WTAD

Unit -1

Introduction to HTML

(HyperText Markup Language)

HTML
(Hyper Text Markup Language)

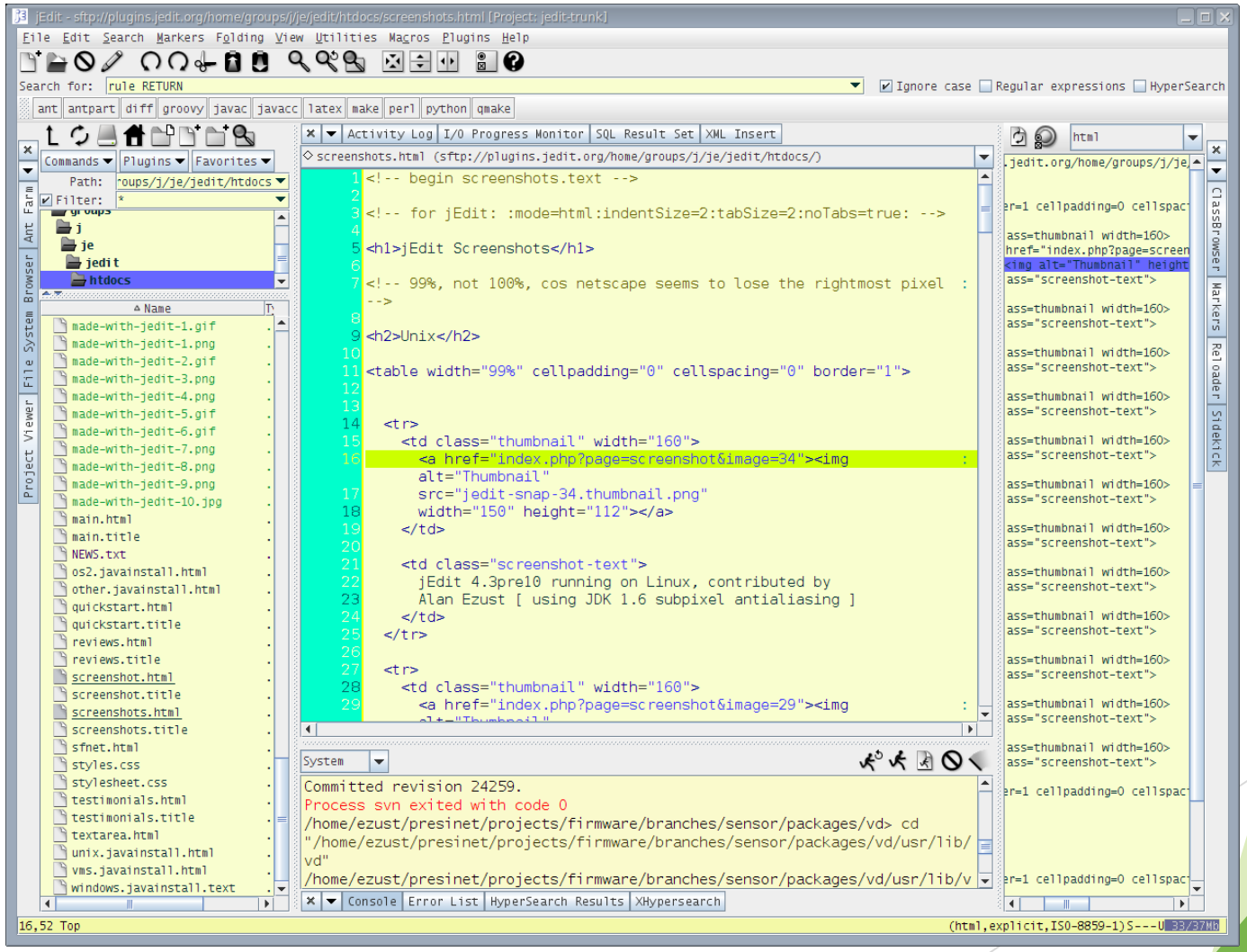
3 languages all web developers **must** learn:

1. **HTML** to define the content of web pages
2. **CSS** to specify the layout of web pages
3. **JavaScript** to program the behaviour of web pages

