

Curso JavaScript 6.0



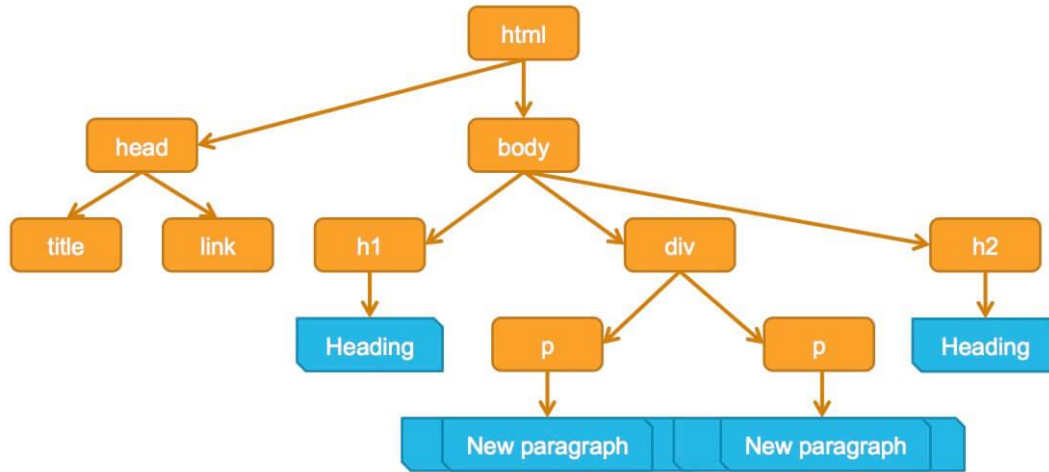
JavaScript

Rafael Herrera García

Octubre 2019



JavaScript and the DOM

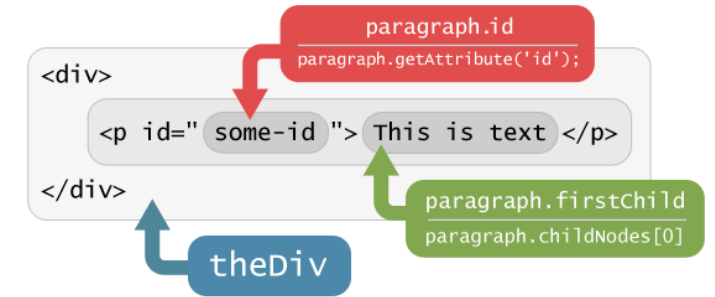


MERKLE | RKG

Tema 3

Document Object Model (DOM)

```
var theDiv = document.getElementsByTagName('div')[0];  
var paragraph = theDiv.getElementById('some-id');
```



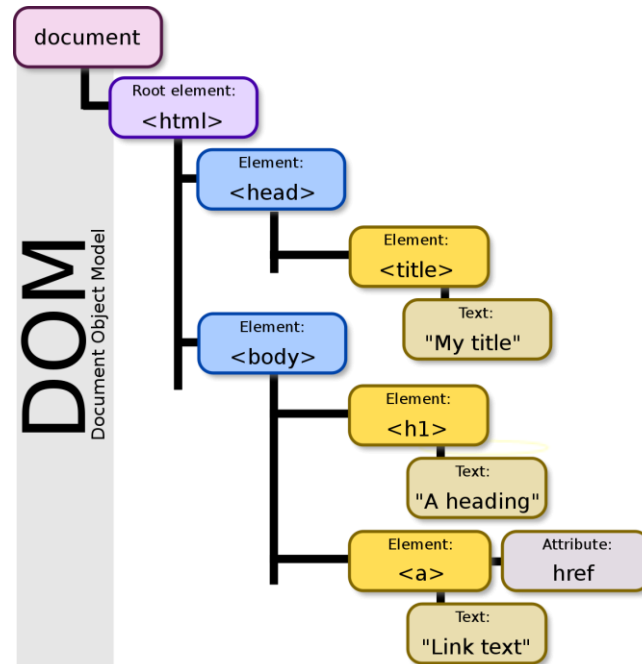
JS

— WEB DEVELOPMENT 101 —

DOM Manipulation

Introducción a DOM

- DOM es un modelo que permite manipular mediante Javascript un documento de hipertexto (HTML).



