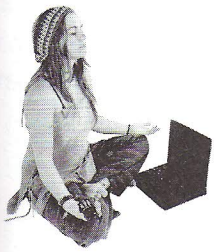
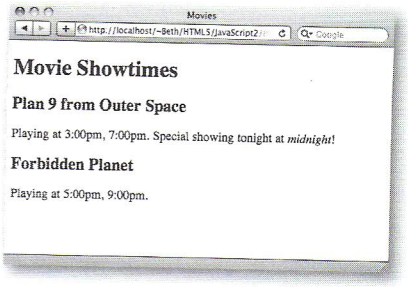


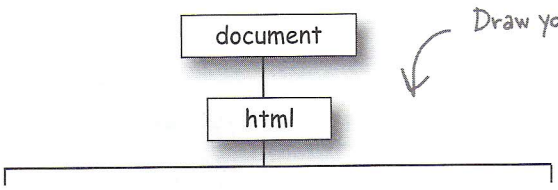
BE the Browser

Your job is to act like you're the browser. You need to parse the HTML and build your very own DOM from it. Go ahead and parse the HTML to the right, and draw your DOM below. We've already started it for you.

Check your answer with our solution at the end of the chapter before you go on.




```
<!doctype html>
<html lang="en">
  <head>
    <title>Movies</title>
  </head>
  <body>
    <h1>Movie Showtimes</h1>
    <h2 id="movie1" >Plan 9 from Outer Space</h2>
    <p>Playing at 3:00pm, 7:00pm.
      <span>
        Special showing tonight at <em>midnight</em>!
      </span>
    </p>
    <h2 id="movie2">Forbidden Planet</h2>
    <p>Playing at 5:00pm, 9:00pm.</p>
  </body>
</html>
```