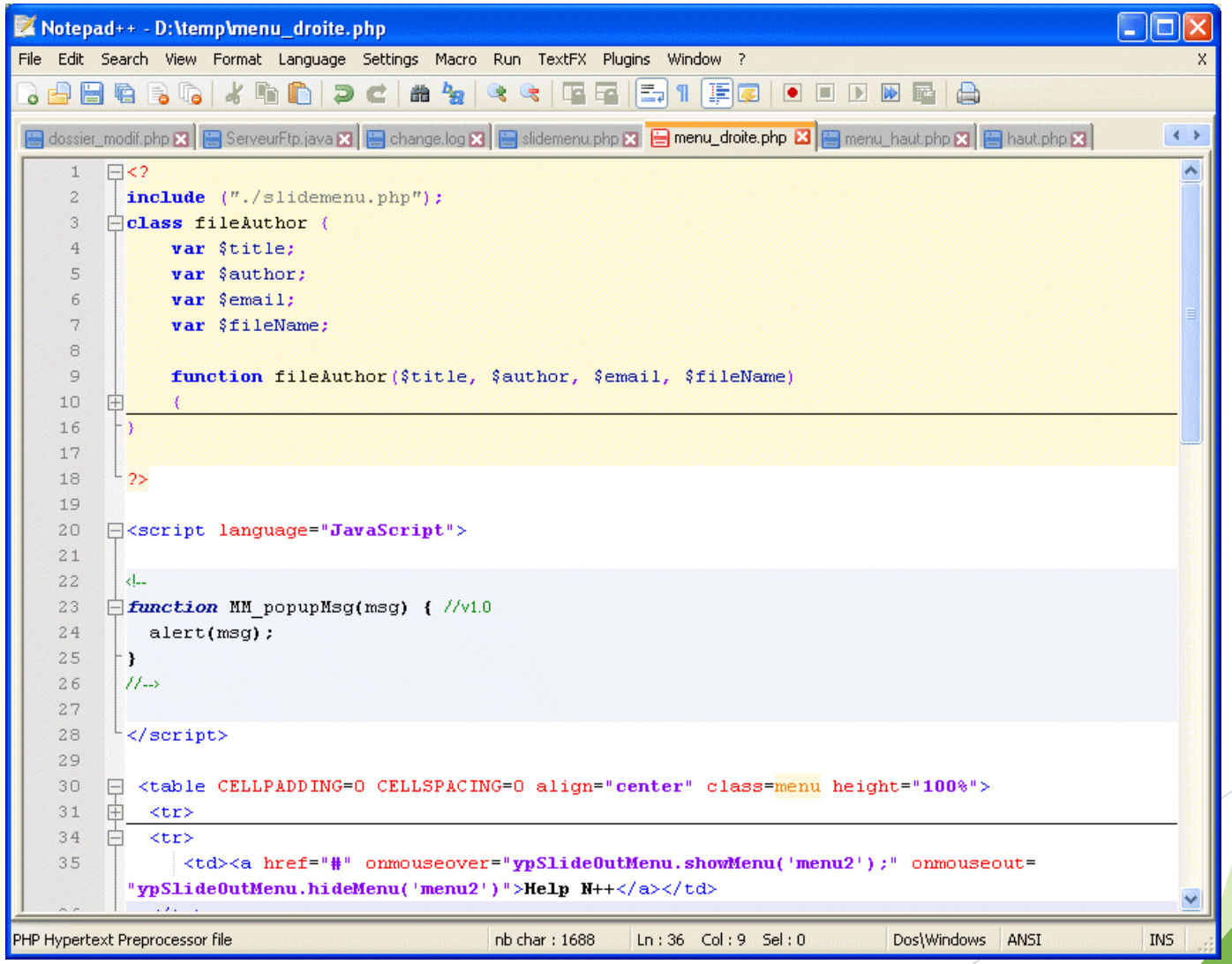
Text Editors for HTML

- jEdit
- Notepad++ (Windows only)
- Kate (Windows: partial)
- gedit
- Emacs
- Vim

