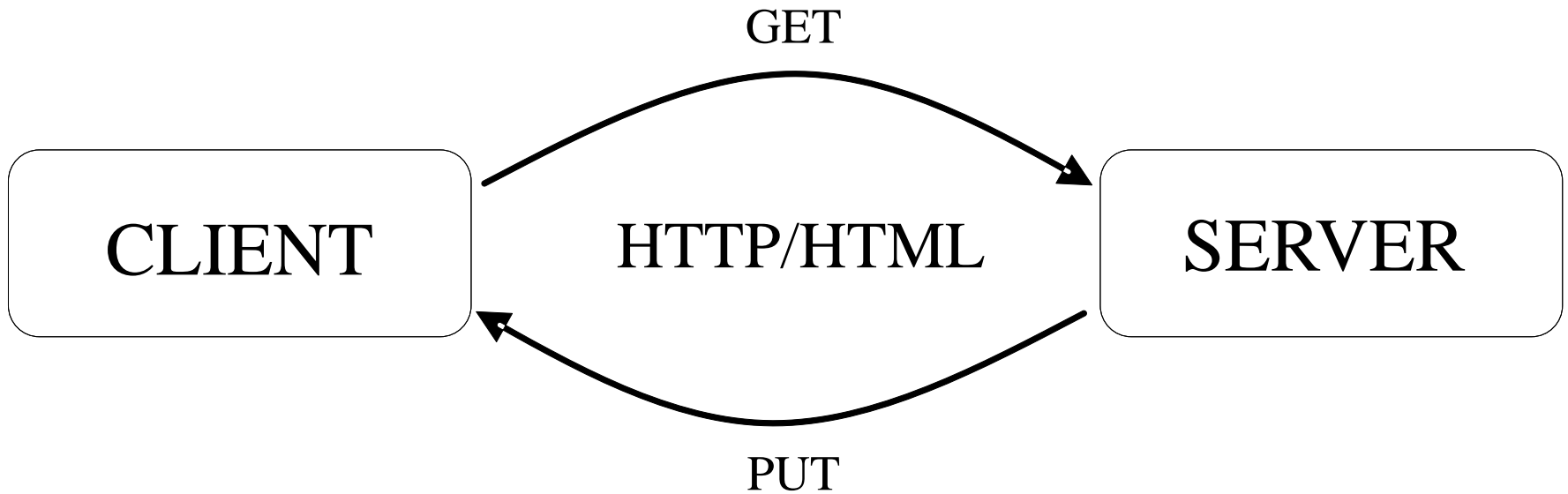


Introduction to HTML

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Web Language



HTML

- HyperText Markup Language

- standard markup language
- to create web pages

```
<!DOCTYPE html>
<html>
<!-- created 2010-01-01 -->
<head>
  <title>sample</title>
</head>
<body>
  <p>Voluptatem accusantium
    totam rem aperiam.</p>
</body>
</html>
```

HTML

- written in the form of **HTML elements**

- **tags** enclosed in angle brackets

- most commonly come in pairs like `<h1>` and `</h1>`
- also unpaired, for example ``

HTML Tutorials

- Read...
 - <http://www.w3.org/MarkUp/Guide/>
 - <http://www.w3.org/MarkUp/Guide/Style.html>

HTML Playground

<http://www.webpaws.com/HTMLPlayGround.php>

The screenshot shows a web browser window with the address bar displaying "www.webpaws.com/HTMLPlayGround.php". The page title is "HTML5 Playground". The main content area is divided into three sections:

- HTML5 Tags:** A list of HTML5 tags including <a>, <abbr>, <address>, <area>, <article>, <aside>, <audio>, <cb>, <base>, <bdo>, <blockquote>, <body>,
, <button>, <canvas>, <caption>, <cite>, <code>, <col>, <colgroup>, <command>, <datalist>, <dd>, , <details>, <dfn>, <div>, <dl>, <dt>, , <embed>, <fieldset>, <figcaption>, <figure>, <footer>, <form>, <h1>, <h2>, <h3>, <h4>, <h5>, <h6>, <header>, <hgroup>, <hr>, <html>, <i>, <iframe>, , <input>, <ins>, <keygen>, <label>, <legend>, , <link>, <map>, <mark>, <menu>, <meta>, <meter>.
- HTML Code (Elements, Attributes and Content):** A text area containing the following HTML code:

```
<!DOCTYPE HTML>
<html>

<head>
  <title>My New HTML Page</title>
  <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
  <meta name="description" content="Free WebPaws.com tutorial" />
  <meta name="keywords" content="HTML, CSS, XML, JavaScript, jQuery, PHP, MySQL" />
  <meta name="author" content="Wolf at WebPaws.com" />
</head>

<body>
  <header>
    <h1>My New HTML Page</h1>
  </header>

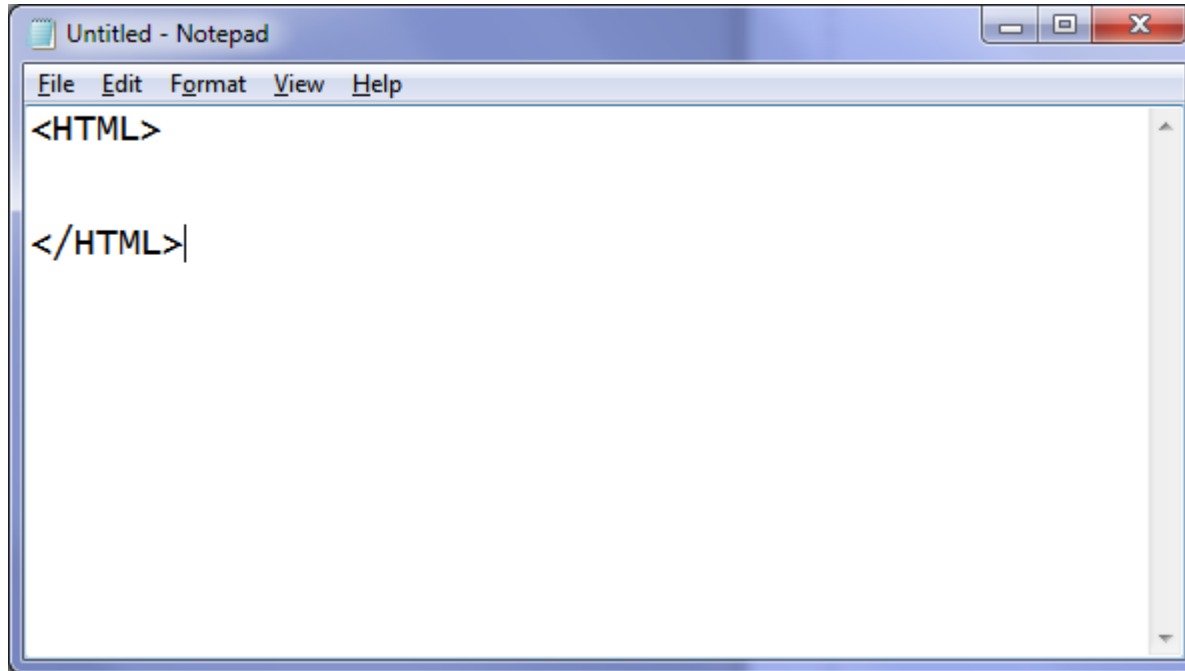
  <div>
  </div>
</body>
```

Below the code area are two buttons: "Start Over" and "Show Below in Browser Window".
- HTML Code Shown in a Browser:** A preview of the rendered HTML code. It shows a page titled "My New HTML Page" with a navigation bar containing links "Go Home", "Play Games", and "Contact Us". The main content area features the heading "The standard Lorem Ipsum passage, used since the 1500s" followed by a paragraph of Lorem Ipsum text. Below this is a section titled "Section 1.10.32 of 'de Finibus Bonorum et Malorum', written by Cicero in 45 BC" followed by another paragraph of Lorem Ipsum text.

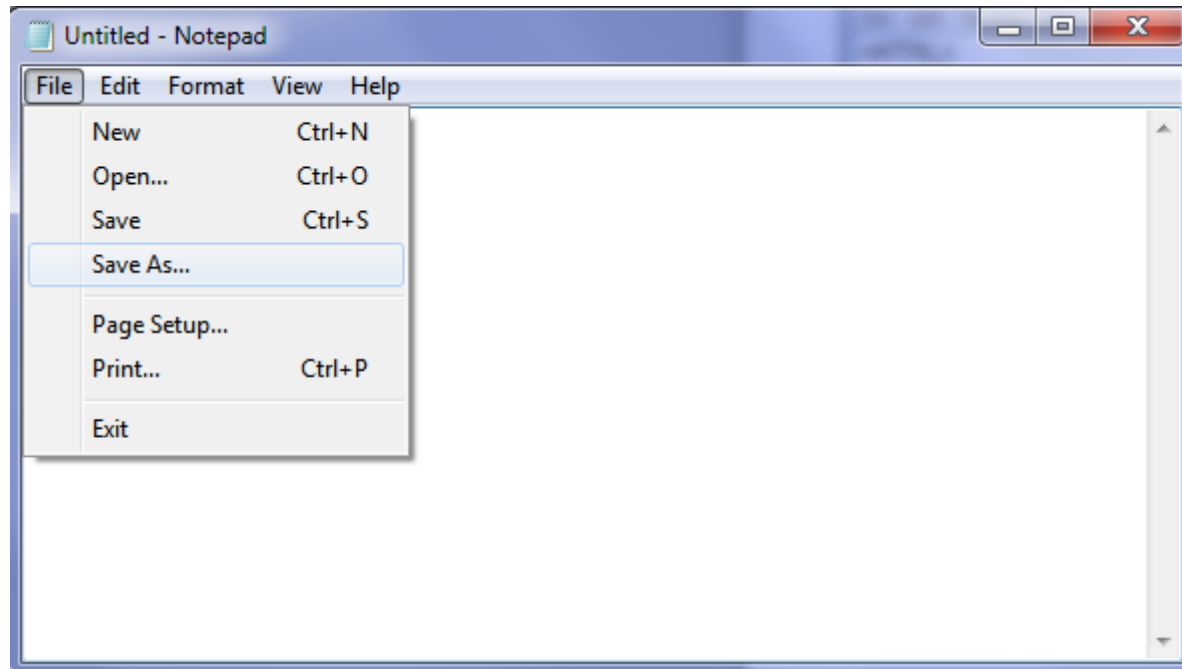
How to write an HTML document

- Open a text browser
 - e.g., Notepad
 - (Windows – Start>Accessories)
 - or Notepad++
 - (download from <http://notepad-plus-plus.org/>)

