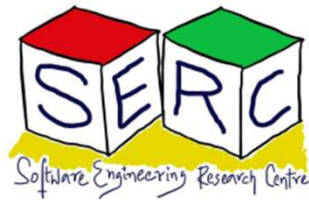


Web Technologies

CS6.302 - Software System Development

Monsoon 2025

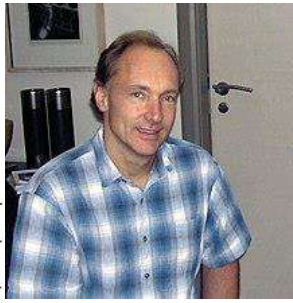
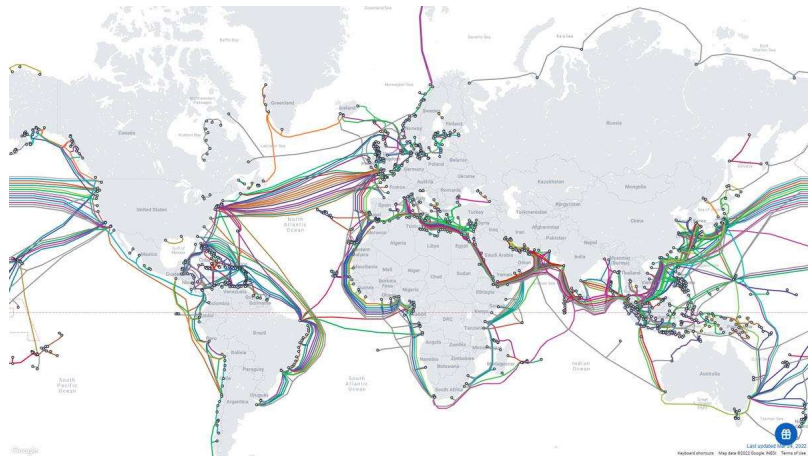
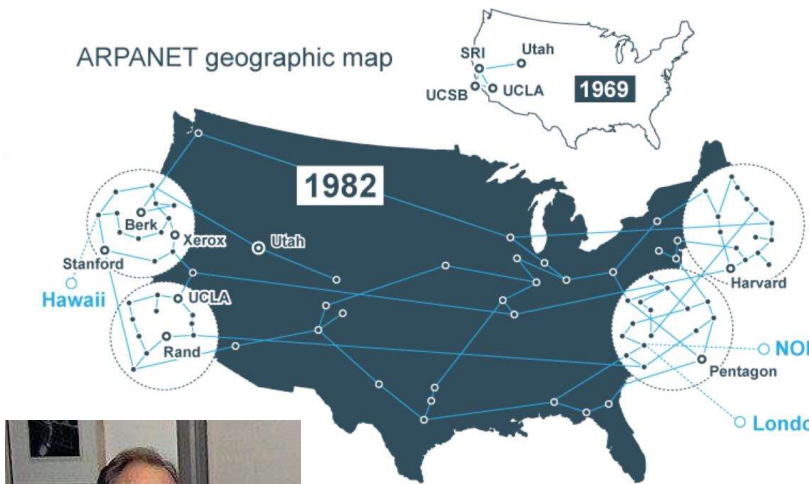
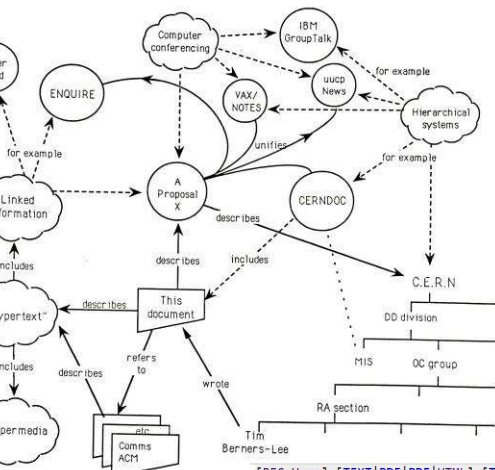


Information Management: A Proposal

Abstract

This proposal concerns the management of general information about accelerators and experiments at CERN. It discusses the problems of loss of information about complex evolving systems and derives a solution based on a distributed hypertext system.