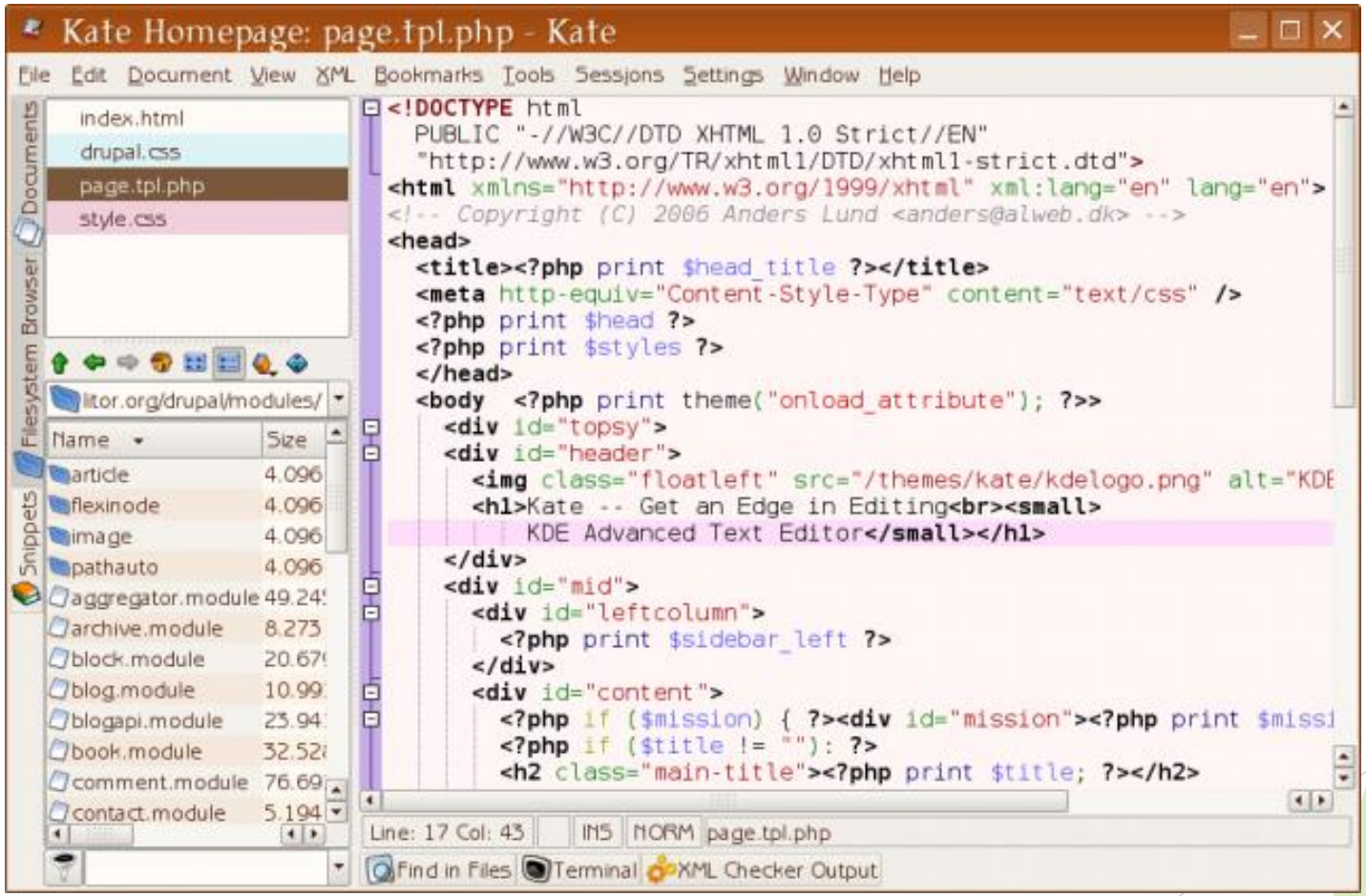
Text Editors: jEdit



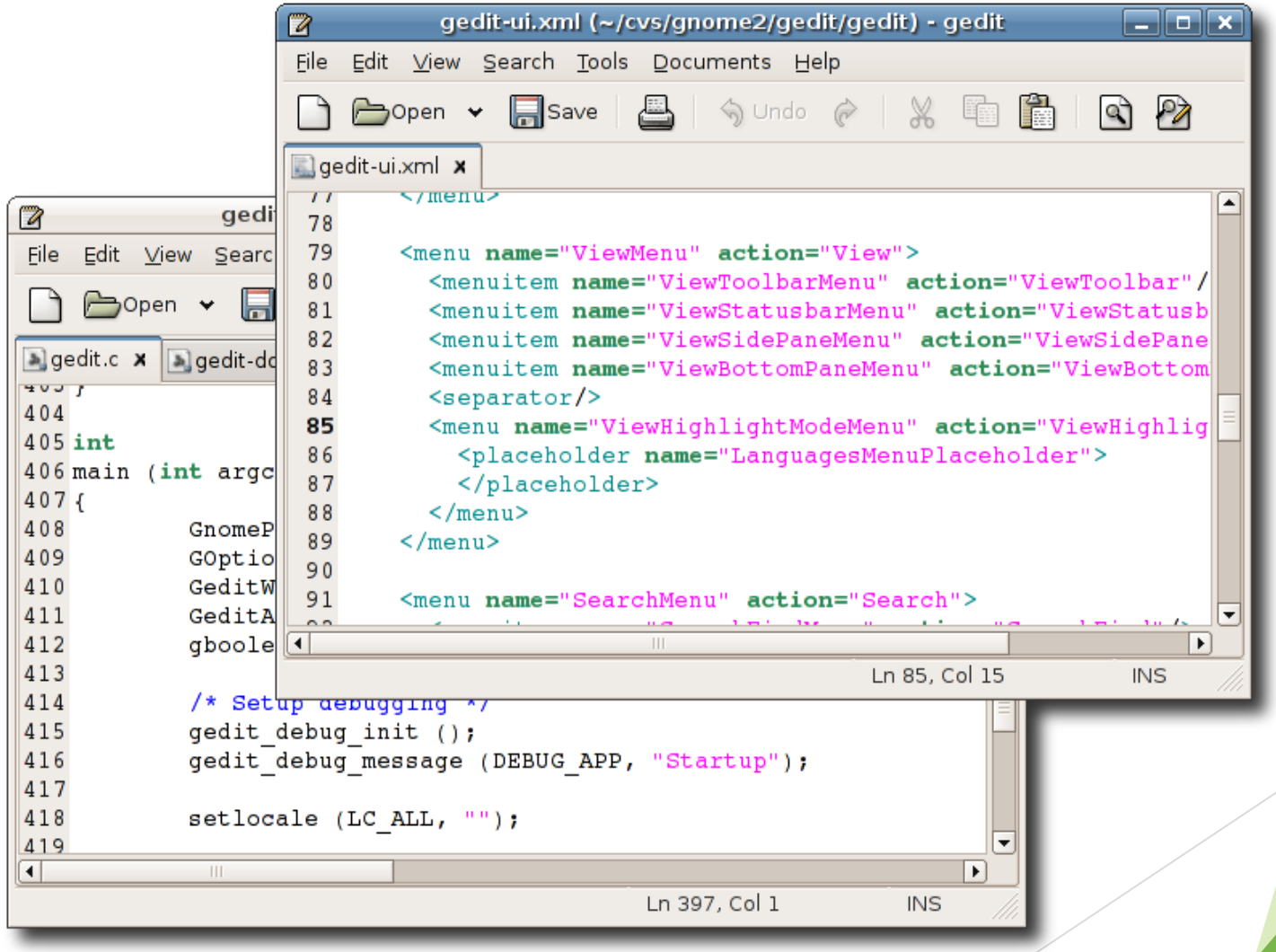
Text Editors: Notepad++



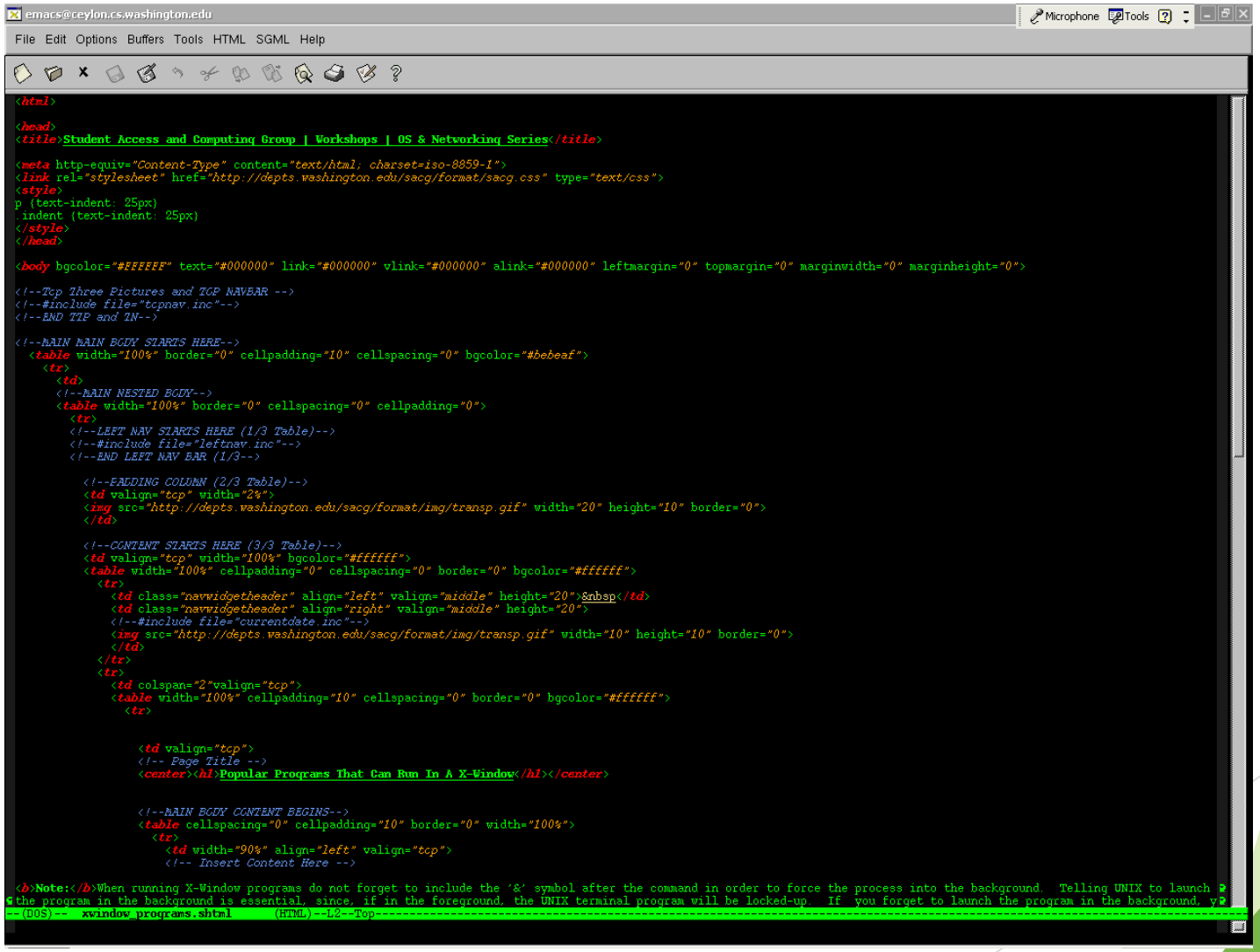