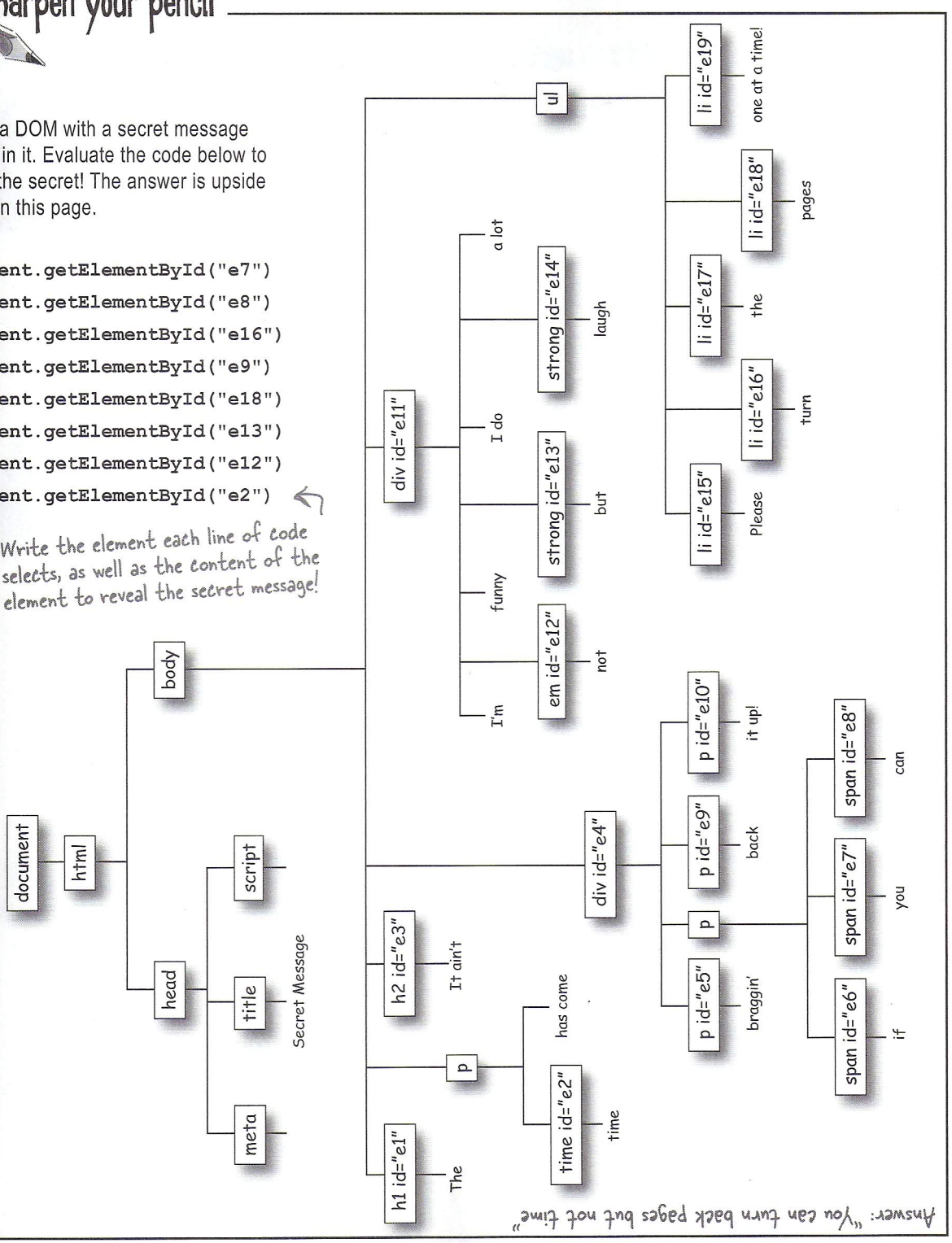


Sharpen your pencil

Here's a DOM with a secret message hidden in it. Evaluate the code below to reveal the secret! The answer is upside down on this page.

```
document.getElementById("e7")
document.getElementById("e8")
document.getElementById("e16")
document.getElementById("e9")
document.getElementById("e18")
document.getElementById("e13")
document.getElementById("e12")
document.getElementById("e2")
```

Write the element each line of code selects, as well as the content of the element to reveal the secret message!



Answer: "You can turn back pages but not time"

Circle and identify at least one of each of the following:
<section> <article> <header> <footer> <nav> <aside>

Georgia Institute of Technology
<header>
Georgia Tech
JACKET GUARDIAN
BUZZPORT
CAMPUS MAP
DIRECTORIES
Search
YOUR GEORGIA TECH
PROSPECTIVE STUDENTS
CURRENT STUDENTS
FACULTY & STAFF
PARENTS
ALUMNI
EMPLOYERS & INDUSTRY
GOVERNMENT PARTNERS
VISITORS
<nav>
About Tech
Admissions
Campuses & Global Reach
Colleges & Schools
Degree Programs
Professional Education
Employment
News Room
Research
Libraries & Info Center
Sports
Alumni Association
Economic Development
Tickets & Merchandise
Campus Calendar
Contact Us
Arctic Sea Ice Decline May Be Driving Snowy Winters
STRATEGIC VISION
DESIGNING THE FUTURE
VIDEOS @ TECH
BLOGS @ TECH
<article>
NEWS & EVENTS
Georgia Tech Students Study Design Challenges at the Atlanta Airport
Georgia Tech students offer design advice to Hartsfield-Jackson Atlanta International Airport.
College of Computing Hires Fortnow, Anton to Lead Schools
Georgia Tech's College of Computing has hired renowned computing leaders Lance Fortnow and Annie Antón to chair its schools of Computer Science and Interactive Computing.
respectively.
Georgia Tech Accepted Students Raise the Bar
Georgia Tech has high expectations for the 2012-13 freshman class, because their qualifications for entry have raised the bar.
MAR 26
Coal in Your Community
The Student Planning Association's Social Justice Committee hosts its annual lecture event.
TWEETS @ TECH
tweets @ Tech
APPLY TO TECH
GREEN BUZZ
GIVING TO TECH
CAREERS @ TECH
EMERGENCY PROCEDURES
DIGITAL LOUNGE @ TECH
<aside>
DID YOU KNOW?
The first advanced computing system at Georgia Tech was the $300,000 AC Network Calculator, installed in 1947. It occupied an entire building and was used to model power station distribution systems with unprecedented accuracy.
<section>
CONTACT US • LEGAL & PRIVACY INFO • ACCOUNTABILITY • SITE MAP • TECH LINGO •
©2012 Georgia Institute of Technology :: Atlanta, Georgia 30332
<footer>
http://gatech.edu/?n=2

HTML Cheat Sheet [TAGS]

New [tags added in HTML5]