Keywords: Hypertext, Computer conferencing, Document retrieval, Information management, Project control



Dot-decimal notation
Binary numbering
Octet's order

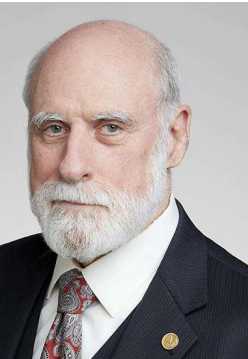
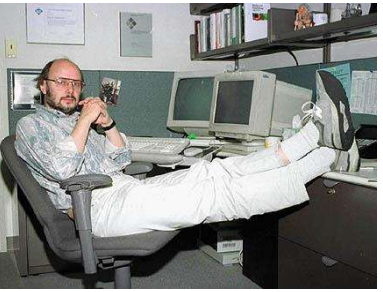
Most significant bit

172 . 16 . 254 . 1

10101100.00010000.11111110.00000001

1st 2nd 3rd 4th

32-bit (4 bytes)



[RFC Home] [TEXT] [PDF] [PDF] [HTML] [Tracker] [IPR] [Errata] [Info page]

INTERNET STANDARD
Errata Exist
Vint Cerf
Request for Comments: 20
UCLA
October 16, 1969

ASCII format for Network Interchange

For concreteness, we suggest the use of standard 7-bit ASCII embedded in an 8 bit byte whose high order bit is always 0. This leads to the standard code given on the attached page, copies from USAS X3, 4-1968. This code will be used over HOST-HOST primary connections. Break characters will be defined by the receiving remote host, e.g. SRI uses "." (ASCII X'2E' or 2/14) as the end-of-line character, where as UCLA uses X'0D' or 0/13 (carriage return).

USA Standard Code for Information Interchange

1. Scope

This coded character set is to be used for the general interchange of information among information processing systems, communication systems, and associated equipment.