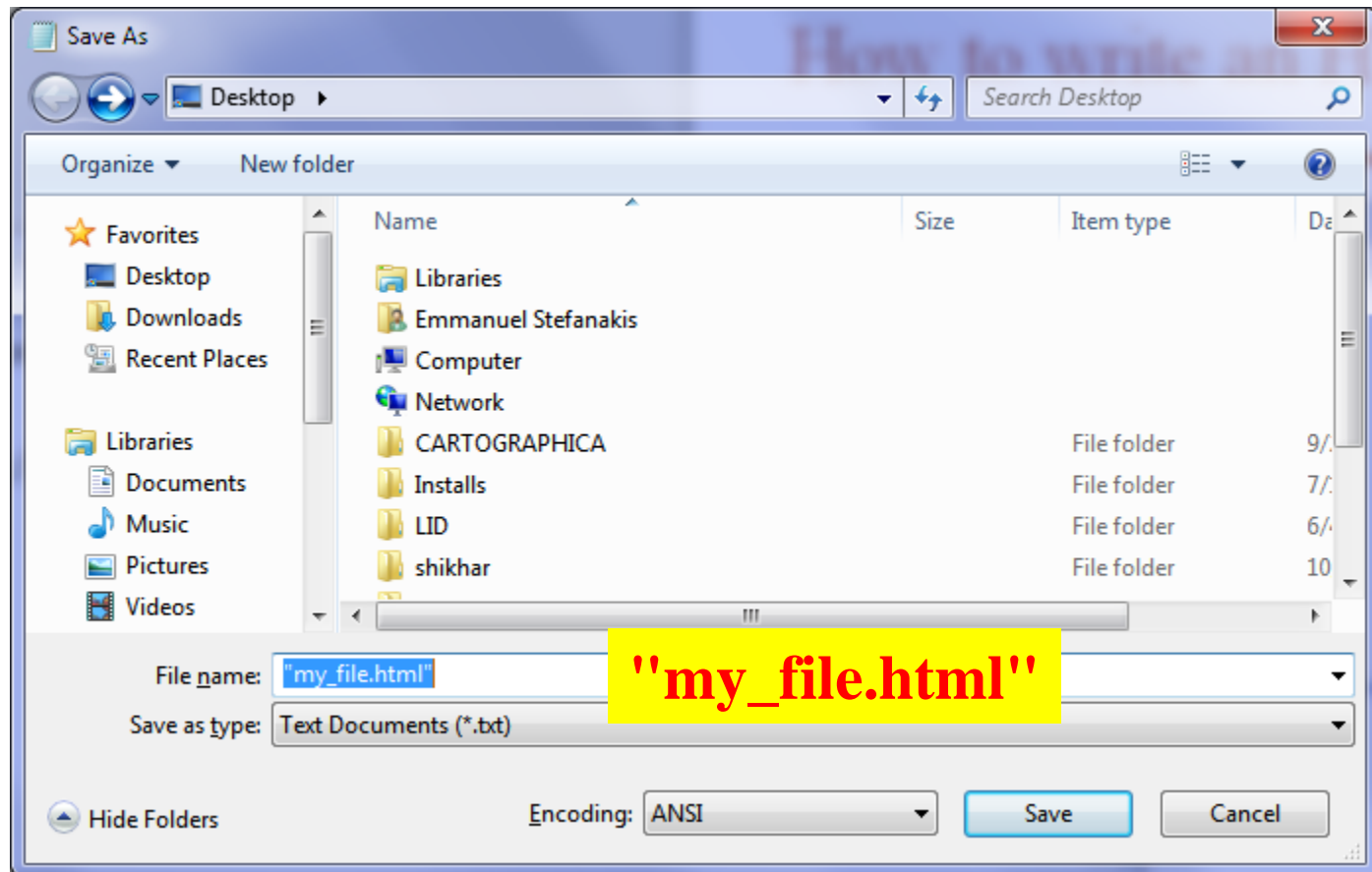
How to write an HTML document



How to write an HTML document



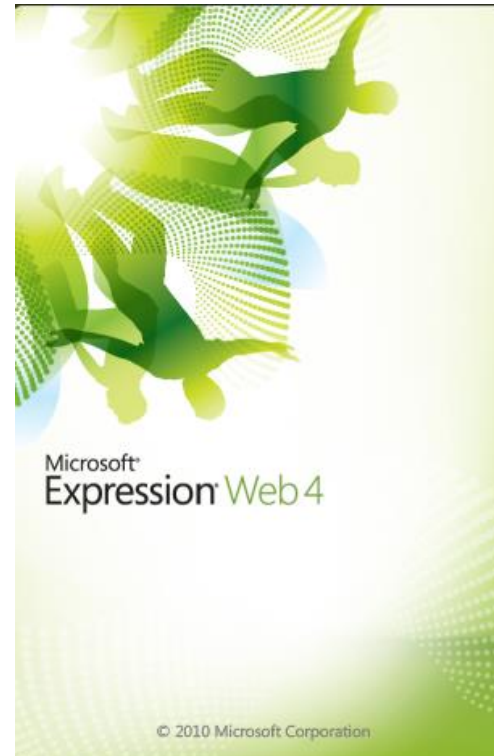
How to write an HTML document



How to write an HTML document

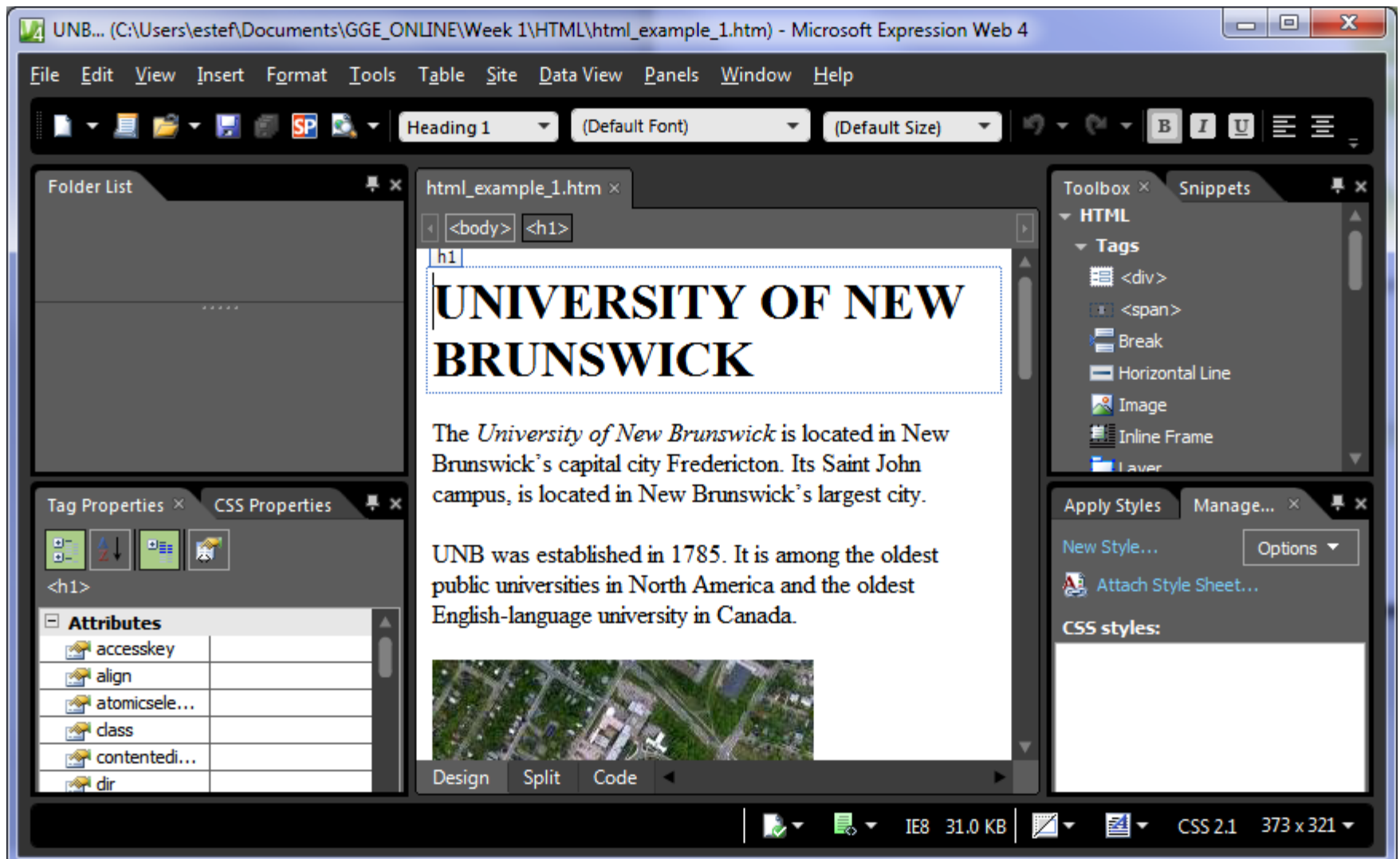
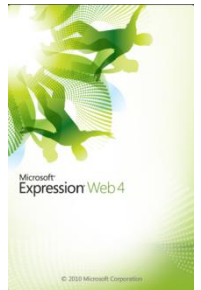
- Use an HTML Editor
 - e.g.,

