RoTwlsGpUfhuEI4RaGZRc9PYNSicKm8E
Z8IqQoI3DQownAVzwEjQCNxalUFIuVk0khTT2DUplqcUldbQRm0UbhqUGYdGbRHCt0ACqXhG4aqvDCi
aQ4RXPChnRsKqRopCmi5011SkKqREKOdHNNN4arYTiV2YKm+4Csf8AFNjRJ2KawtBFjaeETFdWYwXcJ
XPtL4b1H6Bd0e26zzh3sdYlauC66x4kaA/wouI6iwmwlPaX1C1j8ZDC13kaXWhRJi4VKjWYTayt4fFN
dMHRYybs2SVBo7Jsir4jqLGCXOEJ8NjWPEtIKNnOqVOTqtqWCaqwnUIoqJxVClzZSihCmptYm8VEpvU
BJuPSR/sK1NkSTa6HHSy6D0tvtI9on6ph0u5v2WdT6uaYcyYyuLhcnyPecqE6RmLcu0eiL/wAsfKBdx
Sw5oUSQFULilDk9hUGdUUDUUBTKKzDlGxOrB5ksyOMMpNwye6DRlfxCkXlXBhwFLwwEexC0Zn5HFSGH
crviAJjWT3DUrDDcgOwo5SfVlDlNSIcSy3CBP4AVfOTuomoOnb/R0vw06k0VDwu6AahUM5RYgRXoPZi
abzllgkXsZG64fg1ZsNDXS4GD7aFWsV14stTiHNhw4PsubdVkknUmV04sbTt9GGSaao9M+GMG1tDM7c
IdXqNAEqOXJYj4qf4baTDAiDBm3A4TGt4jAwAAi5PPbsFKhJO2VvGqR0FfqLKb87Hy06iVQHWMofkcf
5QB6yVyja6mK4WLwRT6NVml1Z1vS/iZzTFS4P4v1C6yjjA5uZpsvKm1ZsAuk6HiatOA4EsP2WGbGo8o
cjbXZtqmTbh1L+nCGa1+8b99LfWyYVEtmGqXIEoAQjUUDUVbEuJYkKDqsboJqLi/iLqTvEysfAHC0hF
zdIznJRVncZ50KbMeV53hPiCoyRmzDutrCfFQy+cX7K5YZIyWaLOs8RP4ndYDPiGkfxK5SxbXiWmVDq
```

LgemYOoCwH1FNQfz9dlz1P4qYGqNaVWx/xAMsCxO6814J30erHLCuzaPUmOcWZwI1JJn6NIBWXjfh70 4uYWnMJOaW3kCQQY1I1C5enTLn2cAdcxkAzvIldbUxYptYXOLoiDEA+v3uPtK01B42tX2EGsibaKHUf

U36Z1mvF1+ifkx/DuDUUfEK47/lqn96IzrT9JCteNIh54nUY15yG8WN15rj6sPdeb6rocX1qoGFpbru xullGpKqjNxdnqweHAEFQc9cZ0n4jLBlfcBaFT4laRYLm9DT6Ov3RaOhzlLOVzLfiRpCO34hETCPS/w Xsj+m/mKZz4ErA/+hOzCqlX4pdcFhj2TWF/qnlijp886KF1y+H+Jssy1T/+pP8AZ+Sv0sn3ROWc0uUI CHixtF2kRHp2W/iccxn/AFssCQM02Gx0na/ugHVcLmDHtcXwHZnR5jMGIn39ynBvjZUVOKpuLv8AUEw HuhtcMyujInVaJ9VEuhEe8W5VZ77pjfARqJk8J3EOFyiMqAC6Z2KaAIbflSBTyGYU6ohaIxDHN0hyA9 lVnD1wLN19Jv6LPqVZUA+E9bGpUb+Ge3NmdkMbEqG/cED8/ZdDQxDS3IwsGzXNcXGbZZESLxzwuRwWI aBEAu2BuD2A59dfXW3h+ovdD04tE3ayGCOSRwueeNtnb4+dR7JY57muuffb6K1guplpZPy5xm4gzH3/ +6vViyiwhz3F5beIMBo0AIIbpE+qEaKj0DE5HZjuRYyA4mbEqcH+QtnHYJhYT1BcWNzQJaCbx3NvUwF E6TUfhpHaUXJdvs43EYrzGBl0Fru0uC71kWhV2utmd8uw0LiNhwOT/tXuodP8MNfUMA6M/G6NSTtJMk +m9hXo0Z/7akRfIz+7KJiNmgfX3ldSgrPLnttTKlbMIncB0DYHSeLQfQhRFY7JFxcSTckyT3KRF1Ri2 hr9P1Tubv6KJplpupveRppZIYBw3Q8slGJk/skWQixD+AXCRsEF9NWabyBYpvF39UuRtIakwhpsqZWv MIuP5fRc7VYK4ggBwLnF/JDb22JgSLAwTgiVaha2HlziWhzXZvMHHVsPNg0P4Y4DCveC/OGR88FuZt9 xP8ArcLniklZ6kp0XFX/AIH6VTNNviOLspHka4C5AGcxxLQBzC2OmVsxLc0ACxMakXJkwLbzpZYGIx8 sDSIDXNtyQACfeDburXSqsg598zgJMCD8xi+1gqlC42+xRy61GPQ3VMHSnO97nmXESAwQdgCACJiT9j Tqrxp0cPkSjbr+QLqAb872jsP076Cw9yFWfU4UqjMoquE8NuB6u0+k+yEdFukcTJCooOcohqRCoREpS EJ71F108ieyKCxpKG5p3BCstf5qAFaxbyWjML+iV0Mzm0yBKjTeQZidVbwzHuBjQJ0iIhFiolhSXnzC kTZ4/8A3rHYyOyGxoJhsO9wnyEcEMv2AI+9vVb/AEPDMY4tc7KSILA9hDpuBEkjQXnUahcziJPmzFzb dspOzm/hvpsdir2CpvjyBxbodDtIyz6jRZZItqrOnDLWS4s7LHNptyscAQ4yx8CNIIeGjqj811Yyqxx IYONDvOXWDiRDS3kjWw4JTU31zMr5I2JEFus2AgrOxYJImY73P81WWPFXJ6cs1xqjNxLzJHefoTC6z4