<https://www.rfc-editor.org>



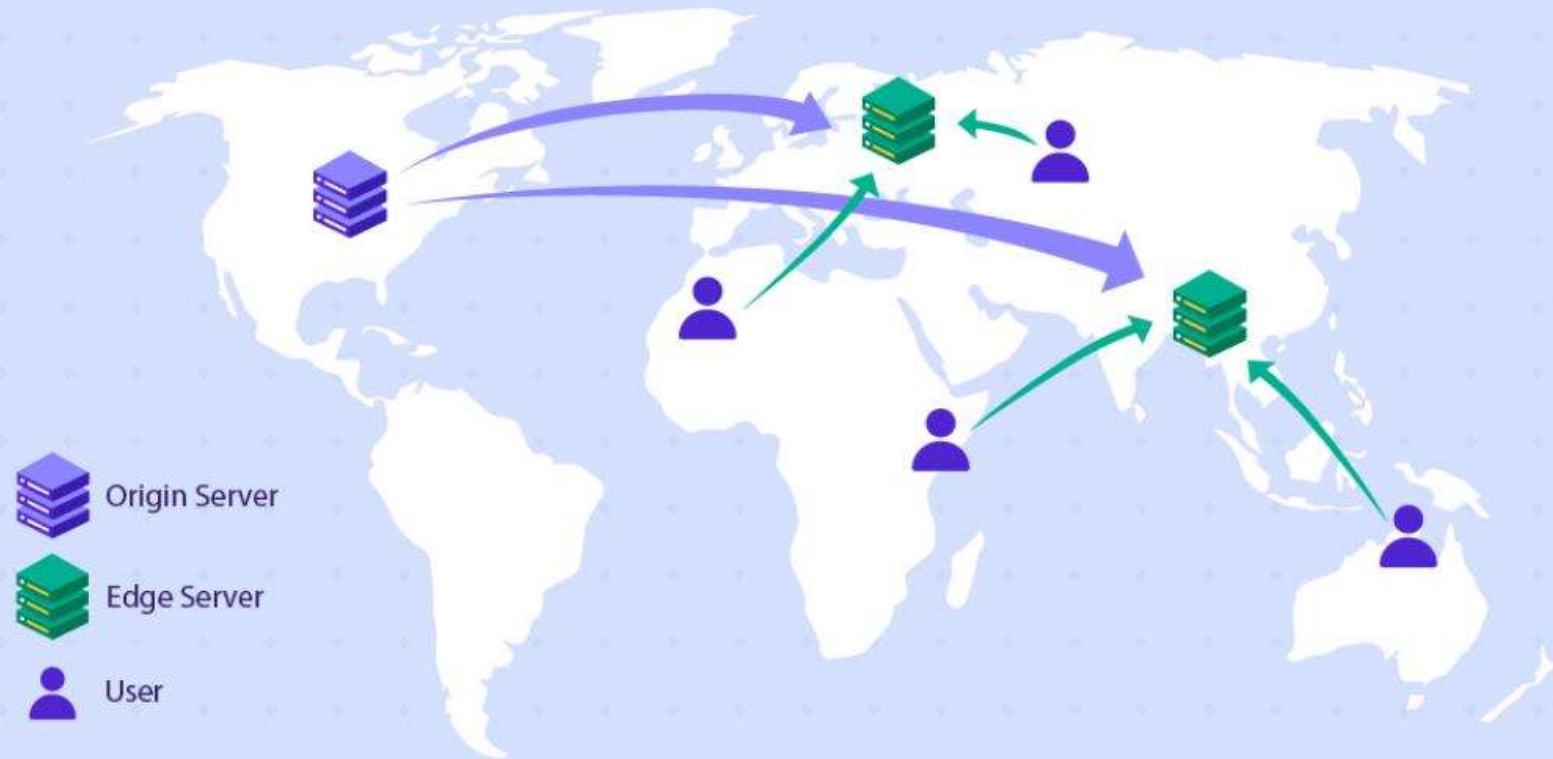
<https://www.whois.com>
<https://www.datacentermap.com>



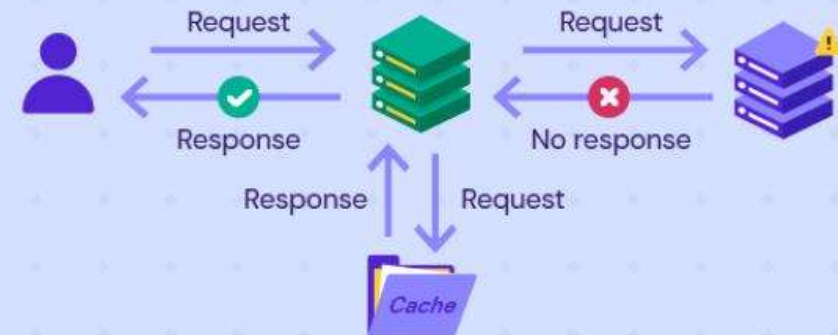
Content Delivery Network



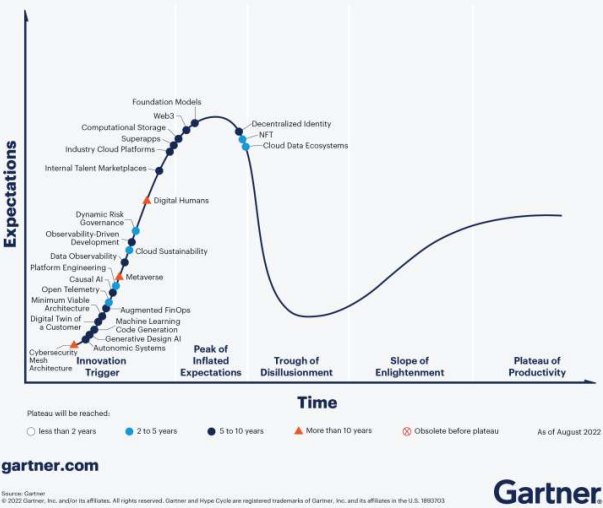
How Does a CDN Work?