*Since 2020, Microsoft has stopped distributing this s/w. You may find similar HTML editors (free and commercial), if you wish.
No HTML Editor is required for this course.*

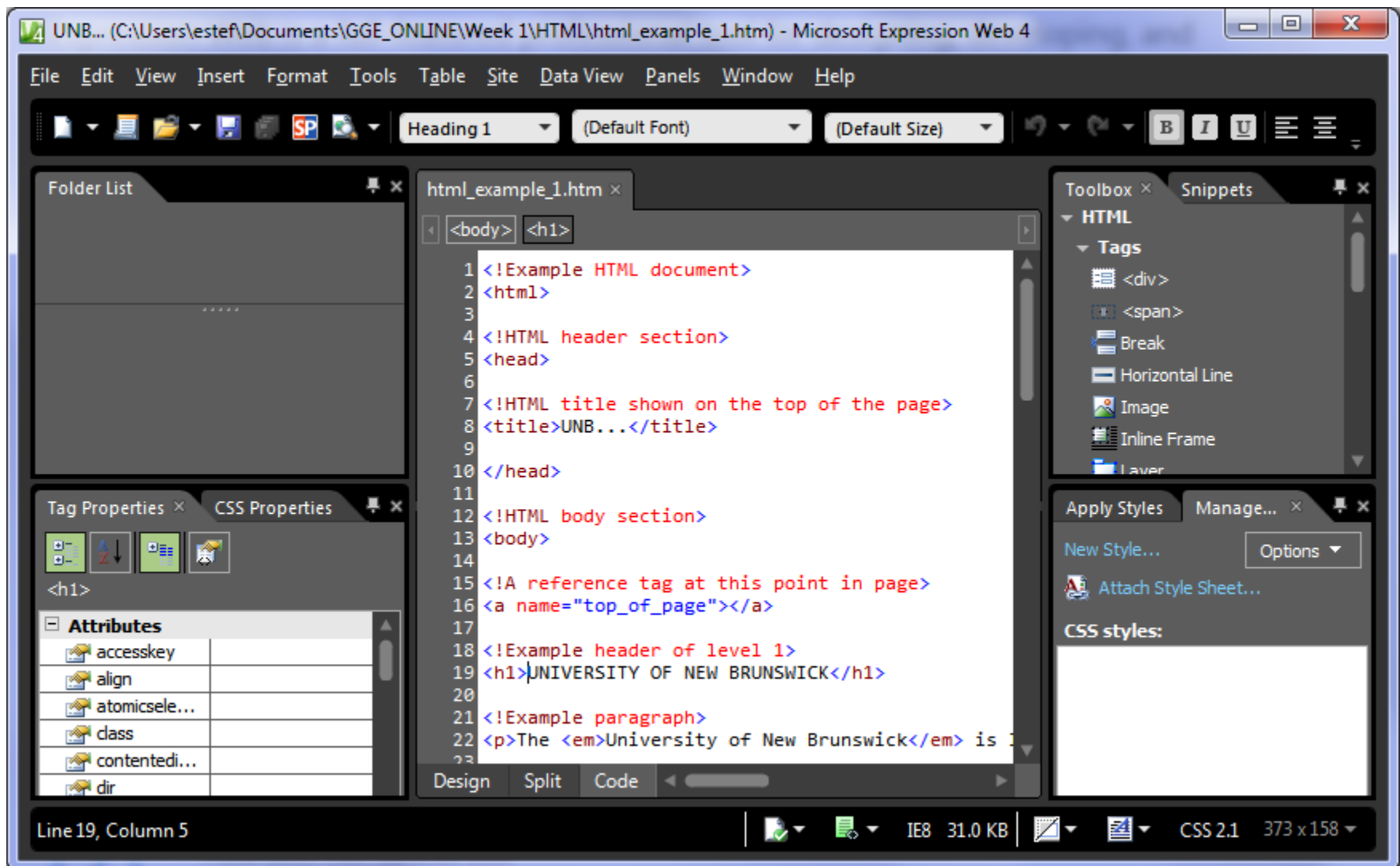
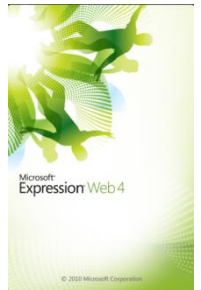