NFvK2Jou/K5TFVn53DKGkSXWdTDYIBJh0kCQL342Rhfw5/JhbuzGfh3EtaGmTYW108Hgf6QawhxAMxadJ08dpWo7EuEhg8xESGj0ZuNLjSQLmBcm0ZdWnltmB04FwPfQn0XSjhkkugcpSmKSZAkgkkgBwjtwpIkaKuVp4KqAA2Nbe+ymTa6Kik3yZpCSNXpFriCOVDwzEqhUDTpw1IpiEFYwz4OgKAApNMaIGnRZxVEC4CrQrlN5y+YH1QDUSKdACVPLN1Eo9CnaSggamybKDxCKa8WaoMEuukBDNFxqtHA4toDs7cxMws6LotDEFkwNbJNWhrsOK9zlsCh1FBtW0QhuqISHYQvRKdaNlVzIjHWuihB6zWHTVUyboxqDhBcUIGTa+6mCDrYfU+ygCoucmBcoYssJLABbU+YkSLGbR6AK+azK0F2ZpkSQS7KTb5TbLwQRe3c5FGpqCARB1F+fmEH7rZ6NRa82pOJjZzojefKRa2x2UTSSs2xNydHQ9Owssyl4nVrnTImfKcxFraLM6gNDx5SBp2Pb91lrqLWMa8sAJbkJOjd2ukNABG8AfmuXx1SSfWDfMWnYHcjv91hjl19OaioOgWDrPe0sESQC5x2DAZNtdU2BwbiYAyms0OJFjEudI0ABnXsi9OwL2ua8XINg02yvGXzHb8QVjEVocWj5iYjXQzA7Tf2Q5ctRLxQ2W0/9G8x1PKGN8wbEwBewABJ35WBlam6oTqZgOc6AloBJAgWJ42vOpM3P6zw2DK0OdsXfLJNyXHyuM+o/Mc31bE0c6XuaTGzwyB2aJho2MX121jHB7EeVKKVFV+RoIDy4fjItmd/aXfiH+Isdc3GXVcH0JADQdANB2RKrpIBcCBYBswBqYkIRZAB5E/z6LtXB5EnYNSZTJTtf1bY/NbQBDZKQ9DDhrofoVVrgBxgLRxdQZR1In7qqxhf831ST+jaXSKattqw0RqIQazMroTzDEpiTosHEB5h/1WhhMDF3GRwsk0HC8K3hcY9rgPQQlJOuC4tXyWMUxhb5RBErLeyFuYnDteJBgxcLHq077oixTVMC1EbG6kyi7hIsgqyC1TxQjLCrEDhTZSNneisuq/4pFd9maQnLkkkEkURjSTZJJJjQgYUC6SkkgRnztkJJJMBwklJJABAJKaokkkAwKSU8OD8xvwPM79B7n2SSY0HbhyDZgAGrnXj6w32hb/S3D5m17Ns4RAjtJb7W0iSSyycxOrBxJGnjMU5zAQXCZBkEMdGsDVv5LBxH19Pbj9kkksf9p1z7NPA1wG0j5srfdzXAgkb6FVaQDn1zzAg+5035JJI1XJcp0kA6hMN8pLjDQfIAAmCASddu/qsXHUCXEgAD1AHSCZ/kpJK8Zw5ubsHhMPJJCYaAZdtMaDk3OFOG5PP1BA76n2GnonSWhzPpAmqZdAhJJMkFKK2q42CSSGBZGFefmamrUnABvokkoUnZpSogyow2KZr79/RJJUSFZULPm1Kt12ZmghMkkwXQEPLRCLQo5jJSSR8Euw9am1hg9k/gt/gSSQui/p//Z"alt="absolute ur1">

Some Tags for Formatting

```
<br/>
<br/>
<br/>
<br/>
<i>ITALIC</i>
<br/>
<i>>br>
<u>UNDERLINE</u>
<hr>
<br/>
```

- Div & Span Tags

```
<div id="parent">
  <div id="child" class="children">
  </div>
  <span id="child2" class="children">
  </span>
  </div>
```

- Lists in HTML

```
color : yellow
    color : yellow
```

- Tables in HTML

```
INFORMATION
 Shradha
```

- Forms in HTML

```
<h5>Select Fav Subjects</h5>
 <input type="checkbox" value="math" name="subject" id="101" /> Math
 <input type="checkbox" value="phy" name="subject" id="102" /> Physics
 <input type="checkbox" value="CS" name="subject" id="104" /> Computer
Select your city
<input type="submit" value="submit" />
```

- iFrame in HTML

Video Tag in HTML

```
<video width="560" height="315" src="/myVideo.mov" controls autoplay>
    my video
    </video>
```