When a user visits a static website for the first time, a CDN server will transfer the files from the origin server. Note that you can access the content even when the origin server is not working since a CDN server typically stores and serves the static cached data.



Hype Cycle for Emerging Tech, 2022



Web 1.0

READ-ONLY
Almost No-Interaction
Company-Centered

Static Web Pages,
Encyclopedia, Phonebook,
Static News, Information

Web 2.0

READ+WRITE
Shared-Dynamic
Community-Centered

Email, Wikipedia, Social
Network, Stock Market, E-
News, Video Websites, Mobile

Web 3.0

READ-WRITE-OWN
AI-driven Centered
Individual-Centered

Semantic Web, VR/AR/MR,
MetaVerse, DeCentralized
Social Networks, NFTs

Web 4.0

??

HTML – Hyper Text Markup Language



Instruction:
a paragraph
with bold text



Displays a paragraph
with bold text

```
<!DOCTYPE html>
<html>
  <head>
    <title> My Home Page
  </title>
  </head>
  <body>
    <p>About myself.</p>
  </body>
</html>
```

← HTML declaration
← HTML opening tag
← Page header opening tag
← Page title opening tag
← Page title closing tag
← Page header closing tag
← Body opening tag
← Content (inside body)
← Body closing tag
← HTML closing tag



Address bar

Browser



HTTP

iiit.ac.in



Give me page
<https://intranet.iiit.ac.in/admin>

Give me the
/admin page

HTML Validator: <http://validator.w3.org>



HTTP

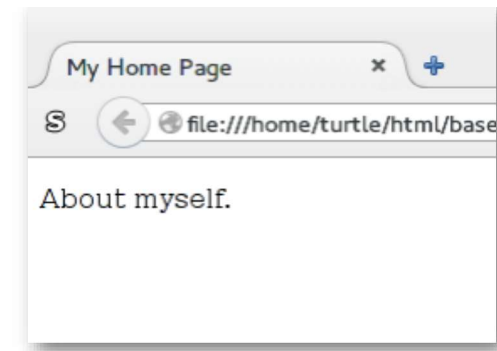
/admin
HTML page



Rendering of
/admin page

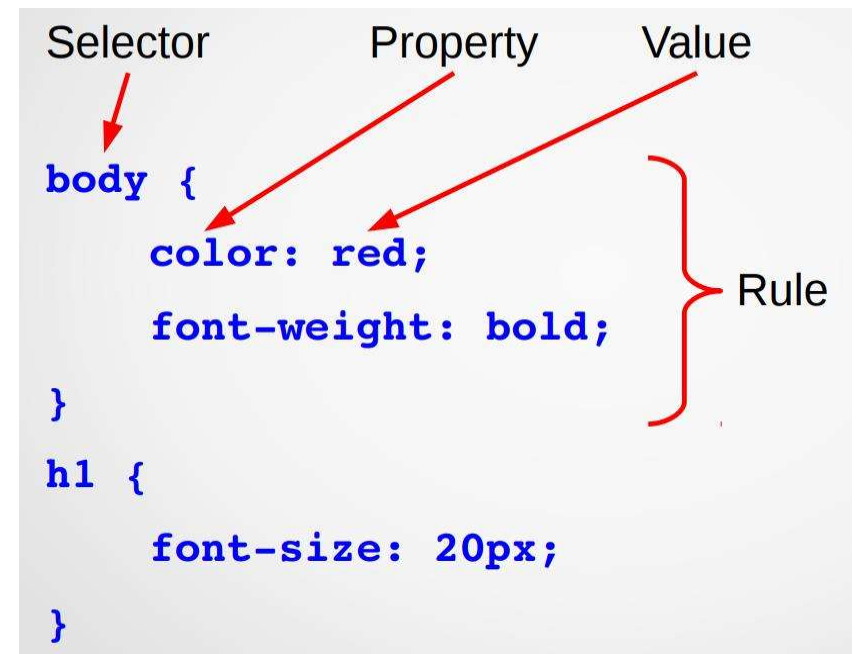


```
<!DOCTYPE html>
<html>
  <head>
    <title> My Home Page
  </title>
  </head>
  <body>
    <p>About myself.</p>
  </body>
</html>
```