<article>	self-contained composition that is independently distributable
<aside>	section of page that consists of content tangentially related to content around it
<audio>	sound content
<bdi>	span of text to be isolated from surroundings for bidirectional formatting purposes
<canvas>	area that can be used to draw graphics via JavaScript
<command>	user invokable command
<datalist>	dropdown list
<datatemplate>	data template
<details>	details of an element
<embed>	embedded content
<figcaption>	caption of figure element
<figure>	group of media content
<footer>	footer for section or page
<header>	header for section or page
<hgroup>	group of headings for section
<keygen>	generated key in a form
<mark>	marked text
<meter>	measurement in defined range
<nav>	navigation links
<output>	represents results of calculation
<progress>	progress of any kind of task
<rp>	parenthesized ruby text
<rt>	ruby text
<ruby>	ruby annotations
<section>	section in a document
<source>	media resources
<summary>	header of a detail element
<time>	date/time
<video>	video
<wbr>	possible line break

Existing [tags in HTML4 & 5]

<!--...-->	comment
<!doctype>	document type
<a>	hyperlink
<abbr>	abbreviation
<address>	address element
<area>	image map area
<b>	bold text
<base>	base URL for all links in page relative to document root
<bdo>	text direction
<blockquote>	long quotation
<body>	body element
 	single line break
<button>	push button
<caption>	table caption
<cite>	citation
<code>	code text
<col>	attributes for columns
<colgroup>	groups of columns
<dd>	definition description
<del>	deleted text
	generic block-level element
<dfn>	defining instance of a term
<dl>	definition list
<dt>	definition term
	emphasized text
<fieldset>	logically group items in a form
<form>	defines a form
<h1> to <h6>	header 1 to header 6
<head>	document information
<hr>	horizontal rule
<html>	html document
<i>	italic text
<iframe>	inline sub window
<img>	image
<input>	input field
<ins>	inserted text
<kbd>	keyboard text
<label>	label for a form control
<legend>	title in a fieldset
	list item
<link>	resource reference
<map>	image map
<menu>	menu list
<meta>	meta information
<noscript>	no script section

[TAGS]

Old [unsupported tags]

<acronym>	*acronym*
<applet>	*applet*
<basefont>	*base font*
<bgsound>	*background sound*
<big>	*big text*
	centered text
<fn>	*footnotes*
<font>	*text font, size, and color*
<frame>	*sub window*
<frameset>	*set of frames*
<isindex>	*provides searchable index related to current document*
<dir>	*directory list*
<noembed>	*no embed section*
<noframes>	*no frame section*
<s>	*strikethrough text*
<strike>	*strikethrough text*
<tt>	*teletype text*
<u>	*underlined text*
<xmp>	*preformatted text*

Existing [tags in HTML4 & 5] (cont.)

<object>	*embedded object*
	ordered list
<optgroup>	*option group*
<option>	*option in a drop-down list*
<p>	*paragraph*
<param>	*parameter for an object*
<pre>	*preformatted object*
<q>	*short quotation*
<samp>	*sample computer code*
<script>	*script*
<select>	*selectable list*
<small>	*small text*
	inline generic container
	strong text
<style>	*style definition*
<sub>	*subscripted text*
<sup>	*superscripted text*
<table>	*table*
<tbody>	*table body*
<td>	*table cell*
<textarea>	*text area*
<tfoot>	*table footer*
<th>	*table header*
<thead>	*wraps row containing table headers*
<title>	*document title*
<tr>	*table row*
	unordered list
<var>	*variable*

Brought to you by:

inmotion hosting

CSS CHEAT SHEET

Shorthand*

background
border
border-bottom
border-left
border-right
border-top
font
list-style
margin
padding

Comments

/* Comment */

Pseudo Selectors

:hover
:active
:focus
:link
:visited
:first-line
:first-letter

Media Types

all
braille
embossed
handheld
print
projection
screen
speech
tty
tv

Units

Length %
em
pt
px
Keywords bolder
lighter
larger

SYNTAX

Syntax

```
selector {property: value;}
```

External Style Sheet

```
<link rel="stylesheet" href="style.css" />
```

Internal Style

```
<style >
  selector {property: value;}
</style>
```

Inline Style

```
<tag style="property: value">
```

GENERAL

Class	String preceded by a period
ID	String preceded by a hash mark
div	Formats structure or block of text
span	Inline formatting
color	Foreground color
cursor	Appearance of the cursor
display	block; inline; list-item; none
overflow	How content overflowing its box is handled visible, hidden, scroll, auto
visibility	visible, hidden