Introducción a DOM

- El W3C define como un estándar a DOM para acceder a un documento.
- El W3C separa en tres categorías
 - Core DOM
 - XML DOM
 - ***HTML DOM***

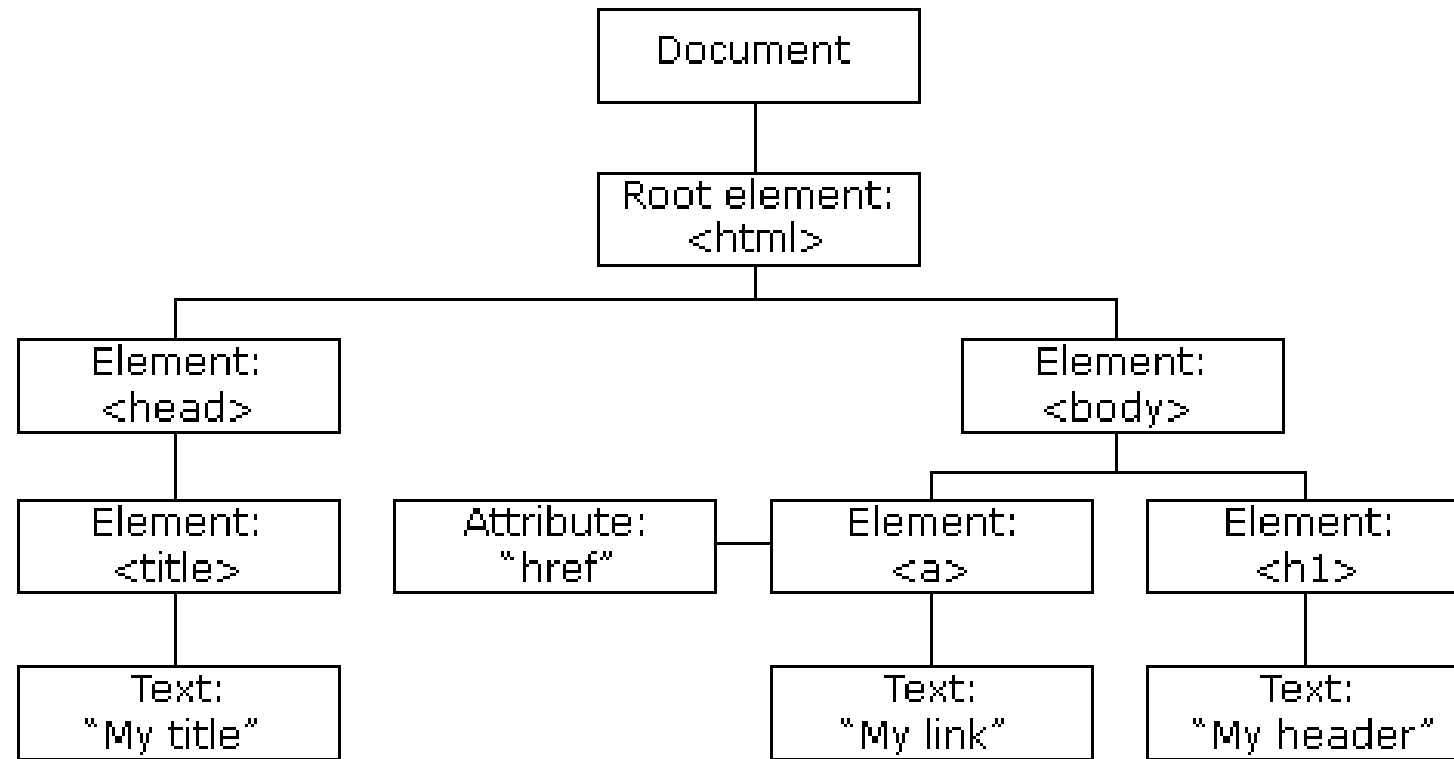


Introducción a DOM

- HTML DOM define:
 - A los elementos de un documento HTML como objetos
 - Las propiedades de todos los elementos de un documento HTML
 - Los métodos de acceso a todos los elementos HTML
 - Los eventos de todos los elementos de un documento HTML.