CSS – Cascading Style Sheets

- It helps beautify a website. It is considered as a make-up to website
- Color, Background and Borders, Basic Box, Flexible Box, Text, Text Decoration, Fonts, Writing Modes, Table, Lists and Counters, Animation, Transform, Transition, Basic User Interface, Multi-column, Paged Media, Generated Content, Filter Effects, Image/Replaced Content, Masking, Speech
- It is written in 3 type – Inline, Internal, External



CSS Validator: <https://jigsaw.w3.org/css-validator/>

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title> My Home Page
```

```
</title>
```

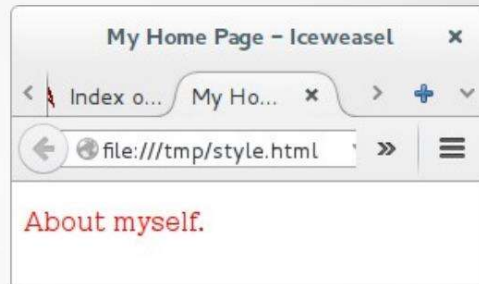
```
</head>
```

```
<body style="color: red;">
```

```
<p>About myself.</p>
```

```
</body>
```

```
</html>
```



Inline CSS

```
<head>
```

```
<title> My Home </title>
```

```
<style>
```

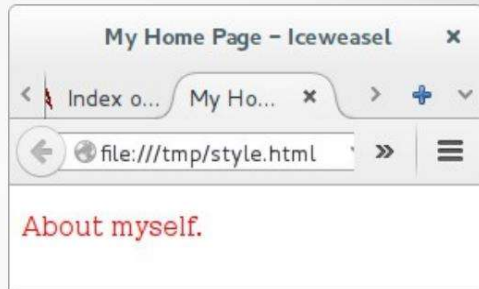
```
body {
```

```
color: red;
```

```
}
```

```
</style>
```

```
</head>
```



Internal CSS

```
<head>
```

```
<title> My Home </title>
```

```
<link
```

```
rel="stylesheet"
```

```
href="style.css">
```

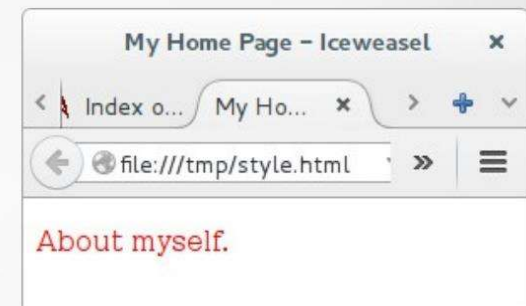
```
</head>
```

In *style.css* You Write:

```
body {
```

```
color: red;
```

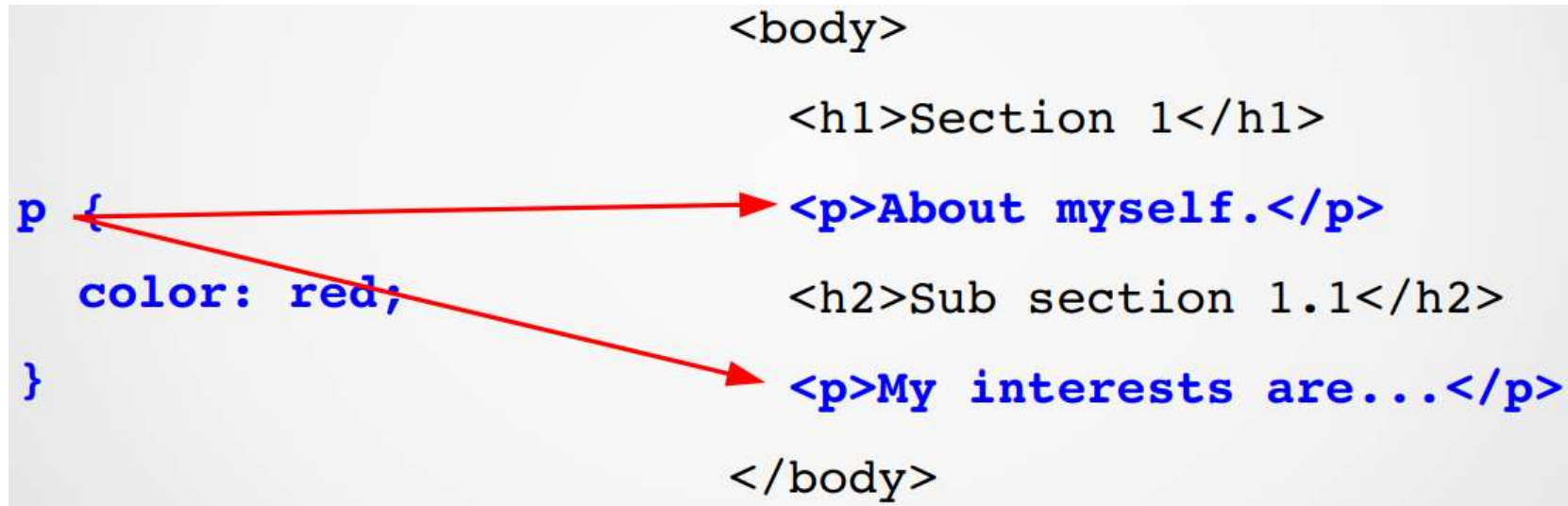
```
}
```



External CSS

CSS Selector with Tag Name

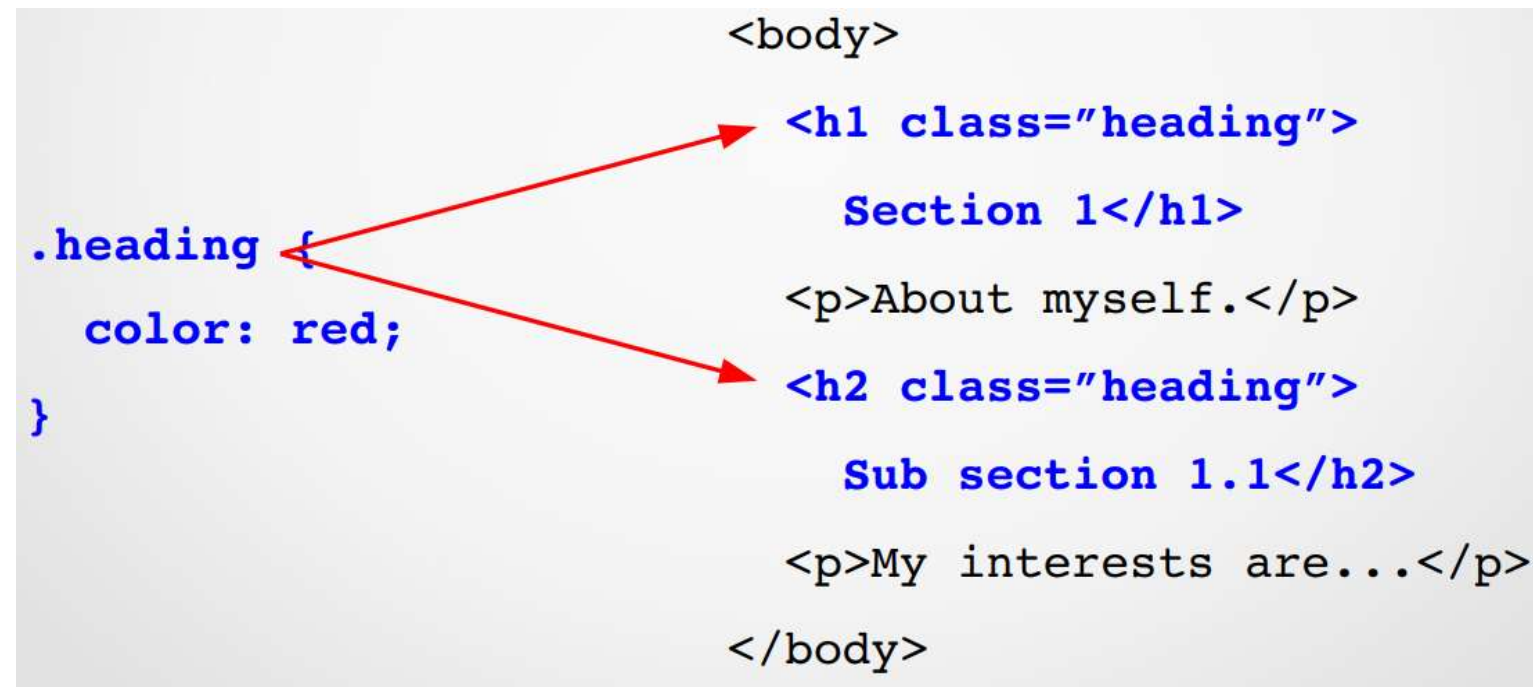
```
p {  
  color: red;  
}
```



The diagram illustrates a CSS selector targeting HTML elements. On the left, a CSS rule is shown: `p { color: red; }`. Two red arrows originate from the `p` selector. One arrow points to the first paragraph in the HTML code: `<p>About myself.</p>`. The other arrow points to the second paragraph: `<p>My interests are...</p>`. The HTML code is enclosed in `<body>` and `</body>` tags, with other elements like `<h1>Section 1</h1>` and `<h2>Sub section 1.1</h2>` also present.