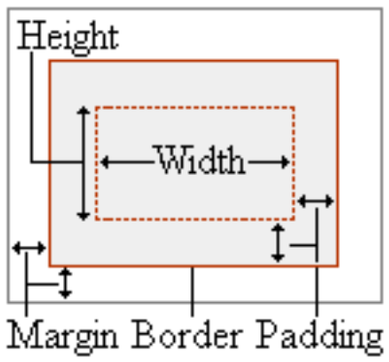
FONT

font-style	Italic, normal
font-variant	normal, small-caps
font-weight	bold, normal, lighter, bolder, integer (100-900)
font-size	Size of the font
font-family	Specific font(s) to be used

TEXT

letter-spacing	Space between letters
line-height	Vertical distance between baselines
text-align	Horizontal alignment
text-decoration	blink, line-through, none, overline, underline
text-indent	First line indentation
text-transform	capitalize, lowercase, uppercase
vertical-align	Vertical alignment
word-spacing	Spacing between words

BOX MODEL



height; width; margin-top; margin-right; margin-bottom; margin-left; padding-top; padding-right; padding-bottom; padding-left;

BORDER

border-width	Width of the border
border-style	dashed; dotted; double; groove; inset; outset; ridge; solid; none
border-color	Color of the border

POSITION

clear	Any floating elements around the element?	both, left, right, none
float	Floats to a specified side	left, right, none
left	The left position of an element	auto, length values (pt, in, cm, px)
top	The top position of an element	auto, length values (pt, in, cm, px)
position	static, relative, absolute	
z-index	Element above or below overlapping elements? auto, integer (higher numbers on top)	

BACKGROUND

background-color	Background color
background-image	Background image
background-repeat	repeat, no-repeat, repeat-x, repeat-y
background-attachment	Background image scroll with the element? scroll, fixed
background-position	(x y), top, center, bottom, left, right

LIST

list-style-type	Type of bullet or numbering in the list disc; circle; square; decimal; lower-roman; upper-roman; lower-alpha; upper-alpha; none
list-style-position	Position of the bullet or number in a list inside; outside
list-style-image	Image to be used as the bullet in a list

CSS3

border-radius	Round the corners of backgrounds and borders horizontal_radius_value vertical_radius_value
box-shadow	Drop shadows hor-shadow vert-shadow blur spread color inset

CSS CHEAT SHEET

Shorthand*

background
border
border-bottom
border-left
border-right
border-top
font
list-style
margin
padding

Comments

/* Comment */

Pseudo Selectors

:hover
:active
:focus
:link
:visited
:first-line
:first-letter

Media Types

all
braille
embossed
handheld
print
projection
screen
speech
tty
tv

Units

Length %
em
pt
px
Keywords
bolder
lighter
larger

SYNTAX

Syntax

selector {property: value;}

External Style Sheet

<link rel="stylesheet" href="style.css" />

Internal Style

<style >
selector {property: value;}
</style>

Inline Style

<tag style="property: value">

GENERAL

Class	String preceded by a period
ID	String preceded by a hash mark
div	Formats structure or block of text
span	Inline formatting
color	Foreground color
cursor	Appearance of the cursor
display	block; inline; list-item; none
overflow	How content overflowing its box is handled visible, hidden, scroll, auto
visibility	visible, hidden

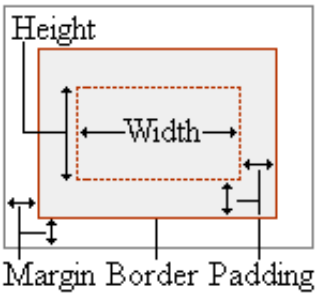
FONT

font-style	Italic, normal
font-variant	normal, small-caps
font-weight	bold, normal, lighter, bolder, integer (100-900)
font-size	Size of the font
font-family	Specific font(s) to be used

TEXT

letter-spacing	Space between letters
line-height	Vertical distance between baselines
text-align	Horizontal alignment
text-decoration	blink, line-through, none, overline, underline
text-indent	First line indentation
text-transform	capitalize, lowercase, uppercase
vertical-align	Vertical alignment
word-spacing	Spacing between words