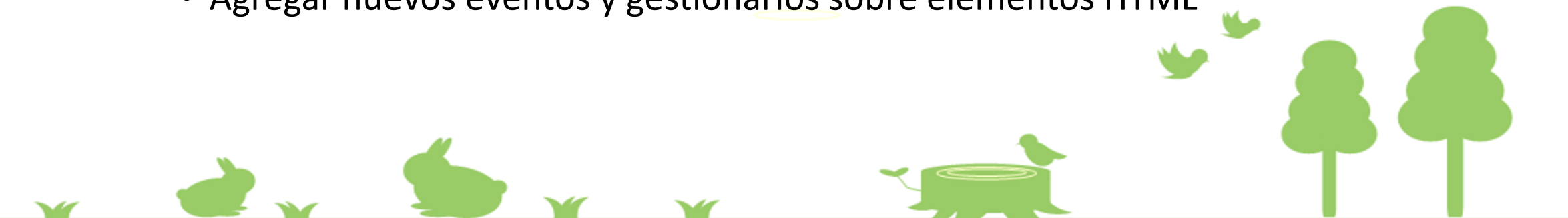


Introducción a DOM



Introducción a DOM

- ¿Qué puedo hacer desde Javascript sobre un documento HTML?
 - Cambiar los elementos HTML
 - Modificar el estado de los atributos de los elementos HTML
 - Modificar los estilos (CSS) de elementos HTML
 - Eliminar elementos y atributos HTML
 - Agregar nuevos elementos HTML
 - Manejar los eventos que ocurren sobre elementos HTML
 - Agregar nuevos eventos y gestionarlos sobre elementos HTML



Introducción a DOM

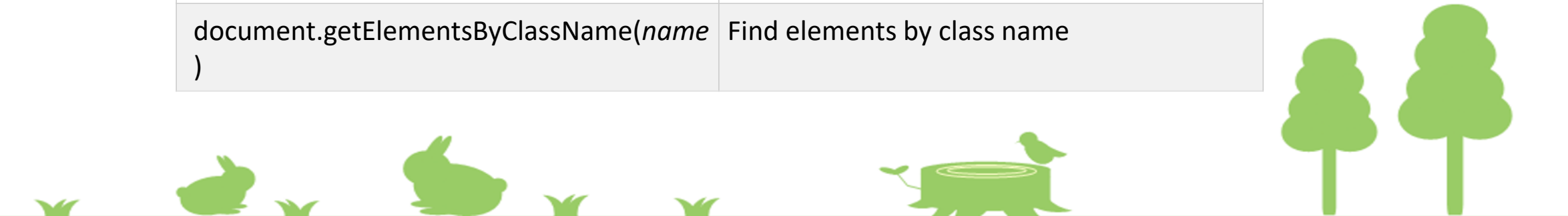
- DOM tiene métodos y propiedades que pueden ser manipulados desde Javascript.
- Cualquier elementos HTML de un documento se puede tratar como un objeto.
- Un método es una acción a realizar o ejecutarse.
- Una propiedad es un dato que puede ser recuperado (get) o modificado(set).



El objeto document

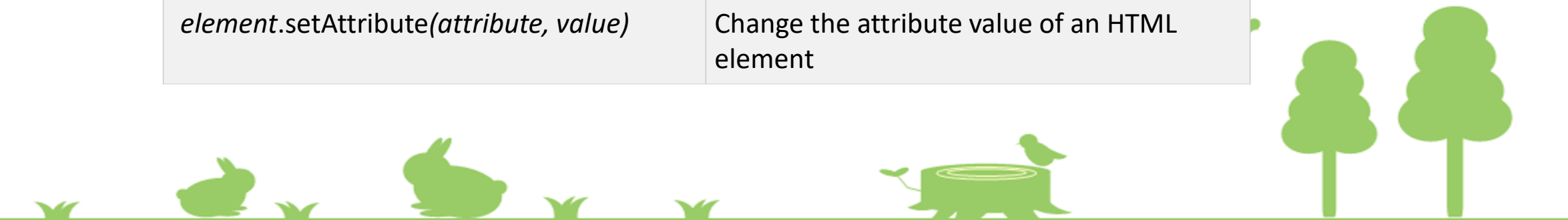
- Es el objeto al que pertenecen todos los elementos de un documento HTML.
- Desde este objeto se puede acceder a los elementos y sus propiedades que están en un documento HTML.