~~<http://www.microsoft.com/en-ca/download/details.aspx?id=36179>~~

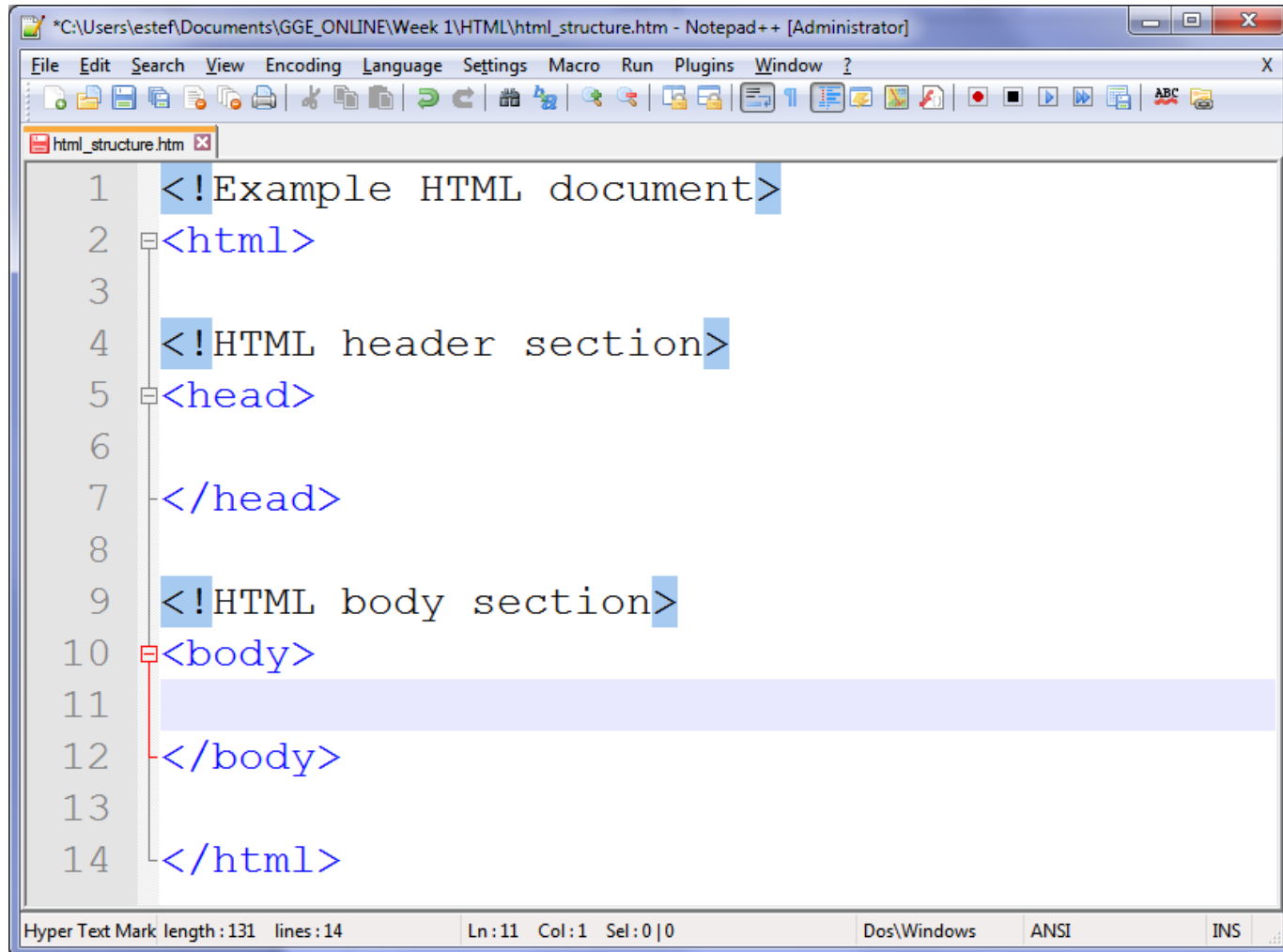
How to write an HTML document



How to write an HTML document



HTML Document Structure

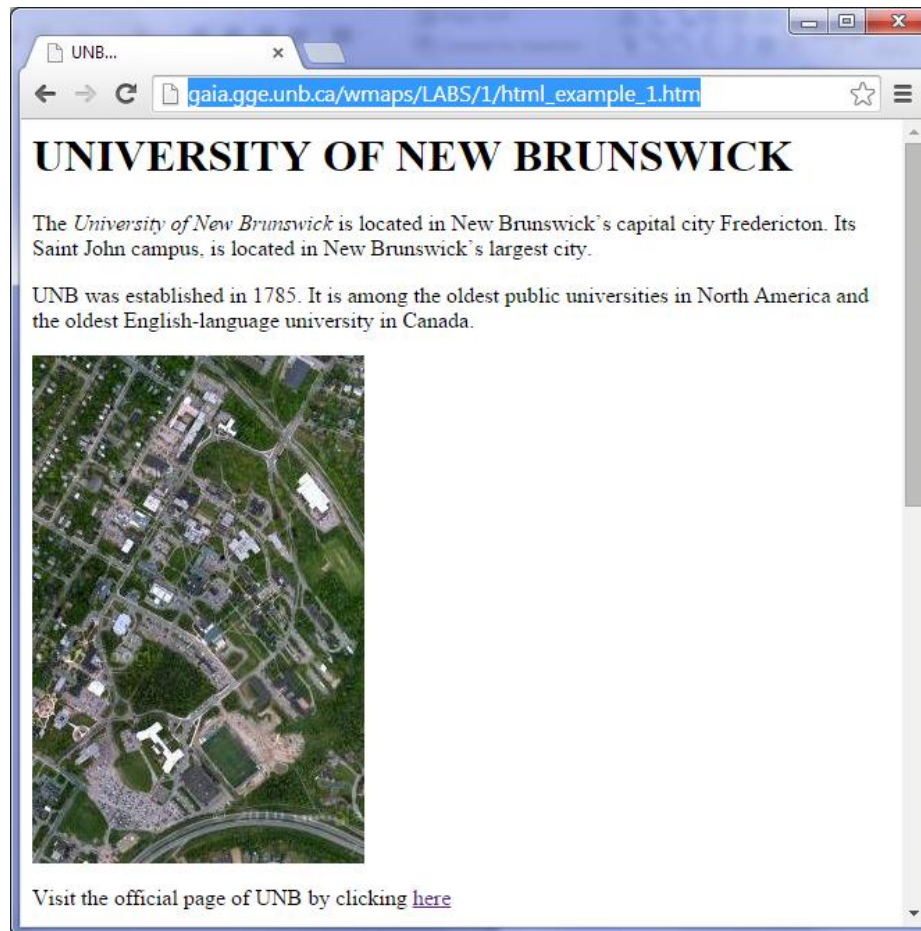


```
*C:\Users\estef\Documents\GGE_ONLINE\Week 1\HTML\html_structure.htm - Notepad++ [Administrator]
File Edit Search View Encoding Language Settings Macro Run Plugins Window ?
html_structure.htm x
1 <!Example HTML document>
2 <html>
3
4 <!HTML header section>
5 <head>
6
7 </head>
8
9 <!HTML body section>
10 <body>
11
12 </body>
13
14 </html>
Hyper Text Mark length : 131 lines : 14 Ln : 11 Col : 1 Sel : 0 | 0 Dos\Windows ANSI INS
```

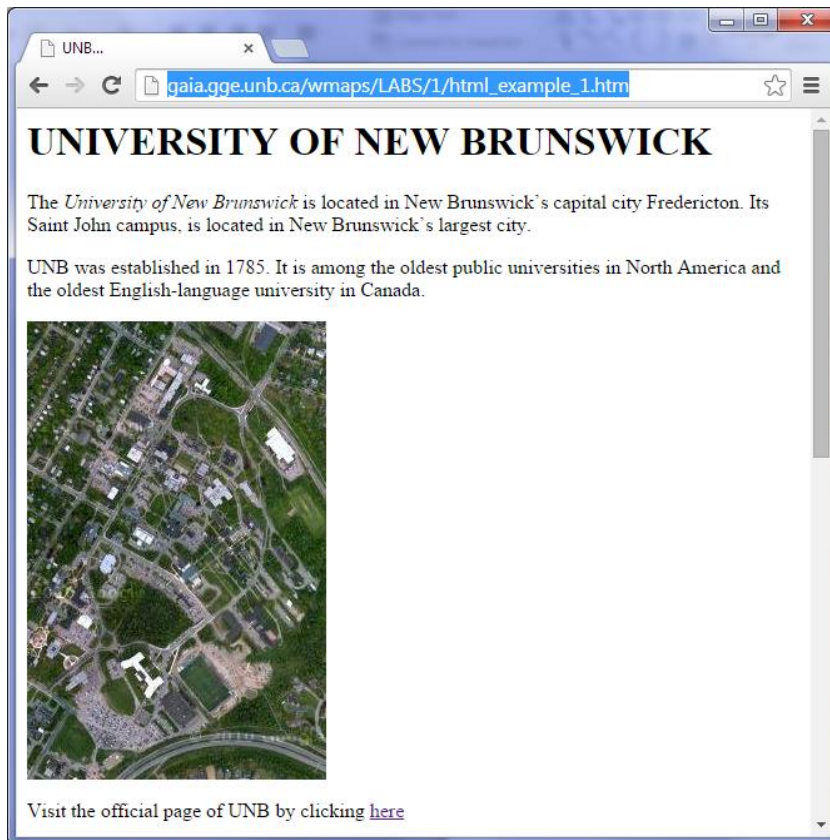
Example 1

http://gaia.gge.unb.ca:8080/gge5403/labs/1/html_example_1.htm

*You need to
establish a VPN
connection to UNB*

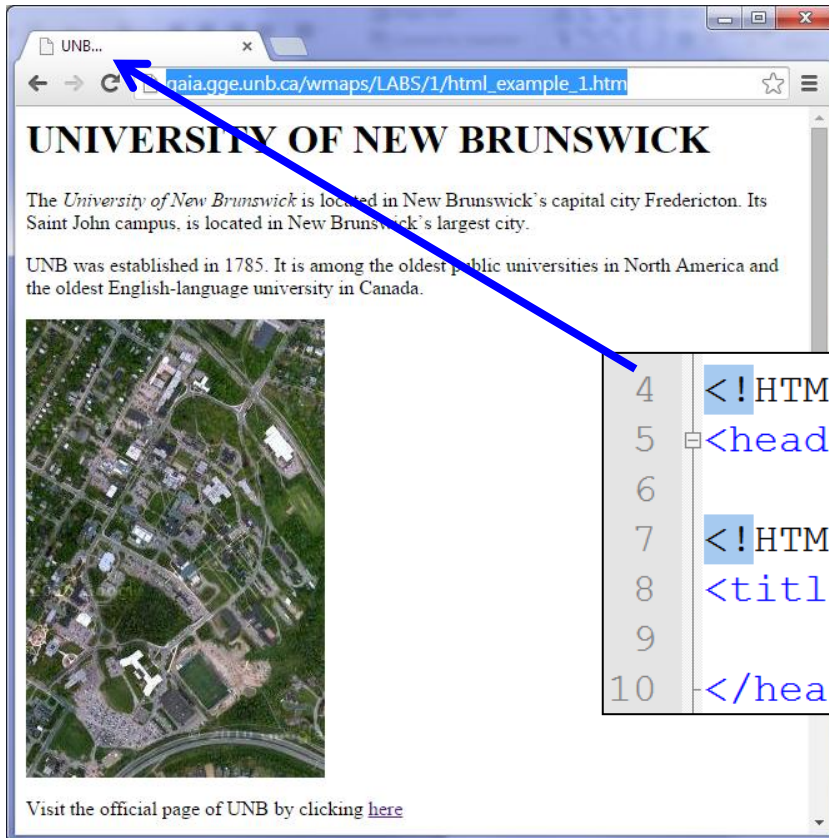


Example 1



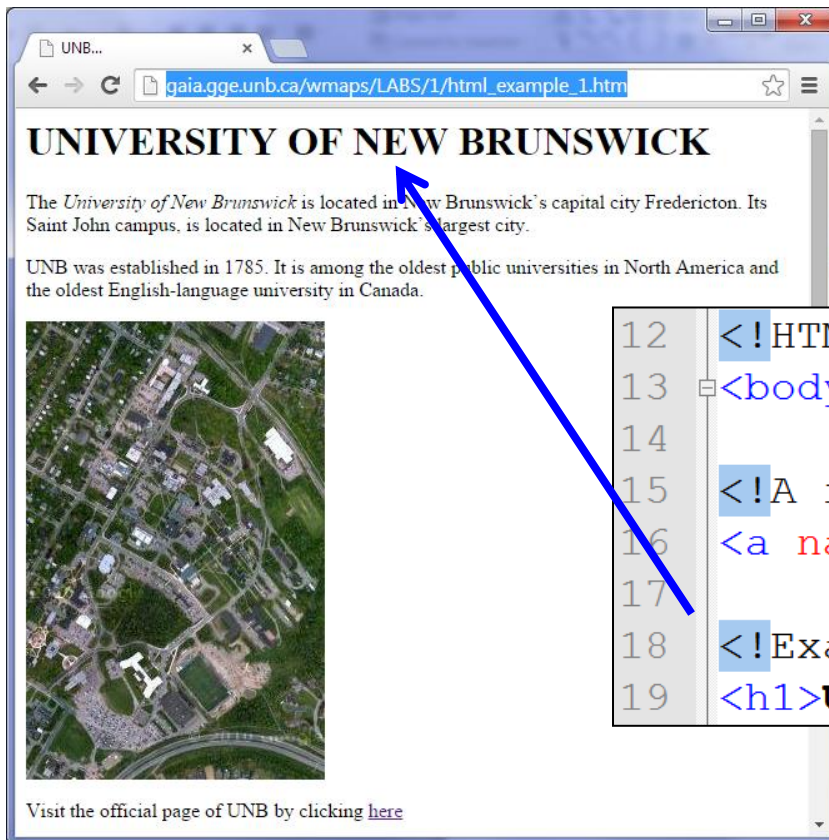
```
1 <!--Example HTML document-->
2 <html>
3
4 <!--HTML header section-->
5 <head>
6
7 <!--HTML title shown on the top of the page-->
8 <title>UNB...</title>
9
10 </head>
11
12 <!--HTML body section-->
13 <body>
14
15 <!--A reference tag at this point in page-->
16 <a name="top_of_page"></a>
17
18 <!--Example header of level 1-->
19 <h1>UNIVERSITY OF NEW BRUNSWICK</h1>
20
21 <!--Example paragraph-->
22 <p>The <em>University of New Brunswick</em> is located in
    New Brunswick's capital city Fredericton. Its Saint John
    campus, is located in New Brunswick's largest city.</p>
```