BOX MODEL



height; width; margin-top; margin-right; margin-bottom; margin-left; padding-top; padding-right; padding-bottom; padding-left;

BORDER

border-width	Width of the border
border-style	dashed; dotted; double; groove; inset; outset; ridge; solid; none
border-color	Color of the border

POSITION

clear	Any floating elements around the element? both, left, right, none
float	Floats to a specified side left, right, none
left	The left position of an element auto, length values (pt, in, cm, px)
top	The top position of an element auto, length values (pt, in, cm, px)
position	static, relative, absolute
z-index	Element above or below overlapping elements? auto, integer (higher numbers on top)

BACKGROUND

background-color	Background color
background-image	Background image
background-repeat	repeat, no-repeat, repeat-x, repeat-y
background-attachment	Background image scroll with the element? scroll, fixed
background-position	(x y), top, center, bottom, left, right

LIST

list-style-type	Type of bullet or numbering in the list disc; circle; square; decimal; lower-roman; upper-roman; lower-alpha; upper-alpha; none
list-style-position	Position of the bullet or number in a list inside; outside
list-style-image	Image to be used as the bullet in a list

CSS3

border-radius	Round the corners of backgrounds and borders horizontal_radius_value vertical_radius_value
box-shadow	Drop shadows hor-shadow vert-shadow blur spread color inset

* The properties for each selector are in the order they should appear when using shorthand notation.

HTML5 Canvas Cheat Sheet v1.1

http://blog.nihilogic.dk/

Canvas element

Attributes

Name	Type	Default
width	*unsigned long*	300
height	*unsigned long*	150

Methods

Return	Name
string	**toDataURL(** [Optional] *string* **type**, [Variadic] *any* **args)**
Object	**getContext(** *string* **contextId)**

2D Context

Attributes

Name	Type
canvas	*HTMLCanvasObject* [readonly]

Methods

Return	Name
void	**save( )**
void	**restore( )**

Transformation

Methods

Return	Name
void	**scale(** *float* **x**, *float* **y)**
void	**rotate(** *float* **angle)**
void	**translate(** *float* **x**, *float* **y)**
void	**transform(** *float* **m11**, *float* **m12**, *float* **m21**, *float* **m22**, *float* **dx**, *float* **dy)**
void	**setTransform(** *float* **m11**, *float* **m12**, *float* **m21**, *float* **m22**, *float* **dx**, *float* **dy)**

Image drawing

Methods

Return	Name
void	**drawImage(** *Object* **image**, *float* **dx**, *float* **dy**, [Optional] *float* **dw**, *float* **dh)**

Argument "image" can be of type *HTMLImageElement*, *HTMLCanvasElement* or *HTMLVideoElement*

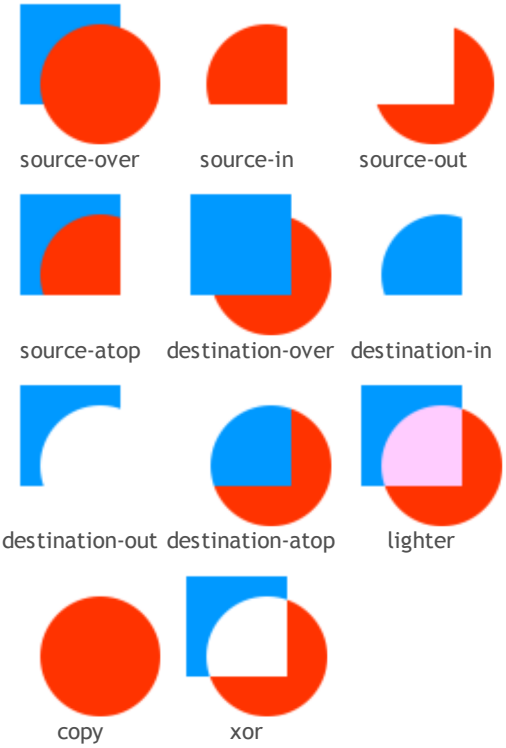
void	**drawImage(** *Object* image, *float* **sx**, *float* **sy**, *float* **sw**, *float* **sh**, *float* **dx**, *float* **dy**, *float* **dw**, *float* **dh)**