Method	Description
<code>document.getElementById(<i>id</i>)</code>	Find an element by element id
<code>document.getElementsByTagName(<i>name</i>)</code>	Find elements by tag name
<code>document.getElementsByClassName(<i>name</i>)</code>	Find elements by class name



El objeto document

Property	Description
<i>element.innerHTML = new html content</i>	Change the inner HTML of an element
<i>element.innerText = new text content</i>	Change the text of an element
<i>element.attribute = new value</i>	Change the attribute value of an HTML element
<i>element.style.property = new style</i>	Change the style of an HTML element
Method	Description
<i>element.setAttribute(attribute, value)</i>	Change the attribute value of an HTML element



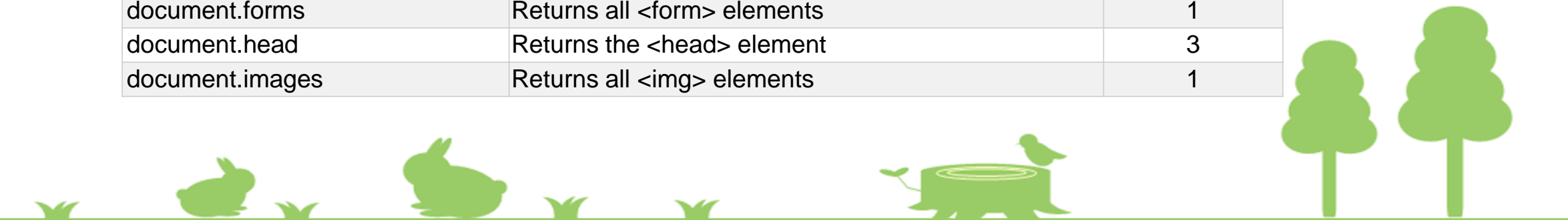
El objeto document

Method	Description
<code>document.createElement(<i>element</i>)</code>	Create an HTML element
<code>document.removeChild(<i>element</i>)</code>	Remove an HTML element
<code>document.appendChild(<i>element</i>)</code>	Add an HTML element
<code>document.replaceChild(<i>new</i>, <i>old</i>)</code>	Replace an HTML element
<code>document.write(<i>text</i>)</code>	Write into the HTML output stream



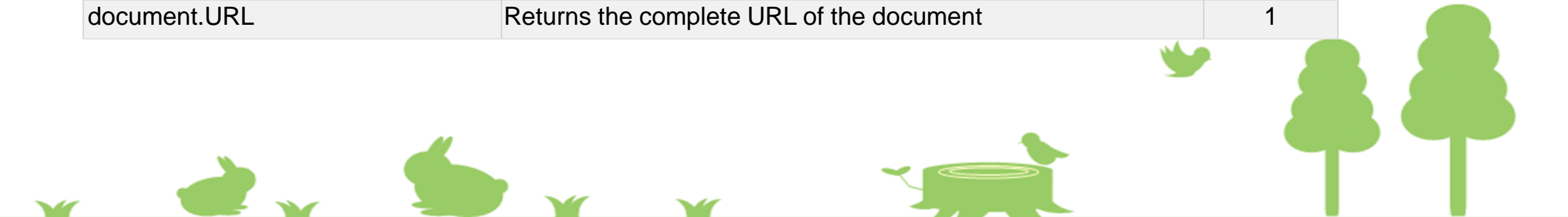
El objeto document

Property	Description	DOM
document.anchors	Returns all <a> elements that have a name attribute	1
document.baseURI	Returns the absolute base URI of the document	3
document.body	Returns the <body> element	1
document.cookie	Returns the document's cookie	1
document.doctype	Returns the document's doctype	3
document.documentElement	Returns the <html> element	3
document.documentMode	Returns the mode used by the browser	3
document.documentURI	Returns the URI of the document	3
document.domain	Returns the domain name of the document server	1
document.embeds	Returns all <embed> elements	3
document.forms	Returns all <form> elements	1
document.head	Returns the <head> element	3
document.images	Returns all elements	1