Text Editors: Kate



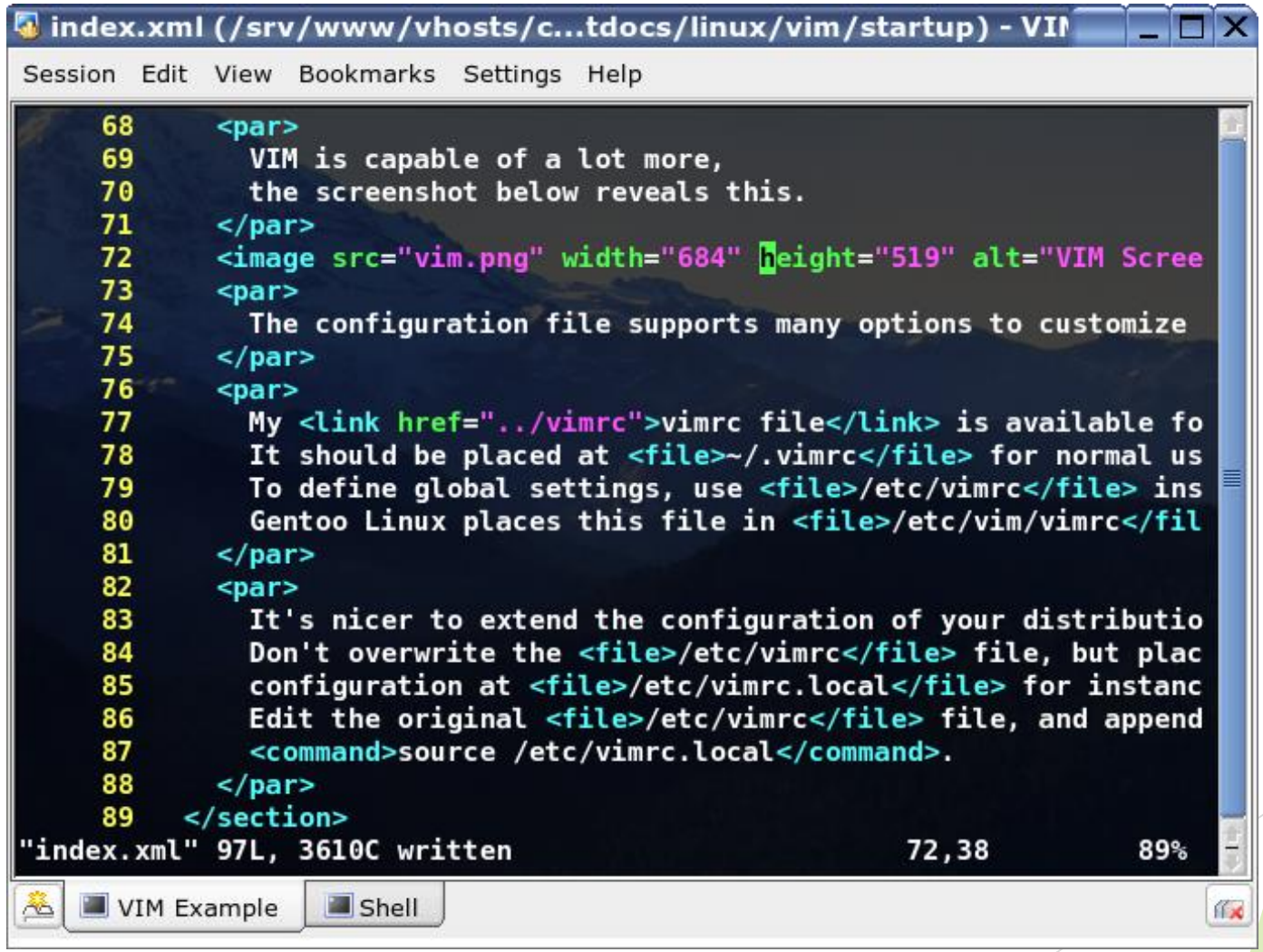
Text Editors: gedit



Text Editors: Emacs



Text Editors: Vim



HTML History

- Since the early days of the web, there have been many versions of HTML
- WHATWG: Web Hypertext Application Technology Working Group.
- W3C : World wide web consortium.