Example 1



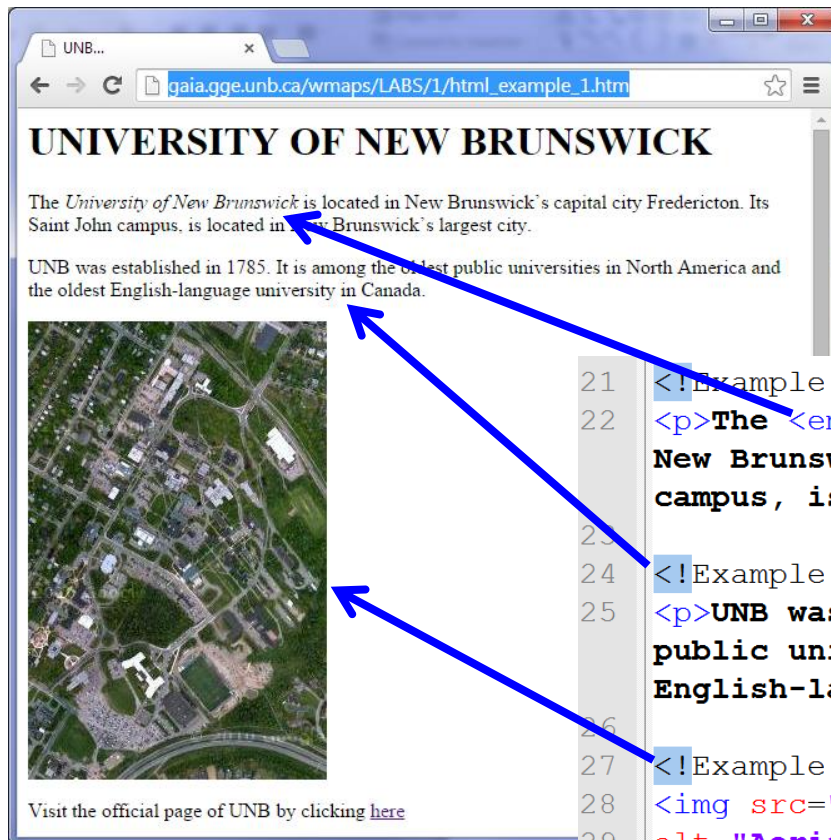
```
4 <!HTML header section>
5 <head>
6
7 <!HTML title shown on the top of the page>
8 <title>UNB...</title>
9
10 </head>
```


Example 1



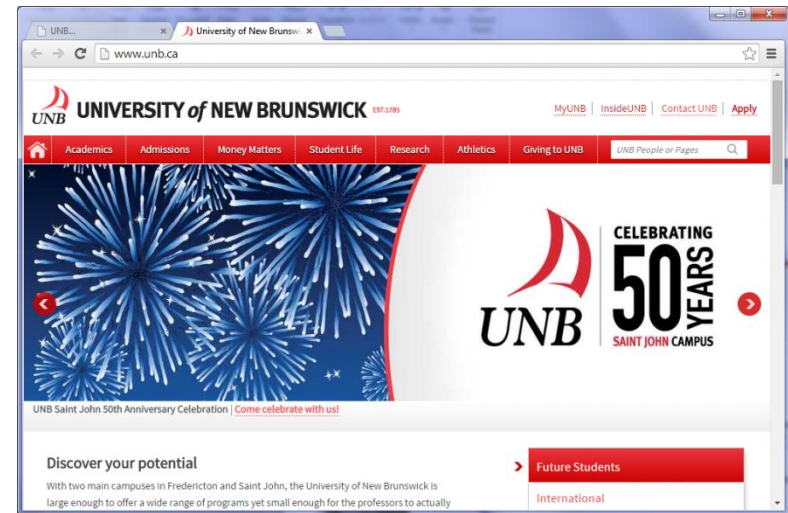
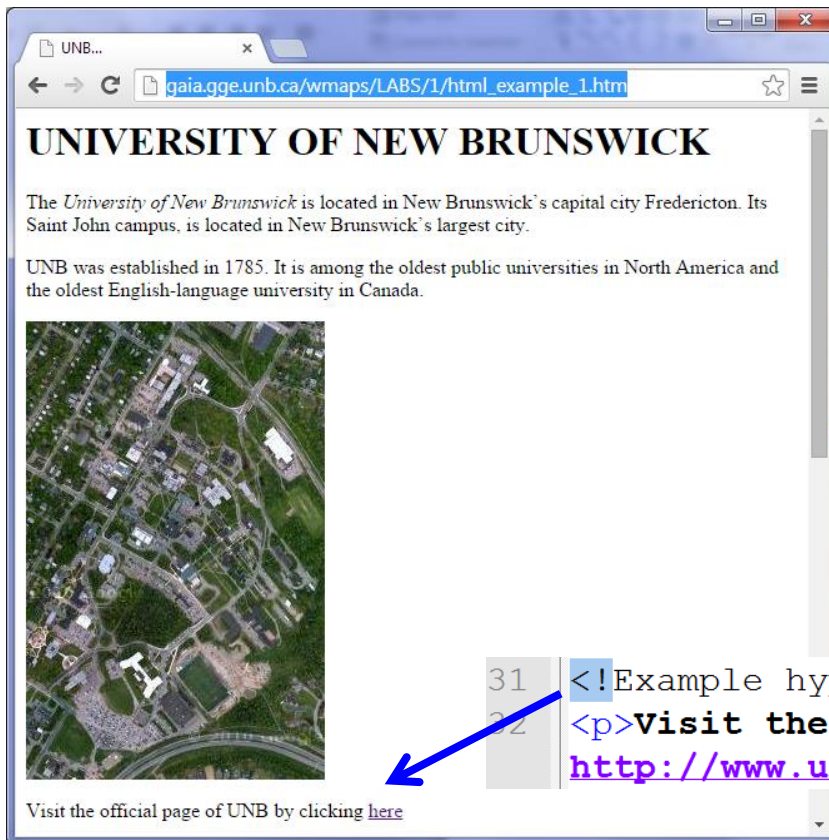
```
12 <!--HTML body section-->
13 <body>
14
15 <!--A reference tag at this point in page-->
16 <a name="top_of_page"></a>
17
18 <!--Example header of level 1-->
19 <h1>UNIVERSITY OF NEW BRUNSWICK</h1>
```

Example 1



```
21 <!--Example paragraph-->
22 <p>The <em>University of New Brunswick</em> is located in
    New Brunswick's capital city Fredericton. Its Saint John
    campus, is located in New Brunswick's largest city.</p>
23
24 <!--Example paragraph-->
25 <p>UNB was established in 1785. It is among the oldest
    public universities in North America and the oldest
    English-language university in Canada.</p>
26
27 <!--Example image-->
28 
```

Example 1



31 <!Example hyperlink>

32 <p>Visit the official page of UNB by clicking here</p>

Example 1

The screenshot shows a web browser window with the address bar displaying `gaia.gge.unb.ca/wmaps/LABS/1/html_example_1.htm`. The page content is as follows:

Faculties

- Faculty of Arts
- Faculty of Science
- Faculty of Engineering
 - 1. Department of Chemical Engineering
 - 2. Department of Civil Engineering
 - 3. Department of Electrical and Computer Engineering
 - 4. Department of Geodesy and Geomatics Engineering
 - 5. Department of Mechanical Engineering
- Faculty of Education