```
<body>  
  <h1>Section 1</h1>  
  <p>About myself.</p>  
  <h2>Sub section 1.1</h2>  
  <p>My interests are...</p>  
</body>
```

```
.heading {  
  color: red;  
}
```




The diagram illustrates a CSS selector targeting HTML elements by class name. On the left, a CSS rule is shown: `.heading { color: red; }`. Two red arrows originate from the `.heading` selector. One arrow points to the first heading element in the HTML code: `<h1 class="heading">Section 1</h1>`. The other arrow points to the second heading element: `<h2 class="heading">Sub section 1.1</h2>`. The HTML code is enclosed in `<body>` and `</body>` tags, with other elements like `<p>About myself.</p>` and `<p>My interests are...</p>` also present.

```
<body>  
  <h1 class="heading">  
    Section 1</h1>  
  <p>About myself.</p>  
  <h2 class="heading">  
    Sub section 1.1</h2>  
  <p>My interests are...</p>  
</body>
```

CSS Selector with Class Name

CSS Selector with ID

```
#first-p {  
  color: red;  
}  
  
<body>  
  <h1>Section 1</h1>  
  <p id="first-p">  
    About myself.</p>  
  <h2>Sub section 1.1</h2>  
  <p>My interests are...</p>  
</body>
```



Priority among various selectors

- Tag (low)
- Class
- ID
- Style attribute (high)

<https://developer.mozilla.org/en-US/docs/Web/CSS/Specificity>