Compositing

Attributes

Name	Type	Default
globalAlpha	*float*	1.0
globalCompositeOperation	*string*	source-over

Supports any of the following values:



Line styles

Attributes

Name	Type	Default
lineWidth	*float*	1.0
lineCap	*string*	butt

Supports any of the following values:

lineJoin	*string*	miter

Supports any of the following values:

miterLimit	*float*	10

Colors, styles and shadows

Attributes

Name	Type	Default
strokeStyle	*any*	black
fillStyle	*any*	black
shadowOffsetX	*float*	0.0
shadowOffsetY	*float*	0.0
shadowBlur	*float*	0.0
shadowColor	*string*	transparent black

Methods

Return	Name
CanvasGradient	**createLinearGradient(** *float* **x0**, *float* **y0**, *float* **x1**, *float* **y1)**
CanvasGradient	**createRadialGradient(** *float* **x0**, *float* **y0**, *float* **r0**, *float* **x1**, *float* **y1**, *float* **r1)**
CanvasPattern	**createPattern(** *Object* **image**, *string* **repetition)**

Argument "image" can be of type *HTMLImageElement*, *HTMLCanvasElement* or *HTMLVideoElement*
"repetition" supports any of the following values: [repeat (default), repeat-x, repeat-y, no-repeat]

CanvasGradient interface

void	**addColorStop(** *float* **offset**, *string* **color)**

CanvasPattern interface

No attributes or methods.

Paths

Methods

Return	Name
void	**beginPath( )**
void	**closePath( )**
void	**fill( )**
void	**stroke( )**
void	**clip( )**
void	**moveTo(** *float* **x**, *float* **y)**
void	**lineTo(** *float* **x**, *float* **y)**
void	**quadraticCurveTo(** *float* **cpx**, *float* **cpy**, *float* **x**, *float* **y)**
void	**bezierCurveTo(** *float* **cp1x**, *float* **cp1y**, *float* **cp2x**, *float* **cp2y**, *float* **x**, *float* **y)**
void	**arcTo(** *float* **x1**, *float* **y1**, *float* **x2**, *float* **y2**, *float* **radius)**
void	**arc(** *float* **x**, *float* **y**, *float* **radius**, *float* **startAngle**, *float* **endAngle**, *boolean* **anticlockwise)**
void	**rect(** *float* **x**, *float* **y**, *float* **w**, *float* **h)**
boolean	**isPointInPath(** *float* **x**, *float* **y)**

Text

Attributes

Name	Type	Default
font	*string*	10px sans-serif
textAlign	*string*	start

Supports any of the following values: [start, end, left, right, center]

textBaseline	*string*	alphabetic

Supports any of the following values: [top, hanging, middle, alphabetic, ideographic, bottom]

Methods

Return	Name
void	**fillText(** *string* **text**, *float* **x**, *float* **y**, [Optional] *float* **maxWidth)**
void	**strokeText(** *string* **text**, *float* **x**, *float* **y**, [Optional] *float* **maxWidth)**
TextMetrics	**measureText(** *string* **text)**

TextMetrics interface

width	*float*	[readonly]

Rectangles

Methods

Return	Name
void	**clearRect(** *float* **x**, *float* **y**, *float* **w**, *float* **h)**
void	**fillRect(** *float* **x**, *float* **y**, *float* **w**, *float* **h)**
void	**strokeRect(** *float* **x**, *float* **y**, *float* **w**, *float* **h)**

Pixel manipulation

Methods

Return	Name
ImageData	**createImageData(** *float* **sw**, *float* **sh)**
ImageData	**createImageData(** *ImageData* **imagedata)**
ImageData	**getImageData(** *float* **sx**, *float* **sy**, *float* **sw**, *float* **sh)**
void	**putImageData(** *ImageData* **imagedata**, *float* **dx**, *float* **dy**, [Optional] *float* **dirtyX**, *float* **dirtyY**, *float* **dirtyWidth**, *float* **dirtyHeight)**

ImageData interface

width	*unsigned long*	[readonly]
height	*unsigned long*	[readonly]
data	*CanvasPixelArray*	[readonly]

CanvasPixelArray interface

length	*unsigned long*	[readonly]

Source: http://www.whatwg.org/specs/web-apps/current-work/ (2009-05-04)