Contact

University of New Brunswick
PO Box 4400
Fredericton, NB, E3B5A3

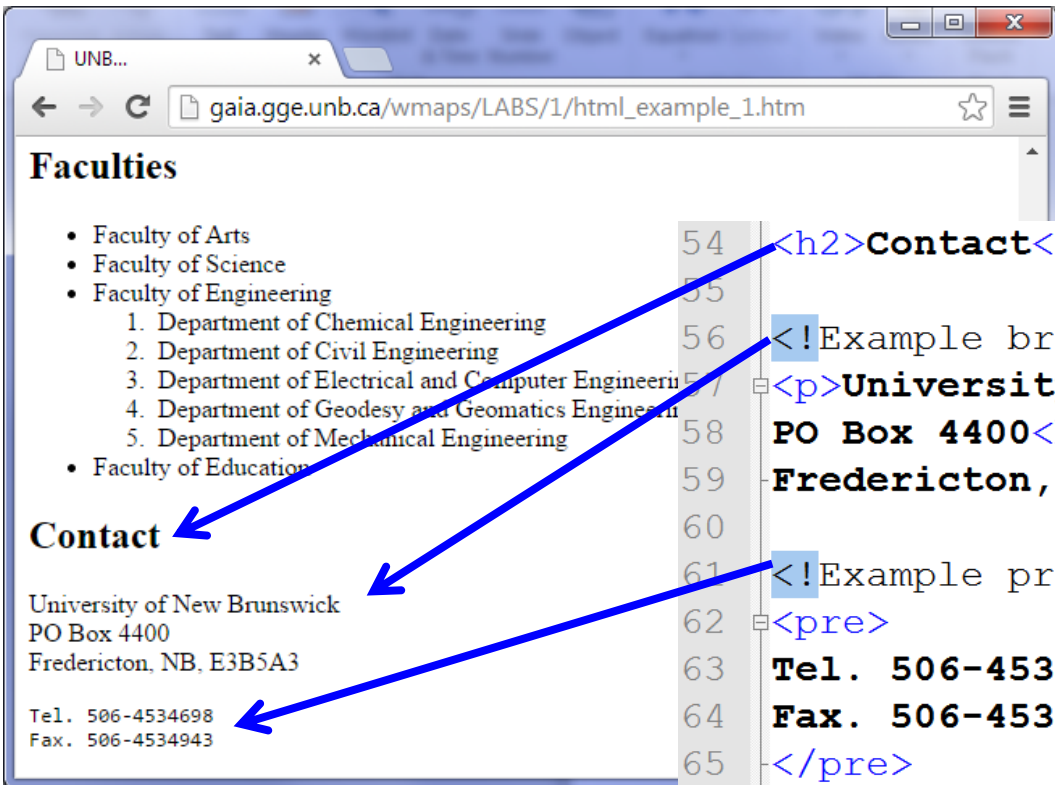
Tel. 506-4534698
Fax. 506-4534943

The source code on the right is as follows:

```
34 <!-- Example header of level 2 -->
35 <h2>Faculties</h2>
36
37 <!-- Example unordered list -->
38 <ul>
39   <li>Faculty of Arts</li>
40   <li>Faculty of Science</li>
41   <li>Faculty of Engineering</li>
42   <!-- Example ordered list -->
43   <ol>
44     <li>Department of Chemical Engineering</li>
45     <li>Department of Civil Engineering</li>
46     <li>Department of Electrical and Computer
47       Engineering</li>
48     <li>Department of Geodesy and Geomatics
49       Engineering</li>
50     <li>Department of Mechanical Engineering</li>
51   </ol>
52   <li>Faculty of Education</li>
53 </ul>
```

Blue arrows indicate the mapping from the rendered HTML to the source code: from the 'Faculties' header to line 35, from the first three list items to lines 39-41, from the ordered list items to lines 44-50, and from the 'Faculty of Education' item to line 52.

Example 1



The screenshot shows a web browser window with the address bar displaying `gaia.gge.unb.ca/wmaps/LABS/1/html_example_1.htm`. The page content is divided into two sections: "Faculties" and "Contact".

Faculties

- Faculty of Arts
- Faculty of Science
- Faculty of Engineering
 - 1. Department of Chemical Engineering
 - 2. Department of Civil Engineering
 - 3. Department of Electrical and Computer Engineering
 - 4. Department of Geodesy and Geomatics Engineering
 - 5. Department of Mechanical Engineering
- Faculty of Education

Contact

University of New Brunswick
PO Box 4400
Fredericton, NB, E3B5A3

Tel. 506-4534698
Fax. 506-4534943

Annotations on the right side of the image show the corresponding HTML code for the "Contact" section:

```
54 <h2>Contact</h2>
55
56 <!-- Example break line - tag br -->
57 <p>University of New Brunswick<br>
58 PO Box 4400<br>
59 Fredericton, NB, E3B5A3</p>
60
61 <!-- Example predefined formatting - tag pre -->
62 <pre>
63 Tel. 506-4534698
64 Fax. 506-4534943
65 </pre>
```

Blue arrows point from the HTML code to the rendered text in the browser window:

- From line 54 to the "Contact" heading.
- From line 57 to the first line of the contact address.
- From line 62 to the first line of the contact address.
- From line 63 to the telephone number.
- From line 64 to the fax number.

Example 1

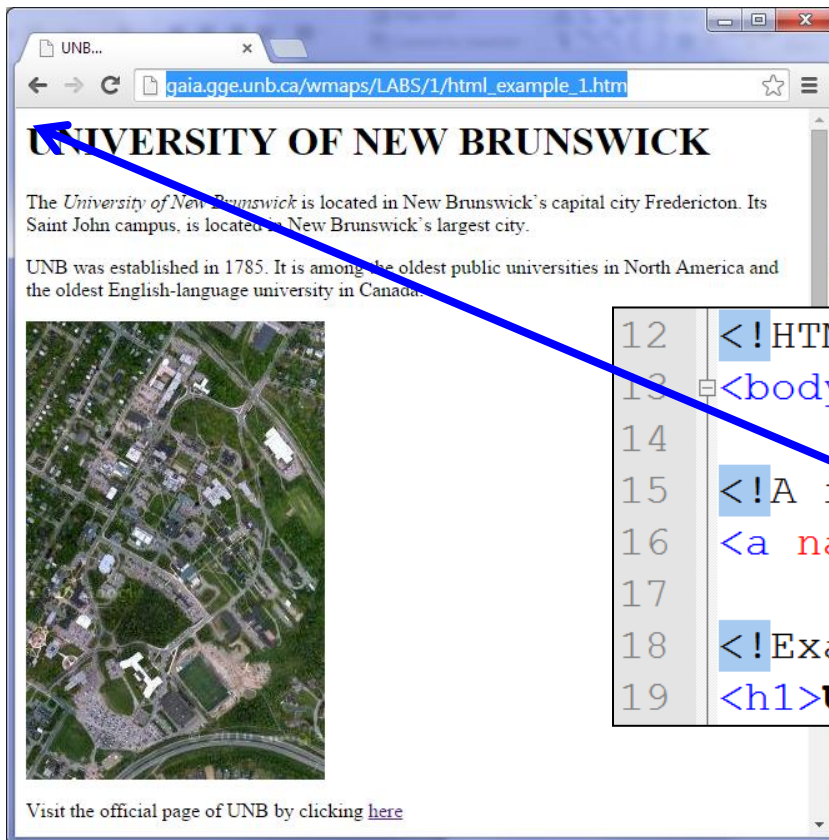
```
67 <!--Example header of level 2-->
68 <h2>Enrolled Students</h2>
69
70 <!--Example Table-->
71 <table border="3" width="80%">
72 <tr align="center"><th>Year</th><th>Students
73 </th></tr>
74 <tr align="center"><td>2008</td><td>8013</td></tr>
75 <tr align="center"><td>2009</td><td>8326</td></tr>
76 <tr align="center"><td>2010</td><td>8579</td></tr>
77 <tr align="center"><td>2011</td><td>8932</td></tr>
78 </table>
79 <!--Example hyperlink in this page-->
80 <p align="right">Go to top of the page by clicking
81 <a href="#top_of_page">here</a><p>
82
83
84 </body>
</html>
```

Enrolled Students

Year	Students
2008	8013
2009	8326
2010	8579
2011	8932

Go to top of the page by clicking [here](#)

Example 1

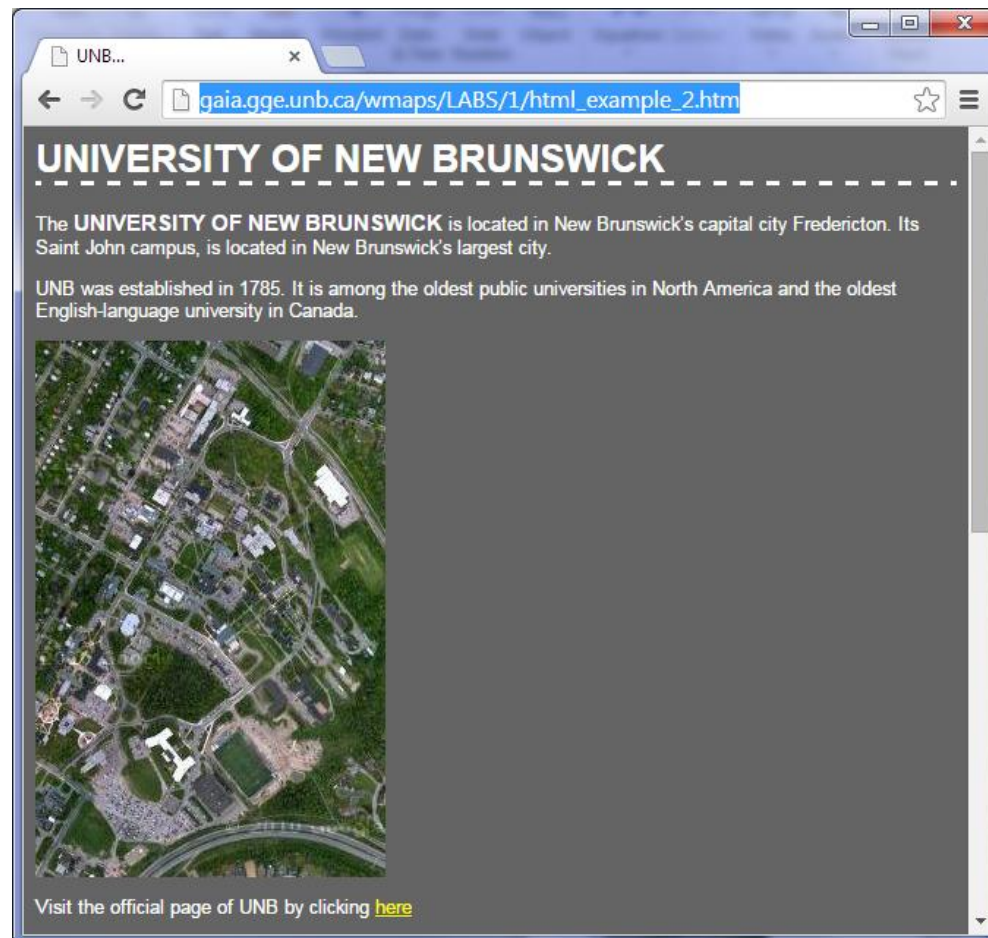


```
12 <!--HTML body section-->
13 <body>
14
15 <!--A reference tag at this point in page-->
16 <a name="top_of_page"></a>
17
18 <!--Example header of level 1-->
19 <h1>UNIVERSITY OF NEW BRUNSWICK</h1>
```