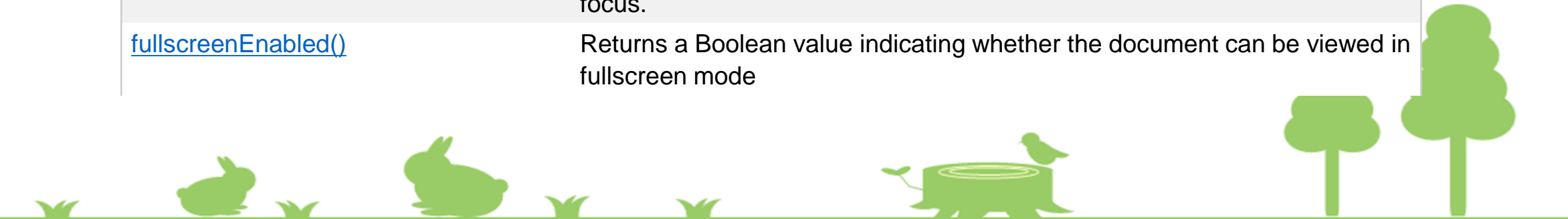
El objeto document

Property	Description	DOM
document.images	Returns all elements	1
document.implementation	Returns the DOM implementation	3
document.inputEncoding	Returns the document's encoding (character set)	3
document.lastModified	Returns the date and time the document was updated	3
document.links	Returns all <area> and <a> elements that have a href attribute	1
document.readyState	Returns the (loading) status of the document	3
document.referrer	Returns the URI of the referrer (the linking document)	1
document.scripts	Returns all <script> elements	3
document.strictErrorChecking	Returns if error checking is enforced	3
document.title	Returns the <title> element	1
document.URL	Returns the complete URL of the document	1



El objeto document

Method	Description
<u>addEventListener()</u>	Attaches an event handler to the document
<u>adoptNode()</u>	Adopts a node from another document
<u>close()</u>	Closes the output stream previously opened with document.open()
<u>createAttribute()</u>	Creates an attribute node
<u>createComment()</u>	Creates a Comment node with the specified text
<u>createDocumentFragment()</u>	Creates an empty DocumentFragment node
<u>createElement()</u>	Creates an Element node
<u>createEvent()</u>	Creates a new event
<u>createTextNode()</u>	Creates a Text node
<u>execCommand()</u>	Invokes the specified clipboard operation on the element currently having focus.
<u>fullscreenEnabled()</u>	Returns a Boolean value indicating whether the document can be viewed in fullscreen mode



El objeto document

Method	Description
getElementById()	Returns the element that has the ID attribute with the specified value
getElementsByClassName()	Returns a NodeList containing all elements with the specified class name
getElementsByName()	Returns a NodeList containing all elements with a specified name
getElementsByTagName()	Returns a NodeList containing all elements with the specified tag name
hasFocus()	Returns a Boolean value indicating whether the document has focus
importNode()	Imports a node from another document
normalize()	Removes empty Text nodes, and joins adjacent nodes
normalizeDocument()	Removes empty Text nodes, and joins adjacent nodes
open()	Opens an HTML output stream to collect output from document.write()
querySelector()	Returns the first element that matches a specified CSS selector(s) in the document
querySelectorAll()	Returns a static NodeList containing all elements that matches a specified CSS selector(s) in the document
removeEventListener()	Removes an event handler from the document (that has been attached with the addEventListener() method)
renameNode()	Renames the specified node
write()	Writes HTML expressions or JavaScript code to a document
writeln()	Same as write(), but adds a newline character after each statement

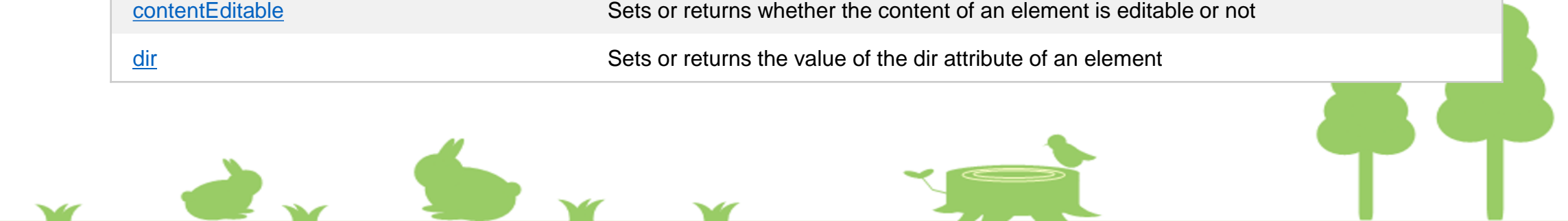
El objeto element

- Cualquier etiqueta HTML es un elemento que puede ser manipulado.