Version	Year
Tim Berners-Lee invented www	1989
Tim Berners-Lee invented HTML	1991
Dave Raggett drafted HTML+	1993
HTML Working Group defined HTML 2.0	1995
W3C Recommended HTML 3.2	1997
W3C Recommended HTML 4.01	1999
W3C Recommended XHTML 1.0	2000
HTML5 WHATWG First Public Draft	2008
HTML5 WHATWG Living Standard	2012
HTML5 W3C Final Recommendation	2014

HTML
(Hyper Text Markup Language)

- The language used to develop web pages is called “Hyper Text Markup Language”.
- HTML is the language interpreted by a Browser.
- HTML is specified as TAGS in an HTML document.

HTML
(Hyper Text Markup Language)

- HTML TAG :
- An HTML tag is a signal to a browser that it should do something other than just throw text up on the screen.
- Tags begin with an open angle bracet (<) and end with a close angle bracet (>).
- Tags can be of two type :
- 1) Paired Tags
- 2) Singular Tags

HTML
(Hyper Text Markup Language)

Paired Tag :

- A tag is said to be a paired tag if it, along with a companion tag.

like <B></B>.

- Here first tag is called **opening tag** (<B>) and second tag is called **closing tag**().
- The opening tag activates the effect and the closing tag turns the effect off.

Singular Tag :

- Singular tag is also know as stand-alone tag.
- Stand-along tag does not have a companion tag.
- For Example : </br> tag will insert a line break.

Structure of HTML Program

- Every HTML program has a rigid structure.
- The entire web page is enclosed within **<HTML> </HTML>.**

```
<HTML>
<HEAD>
    <TITLE> </TITLE>
</HEAD>
<BODY>
</BODY>
</HTML>
```

- All the information placed within the <HEAD></HEAD> tags is not displayed in the browser.

Body Tag Attribute

Body Tag Attribute	value
background	url (Absolute or Relative)
color (style attribute)	color
bgcolor	color

How to specify Relative pathnames

The HTML document is my.html and the image file is dragonfly.gif

C:\- 🗁 Iam -my.html ☞ Type this ; **<body background=dragonfly.gif>**

-dragonfly.gif

C:\- 🗁 Iam -my.html ☞ Type this ; **<body background=Image/dragonfly.gif>**

🗀 Image

-dragonfly.gif

C:\- 🗁 Iam -my.html ☞ Type this ; **<body background=../Image/dragonfly.gif>**

🗀 Image

-dragonfly.gif

C:\- 🗀 Image -dragonfly.gif ☞ Type this ; **<body background=../dragonfly.gif>**

🗁 Iam

-my.html

Titles and Footers

- To put the title in the web page
- <TITLE> </TITLE> tag is used.
- To put the footer in the web page
- <ADDRESS> </ADDRESS> tag is used.
- Generally text typed within these tags always appears in *ITALICS*.

TEXT FORMATTING

Tag Name	Description
	A blank line always separates paragraphs in textual material using tag.
</br>	When text need to start from a new line and not continue on the same line, the </br> tag is used.
	Display text in bold
	Display text in italic
<u></u>	Display underline
	Used to center everything found between them
          	Used for Heading purpose. The highest level header format is <h1> and lowest level is <h6>. NOTE : As the number next to

Drawing Lines

- <hr> tag draws lines and horizontal rules.
- This tag draws a horizontal line across the whole page wherever specified.

Attributes	Description
align	Aligns the line on the browser screen. Possible values LEFT,RIGHT,CENTER. Default is CENTER.
size	Changes the size of the rule.
width	Sets the width of the rule. It can be set to a fixed number of pixels, or to a percentage of the available screen width.

Spacing

- <SPACER> tag is used for inserting blank spaces in an HTML document.
- The SPACER command is understood Only by the browser Netscape.

Attributes	Description
type	To specify whether space has to be left horizontally or vertically. TYPE="HORIZONTAL" TYPE="VERTICAL"
size	Indicates the amount of space to be left. Size accepts any integer.

Font

- Font tag is deprecated.
- Instead of font tag is specified in css Text formatting properties.
- CSS text formatting properties must be specified in “STYLE”.

Attributes	Description
Font-family	• Sets the text to the specified font for the specified element. • This can hold one or multiple font names, In case of multiple fonts, • if browser not support first, it tries next one.
Font-size	• Set the size of the text • Font-size value can be absolute(using px or em) • Font-size value can be relative(using %)
color	Sets the color of the text. Color can be set to English language name, hexadecimal or RGB value like RED, #ff0000,rgb(255,0,0)

Font

- Example of CSS Style :

- Welcome to home page
- Example of html font:
- This is some text!

