Abstract
Tutorials written in Java as Java Applets were ported to HTML5 and JavaScript. Interactivity was provided via JavaScript using Canvas, ThreeJS and the built-in JavaScript tools while programming in and learning about the powerful modal text editor, vim.

HTML5 + JavaScript
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Overview
Almost all web pages today are comprised of HTML, CSS and Javascript. These languages are written in plain text but are structured in such a way that web browsers can interpret. Each of them tells the web browser how to do a specific thing.

HTML Hypertext Markup Language
HTML is used to represent content – like images and text. It is comprised of just one thing: tags. Tags can store other tags or plain text. An opening and closing tag comprise an element.

CSS Cascading Style Sheet
CSS is tells the browser how to color, position, and otherwise style HTML elements.

JS JavaScript
JavaScript is a very powerful addition to HTML and CSS, and it can reference both the HTML and CSS elements. It can also listen to and respond to mouse and keyboard interaction.

CSS

<table>
<thead>
<tr>
<th>mark</th>
<th>type</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td>class</td>
<td>selector</td>
<td>selects html class</td>
</tr>
<tr>
<td>id</td>
<td>selector</td>
<td>selects html id</td>
</tr>
<tr>
<td>property</td>
<td>property</td>
<td>property that governs how an element looks or behaves; “color” sets background</td>
</tr>
<tr>
<td>value</td>
<td>value</td>
<td>describes the property: “absolute” positions without contextual awareness</td>
</tr>
</tbody>
</table>

JS

<table>
<thead>
<tr>
<th>mark</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td>globals</td>
<td>defines variables for entire scope of “main” function</td>
</tr>
<tr>
<td>lines</td>
<td>relevant code that draws lines on canvas’s context</td>
</tr>
</tbody>
</table>

Vim

Overview
Since software developers are editing text a lot, text editors tend to be very important to them.

Vim Vi iMproved
Vim is a very powerful tool for developers that is designed to do one thing: edit text efficiently. Despite its old code base, it is quite powerful. It was released in 1991 but has grown considerably since then into a mature and powerful editor.

Modality normal insert command visual select ex
In vim, you can be in one of six modes. The most common are “normal” and “insert” mode. In normal mode you can perform actions. Each action is mapped to a key, a combination of keys, or a sequence of key strokes. You can remap all of these keys in any of the modes.

normal mode in which most movements and commands are performed; any other mode can also be accessed from normal mode
insert allows characters to be inserted into buffer as they are typed. <esc> returns to normal mode
command entered by typing ; this mode allows user to use vimscript and run built-in or shell commands
visual block, line, or in-line select that defines a visual selection for using commands on a region
select & ex ex – for compatibility; select – less-useful visual

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