Property / Method	Description
accessKey	Sets or returns the accesskey attribute of an element
addEventListener()	Attaches an event handler to the specified element
appendChild()	Adds a new child node, to an element, as the last child node
attributes	Returns a NamedNodeMap of an element's attributes
blur()	Removes focus from an element
childElementCount	Returns the number of child elements an element has
childNodes	Returns a collection of an element's child nodes (including text and comment nodes)
children	Returns a collection of an element's child element (excluding text and comment nodes)
classList	Returns the class name(s) of an element
className	Sets or returns the value of the class attribute of an element

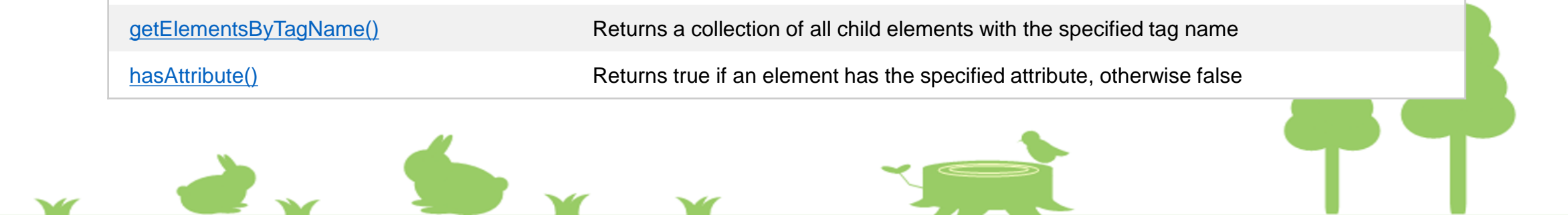
El objeto element

Property / Method	Description
click()	Simulates a mouse-click on an element
clientHeight	Returns the height of an element, including padding
clientLeft	Returns the width of the left border of an element
clientTop	Returns the width of the top border of an element
clientWidth	Returns the width of an element, including padding
cloneNode()	Clones an element
compareDocumentPosition()	Compares the document position of two elements
contains()	Returns true if a node is a descendant of a node, otherwise false
contentEditable	Sets or returns whether the content of an element is editable or not
dir	Sets or returns the value of the dir attribute of an element



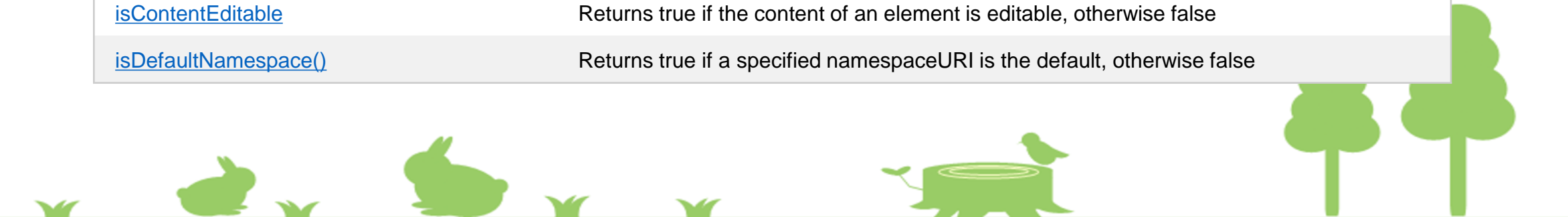
El objeto element

Property / Method	Description
exitFullscreen()	Cancels an element in fullscreen mode
firstChild	Returns the first child node of an element
firstElementChild	Returns the first child element of an element
focus()	Gives focus to an element
getAttribute()	Returns the specified attribute value of an element node
getAttributeNode()	Returns the specified attribute node
getBoundingClientRect()	Returns the size of an element and its position relative to the viewport
getElementsByClassName()	Returns a collection of all child elements with the specified class name
getElementsByTagName()	Returns a collection of all child elements with the specified tag name
hasAttribute()	Returns true if an element has the specified attribute, otherwise false