LISTS

- Types of LISTS :
- 1) Unordered List (Bullets)
- 2) Ordered List(Numbering)
- 3) Definition List

LISTS

- Unordered List:
- An unordered list starts with the **<ul>** tag. Each list item starts with the **<li>** tag.
- The list items will be marked with bullets (small black circles).
-
```
<ul>
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ul>
```

Unordered List

- **Unordered HTML Lists - The Style Attribute**
- **style** attribute can be added to an **unordered list**, to define the style of the marker:

Style	Description
list-style-type:disc	The list items will be marked with bullets (default)
list-style-type:circle	The list items will be marked with circles
list-style-type:square	The list items will be marked with squares
list-style-type:none	The list items will not be marked

Ordered HTML Lists

- An ordered list starts with the **<ol>** tag. Each list item starts with the **<li>** tag.
- The list items will be marked with numbers.
-
  Coffee
  Milk

Ordered HTML Lists - The Type Attribute

- A **type** attribute can be added to an **ordered list**, to define the type of the marker:

Type	Description
type="1"	The list items will be numbered with numbers (default)
type="A"	The list items will be numbered with uppercase letters
type="a"	The list items will be numbered with lowercase letters
type="I"	The list items will be numbered with uppercase roman numbers
type="i"	The list items will be numbered with lowercase roman numbers

Ordered HTML Lists

- For Example :
- <ol type="1">
  Coffee
  Tea
  Milk

Ordered HTML Lists

- css/style properties can also be specified with <li> tag.

Style attribute	value
List-style-type	decimal, decimal-leading-zero lower-alpha, lower-greek, lower-latin, lower-roman, upper-alpha, upper-latin, upper-roman,
Counter-reset	The counter-reset property creates or resets one or more counters.

Define List

- A description list, is a list of terms, with a description of each term.
- The **<dl>** tag defines a description list.
- The **<dt>** tag defines the term (name), and the **<dd>** tag defines the data (description).

Define List

- For Example :
- <dl>
  <dt>Coffee</dt>
  <dd>- black hot drink</dd>
  <dt>Milk</dt>
  <dd>- white cold drink</dd>
  </dl>

Nested HTML Lists

```
<ul>
 <li>Coffee</li>
 <li>Tea
  <ul>
    <li>Black tea
  <ol>
       <li>lemon tea</li>
       <li> ginger tea</li>
 </ol>
  </li>
    <li>Green tea</li>
  </ul>
 </li>
 <li>Milk</li>
</ul>
```

Adding graphics to html document

- <img> tag is used to add the image to the html document.
- Html accepts two picture file **.gif** and **.jpg.**
- Example :
- <img src="smile.gif" height="57px" width="44px" alt="image not available" border="3px" style="padding:10px;"></img>

Image

- To put image left or right style tag is useful.
- <img src="smile.gif" style="float:right"></img>
-

Table tag

- Table is two dimensional matrix, consisting of rows and columns.
- Table rows can be of two types :
- Header Rows: A row that spans across columns of a table is called the Header Row.
- Data Rows :Individual data cells placed in the horizontal plane creates a data row.
- For header row <th></th> tag is used.
- For data row <tr> </tr> tag is used.
- For each column of a table is described between the <td> </td> tag.

Table tag

Attribute	Value
align	Horizontal alignment is control by the ALIGN attribute. It can be set to left, right,center,justify or inherit. This attribute should be used in CSS.
Valign (td)	It controls the vertical alignment. It accepts the values TOP, MIDDLE or Bottom.
Width	Set the width to a specific number of ppixels or to a percentage of the available screen width.If width is not specified, the data cell is adjusted based on the cell data value.
border	The border to be placed around the table. The border thickness is specified in pixels.
cellpadding	This attribute controls the distance between the data in a cell and the boundaries of the cell.
cellspacing	Controls the spacing between adjacent cells.
colspan	The colspan attribute can be set equal to the number of columns the cell is to occupy. This attribute is useful when one row of the table needs to be a certain number of columns wide.
rowspan	It works in the same way as the colspan attribute except that it allows a cell to take up more than one row. The attribute can be set by giving a numeric value.

Caption tag

- Table Headings are called Captions.
- To give the Caption, <caption>…</caption> tag is used.
- Attribute of the caption tag :

Attribute	value
Css/style Caption-side	It controls placing of the caption with respect to the table. 1) caption-side:bottom will place the caption immediately below the table. 2) caption-side:top will place the caption immediately above the table. 3) caption-side:right will place the caption immediately right side of the table. 4) caption-side:left will place the captionimmediately left side of the table.