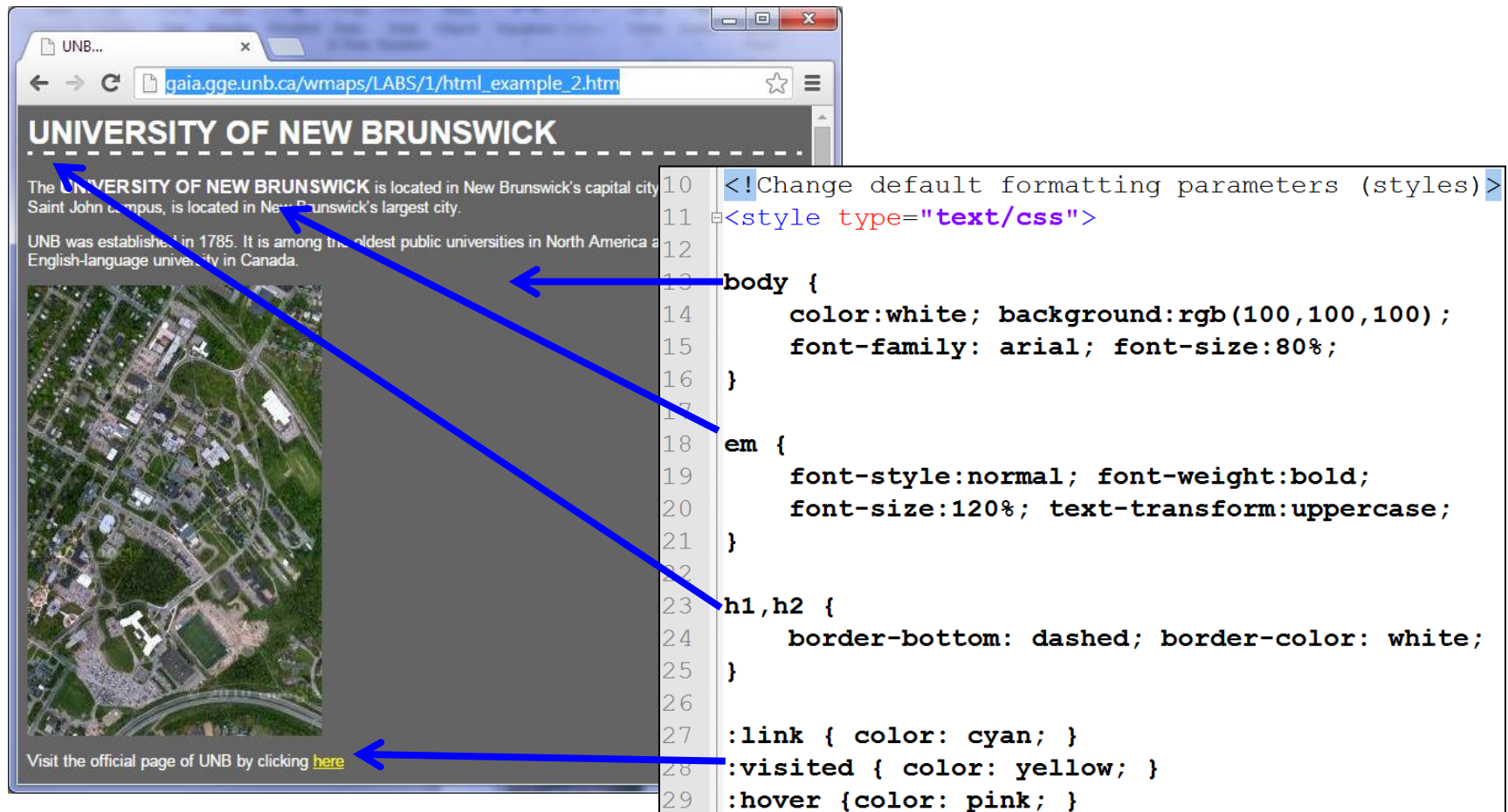
Example 2

http://gaia.gge.unb.ca:8080/gge5403/labs/1/html_example_2.htm

*You need to
establish a VPN
connection to UNB*



Example 2



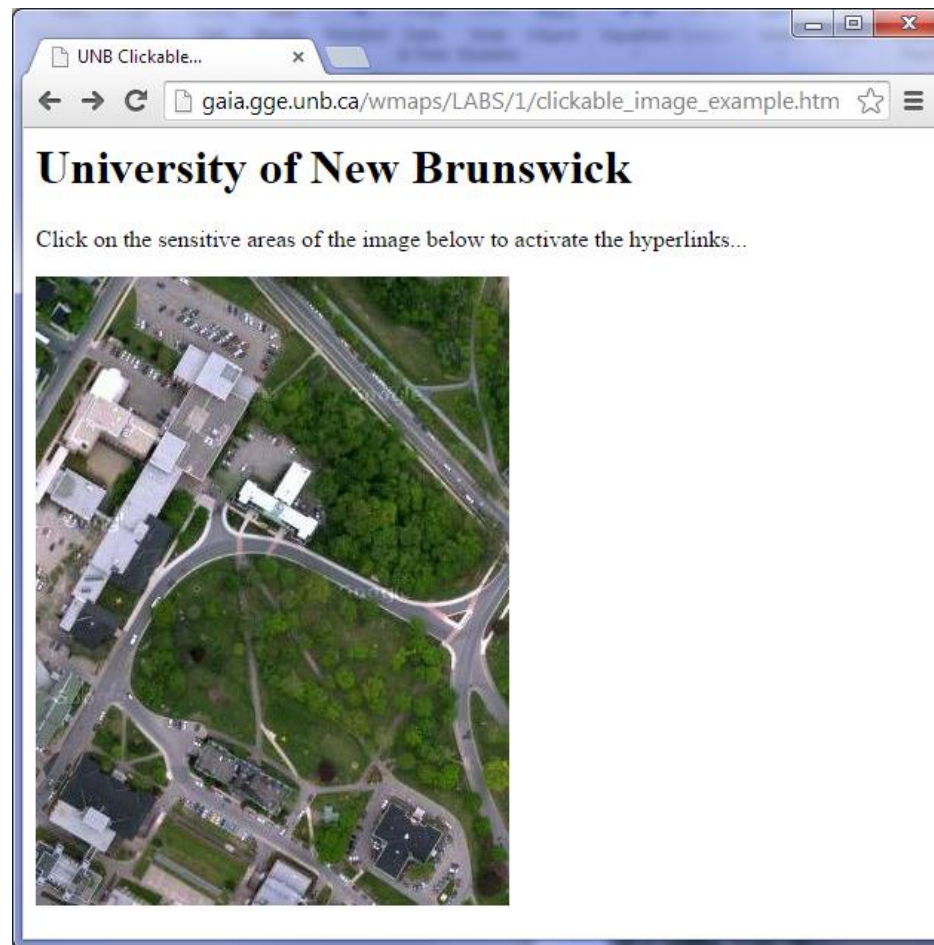
The image shows a web browser window displaying the University of New Brunswick website. The browser's address bar shows the URL `gaia.gge.unb.ca/wmaps/LABS/1/html_example_2.htm`. The website content includes the heading "UNIVERSITY OF NEW BRUNSWICK", a paragraph about the university's location and history, and an aerial photograph of the campus. A blue arrow points from the heading to the `h1, h2` CSS rule. Another blue arrow points from the paragraph to the `body` CSS rule. A third blue arrow points from the photograph to the `img` tag in the HTML code. A fourth blue arrow points from the text "Visit the official page of UNB by clicking [here](#)" to the `:link` and `:visited` CSS rules.

```
10 <!--Change default formatting parameters (styles)-->
11 <style type="text/css">
12
13 body {
14     color:white; background:rgb(100,100,100);
15     font-family: arial; font-size:80%;
16 }
17
18 em {
19     font-style:normal; font-weight:bold;
20     font-size:120%; text-transform:uppercase;
21 }
22
23 h1,h2 {
24     border-bottom: dashed; border-color: white;
25 }
26
27 :link { color: cyan; }
28 :visited { color: yellow; }
29 :hover {color: pink; }
```