El objeto element

Property / Method	Description
childNodes()	Returns true if an element has any child nodes, otherwise false
id	Sets or returns the value of the id attribute of an element
innerHTML	Sets or returns the content of an element
innerText	Sets or returns the text content of a node and its descendants
insertAdjacentElement()	Inserts a HTML element at the specified position relative to the current element
insertAdjacentHTML()	Inserts a HTML formatted text at the specified position relative to the current element
insertAdjacentText()	Inserts text into the specified position relative to the current element
insertBefore()	Inserts a new child node before a specified, existing, child node
isContentEditable	Returns true if the content of an element is editable, otherwise false
isDefaultNamespace()	Returns true if a specified namespaceURI is the default, otherwise false



El objeto element

Property / Method	Description
isEqualNode()	Checks if two elements are equal
isSameNode()	Checks if two elements are the same node
isSupported()	Returns true if a specified feature is supported on the element
lang	Sets or returns the value of the lang attribute of an element
lastChild	Returns the last child node of an element
lastElementChild	Returns the last child element of an element
namespaceURI	Returns the namespace URI of an element
nextSibling	Returns the next node at the same node tree level
nextElementSibling	Returns the next element at the same node tree level
nodeName	Returns the name of a node
nodeType	Returns the node type of a node
nodeValue	Sets or returns the value of a node
normalize()	Joins adjacent text nodes and removes empty text nodes in an element



El objeto element

Property / Method	Description
offsetHeight	Returns the height of an element, including padding, border and scrollbar
offsetWidth	Returns the width of an element, including padding, border and scrollbar
offsetLeft	Returns the horizontal offset position of an element
offsetParent	Returns the offset container of an element
offsetTop	Returns the vertical offset position of an element
outerHTML	Sets or returns the content of an element (including the start tag and the end tag)
outerText	Sets or returns the outer text content of a node and its descendants
ownerDocument	Returns the root element (document object) for an element
parentNode	Returns the parent node of an element
parentElement	Returns the parent element node of an element
previousSibling	Returns the previous node at the same node tree level
previousElementSibling	Returns the previous element at the same node tree level
querySelector()	Returns the first child element that matches a specified CSS selector(s) of an element
querySelectorAll()	Returns all child elements that matches a specified CSS selector(s) of an element
remove()	Removes the element from the DOM

El objeto element

Property / Method	Description
<u>removeAttribute()</u>	Removes a specified attribute from an element
<u>removeAttributeNode()</u>	Removes a specified attribute node, and returns the removed node
<u>removeChild()</u>	Removes a child node from an element
<u>removeEventListener()</u>	Removes an event handler that has been attached with the addEventListener() method
<u>replaceChild()</u>	Replaces a child node in an element
<u>requestFullscreen()</u>	Shows an element in fullscreen mode
<u>scrollHeight</u>	Returns the entire height of an element, including padding
<u>scrollIntoView()</u>	Scrolls the specified element into the visible area of the browser window
<u>scrollLeft</u>	Sets or returns the number of pixels an element's content is scrolled horizontally
<u>scrollTop</u>	Sets or returns the number of pixels an element's content is scrolled vertically



El objeto element

Property / Method	Description
<u>scrollWidth</u>	Returns the entire width of an element, including padding
<u>setAttribute()</u>	Sets or changes the specified attribute, to the specified value
<u>setAttributeNode()</u>	Sets or changes the specified attribute node
<u>style</u>	Sets or returns the value of the style attribute of an element
<u>tabIndex</u>	Sets or returns the value of the tabIndex attribute of an element
<u>tagName</u>	Returns the tag name of an element
<u>textContent</u>	Sets or returns the textual content of a node and its descendants
<u>title</u>	Sets or returns the value of the title attribute of an element
<u>toString()</u>	Converts an element to a string