Linking document

- Html allows linking to other HTML documents as well as images.
- The text or an image that provides such linkages is called Hypertext, a Hyperlink or a Hotspot.
- The browser distinguishes Hyperlinks from normal text. Every Hyperlink,
  - Appears blue in color.
  - The hypertext text/image is underlined.
  - When mouse cursor is placed over it, the standard arrow shaped mouse cursor changes to the shape of a hand.

Linking document

- To generate the hyperlink <a> tag is used.
- Syntax:
-
- There are two types of hyperlink
  1) Links to an external document
  2) links to a specific place within the same document.
     - Generally done in case of a web page containing a large amount of text.

External Document References

1) Visit second page
2) Visit my second page

Mention the section in the second page like:

This is section

Internal Document References

- Sometimes, a jump is required to a different location in the same document.
- Syntax:
- <a name="location_name">
- …

Images as hyperlinks

-

Image Map

- If the image is a large image and there is a need to link multiple documents to the same image, there has to be a technique that divides the image into multiple sections and allow linking of each section to a different document.
- These can be done through Image Map.
- Image maps can be created and applied to an image so specific portions of the image can be linked to a different file/image.

Image Map

- Creating an image map is a two-step process:
- 1) create an image map i.e. divide the image into various areas. This is done using the <MAP> </MAP>

  Tag.
- 2) Deals with applying the image map to a particular image.

For these, UseMap attribute of <img> tag is used.

Step :1 Map tag

- Syntax :
- <map name="map name">…..</map>
- Within the <map> ….<map> tags the <Area> tag is specified.
- This tag defines the specific region within the image.
- Attribute of area tag is as below:

Step :1 Map tag

- Attribute of Area tag is as below:

Shape	The shape of a region can be one of the following: Rect,Circle,Polygon,Default
Coords	Each of the above shapes takes different coordinate parameters. A Rectange will take four coordinates : x1,y1,x2,y2 A circle will take three coordinates : centerx,centery and radius. A Polygon will take three or more pairs of coordinates denoting a polygonal region. A Default shape will not take any parameter and it indicates the portion of the image not specified under any area tag.
Href	Takes the name of the .html file that is linked to the particular area on the image.

Step :2
UseMap

- Syntax:
- <img UseMap="#map_name"></img>

Example

- <MAP NAME="map1">
- <AREA
- HREF="contacts.html" ALT="Contacts" TITLE="Contacts" SHAPE="RECT" COORDS="6,116,97,184">
- <AREA
- HREF="products.html" ALT="Products" TITLE="Products" SHAPE="CIRCLE" COORDS="251,143,47">
- <AREA
- HREF="new.html" ALT="New!" TITLE="New!" SHAPE="POLY" COORDS="150,217, 190,257, 150,297,110,257">
- </MAP>

- <IMG SRC="testmap.gif" ALT="map of GH site" BORDER="0" WIDTH="300" HEIGHT="300" USEMAP="#map1">

Form Tag

- HTML forms can be made up of a varity of HTML elements that accept user input.
- The <FORM></FORM> HTML tags enclose the HTML elements that make up the form.
- Once a JavaScript enabled browser encounters these tags in an HTML file the JS enabled browser creates a form object in memory, which is held as an element of the forms array.
- The form object has properties like name, method, and action.

Form Tag

- Method:
- The Method property is used to specify the method used to send data captured by various form elements back to the web server.
- The method used can be either GET or POST.
- Get Method sends the data captured by form elements
- To the web server encoded into a URL, which points to a web server.
- The data captured in form elements is appended to the URL.

Form Tag

- POST Method sends the data captured by form elements to the web server as a separate bit-stream of data.
- When there is a large amount of data to be sent back to the web server, POST method is used.
- When method attribute is not specified, by default GET method is used to send the data to the server.

Form Tag

- Action
- The Action attribute of the <form> tags points to the URL(address) of a program on the web server that will process the form data captured and being sent back.
- The server side program that processes this data can be written in any scripting language that the web server understands.

Form Tag

- HTML elements used to capture form data are specified as attributes of the <input> </input> tags used within the <form></form> tags.
- The HTML form elements that can be specified as attributes to the <input> tag are listed in next slide:

Form Tag

Form elements	Syntax
Text	<input type="text">
Password	<input type="password">
Button	<input type="button">
Checkbox	<input type="Checkbox">
Radio	<input type="Radio"
Reset	<input type="reset"
Submit	<input type="submit">
Select	<select> <option>OPTION1</option> <option>OPTION2</option> </select>
TextArea	<TextArea> Default Text </TextArea>
Hidden	<input type="hidden">

Form Tag

- Each of these form elements can ne named ,their names can then be used for referencing them in JavaScript.
- “name” property associated with every HTML object used in a form.
- There are several other properties and methods associated with each of these form objects.
- These Properties and Methods, along with the Objects with which they are associated is summarized in Table1.

THANK YOU