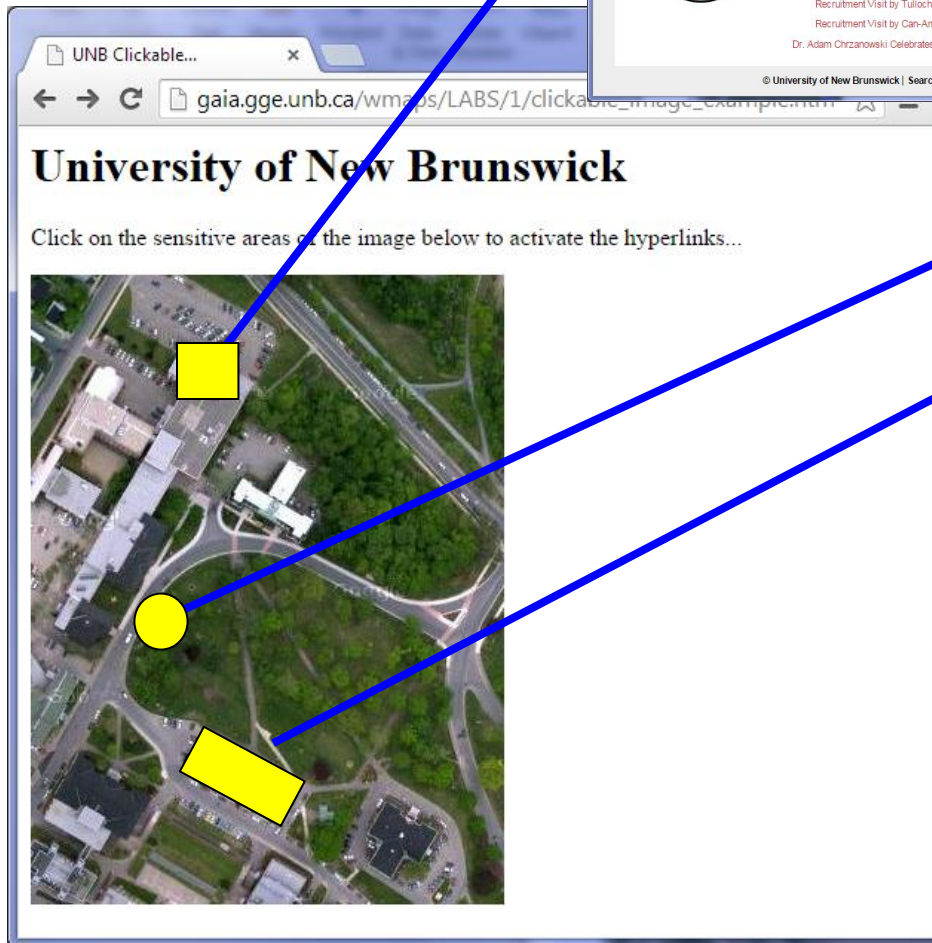
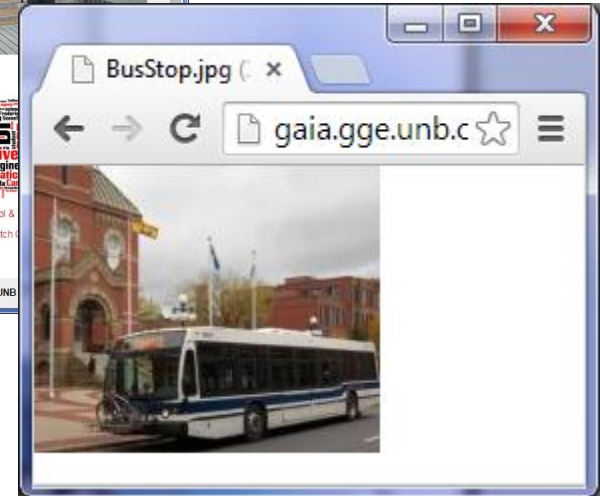
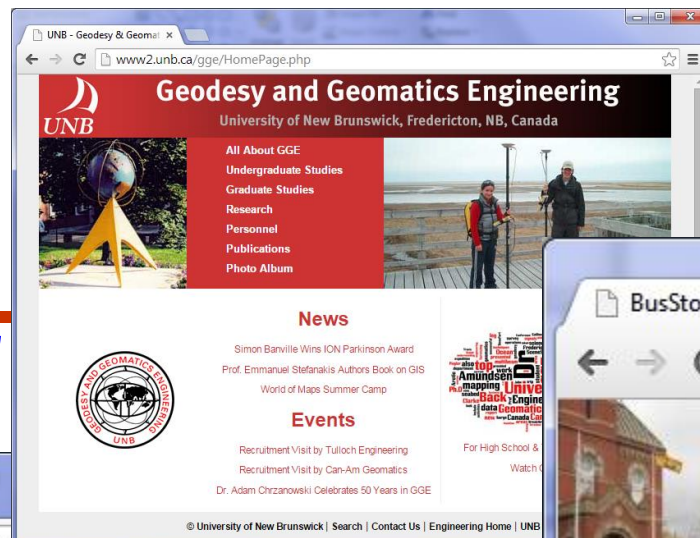
Example 3: Clickable areas on image

http://gaia.gge.unb.ca:8080/gge5403/labs/1/clickable_image_example.htm

*You need to
establish a VPN
connection to UNB*

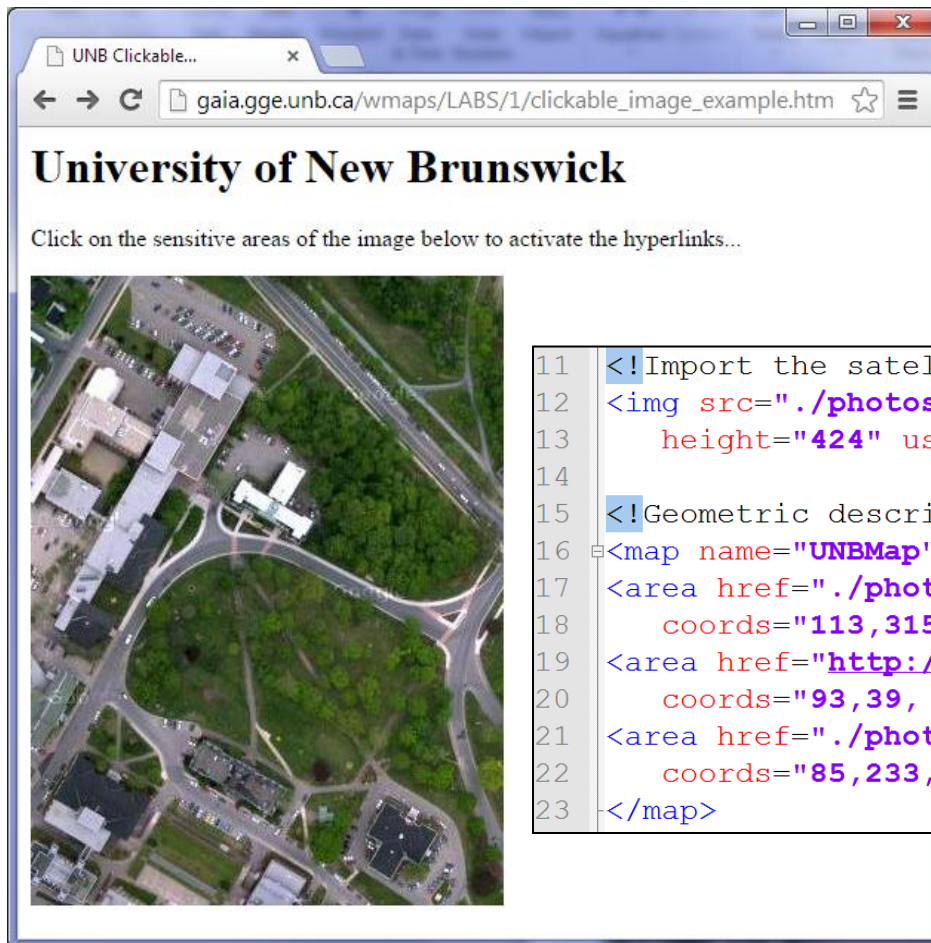


Example 3



```
C:\Users\estef\Documents\GGE_ONLINE\Week 1\HTML\clickable_image_example.htm - Notepad++ [Administrator]
File Edit Search View Encoding Language Settings Macro Run Plugins Window ?
clickable_image_example.htm
1 <!--Example image with clickable areas-->
2 <html>
3 <head>
4 <title>UNB Clickable...</title>
5 </head>
6 <body>
7 <h1>University of New Brunswick</h1>
8
9 <p>Click on the sensitive areas of the image below to activate the hyperlinks...</p>
10
11 <!--Import the satellite image and define a map on top of it-->
12 
14
15 <!--Geometric description of the sensitive areas and their hyperlinks-->
16 <map name="UNBMap">
17 <area href="./photos/OldArtsBuilding.jpg" shape="polygon"
18     coords="113,315, 101,334, 164,372, 172,346">
19 <area href="http://gge.unb.ca" shape="rect"
20     coords="93,39, 135,94">
21 <area href="./photos/BusStop.jpg" shape="circle"
22     coords="85,233, 10">
23 </map>
24
25 </body>
26 </html>
27
Hyper Text Markup Language file | length: 760 lines: 27 | Ln:1 Col:1 Sel:0|0 | Dos/Windows ANSI as UTF-8 INS
```


Example 3



```
11 <!--Import the satellite image and define a map on top of it-->
12 
14
15 <!--Geometric description of the sensitive areas and their hyperlinks-->
16 <map name="UNBMap">
17   <area href="./photos/OldArtsBuilding.jpg" shape="polygon"
18       coords="113,315, 101,334, 164,372, 172,346">
19   <area href="http://gge.unb.ca" shape="rect"
20       coords="93,39, 135,94">
21   <area href="./photos/BusStop.jpg" shape="circle"
22       coords="85,233, 10">
23 </map>
```

Example 3

