```
1   /*
2
3   DOM (Document Object Model): It is a representation of an HTML document. It treats HTML as a tree and its elements as nodes.
4
5   1. document: It is a global object that represents the HTML document. It has various properties and methods that can be used
    to access and manipulate the document.
6
7   2. document.getElementById(): It is used to get an element by its id.
8
9   3. document.getElementsByClassName(): It is used to get all elements with a specific class name.
10
11  4. document.getElementsByTagName(): It is used to get all elements with a specific tag name.
12
13  5. document.querySelector(): It is used to get the first element that matches a specific CSS selector.
14
15  6. document.querySelectorAll(): It is used to get all elements that match a specific CSS selector.
16
17  7. document.createElement(): It is used to create new HTML elements.
18
19  8. document.createTextNode(): It is used to create new text nodes.
20
21  9. document.appendChild(): It is used to append a child element to a parent element.
22
23  10. document.removeChild(): It is used to remove a child element from a parent element.
24
25  11. document.addEventListener(): It is used to add an event listener to an element.
26
27  12. document.removeEventListener(): It is used to remove an event listener from an element.
28
29  13. document.setAttribute(): It is used to set an attribute on an element.
30
31  14. document.removeAttribute(): It is used to remove an attribute from an element.
32
33  15. document.getAttribute(): It is used to get the value of an attribute on an element.
34
35  16. document.style: It is used to set or get the style of an element.
36
37  17. document.title: It is used to set or get the title of the document.
```

```
38
39  18. document.URL: It is used to get the URL of the current document.
40
41  19. document.firstChild: It is used to get the first child element of an element.
42
43  20. document.lastChild: It is used to get the last child element of an element.
44
45  21. document.parentNode: It is used to get the parent element of an element.
46
47  22. document.childNodes: It is used to get all child elements of an element.
48
49  23. document.innerHTML: It is used to set or get the inner HTML of an element.
50
51  24. document.textContent: It is used to set or get the text content of an element.
52
53  25. document.location: It is used to get the location of the current document.
54
55  22. document.firstElementChild: It is used to get the first child element of an element.
56
57  23. document.lastElementChild: It is used to get the last child element of an element.
58
59  24. document.previousElementSibling: It is used to get the previous sibling element of an element.
60
61  25. document.nextElementSibling: It is used to get the next sibling element of an element.
62
63  */
64
65  // 1. document
66
67  console.log(document); // Logs entire HTML document
68
69  // 2. getElementById
70
71  let heading = document.getElementById("heading");
72  heading.style.color = "red";
73
74  // 3. getElementsByClassName
75
```

```
 76   let classList = document.getElementsByClassName("ordered-list");
 77   console.log(classList);
 78
 79   // 4. getElementsByTagName
 80
 81   let allParas = document.getElementsByTagName("p");
 82   console.log(allParas);
 83
 84   // 5. querySelector
 85
 86   let firstListItem = document.querySelector("li");
 87   console.log(firstListItem);
 88
 89   // 6. querySelectorAll
 90
 91   let allListItems = document.querySelectorAll("li");
 92   console.log(allListItems);
 93
 94   // 7. createElement
 95
 96   let newDiv = document.createElement("div");
 97
 98   // 8. createTextNode
 99
100   let textNode = document.createTextNode("Created using createTextNode");
101
102   // 9. appendChild
103
104   newDiv.appendChild(textNode);
105   document.body.appendChild(newDiv);
106
107   // 10. removeChild                                                    O
108
109   let removeTarget = document.createElement("p");
110   removeTarget.textContent = "This will be removed";
111   document.body.appendChild(removeTarget);
112   document.body.removeChild(removeTarget);
113
```

```javascript
114  // 11. addEventListener
115
116  newDiv.addEventListener("click", () => {
117
118    alert("Div Clicked!");
119
120  });
121
122  // 12. removeEventListener (not visible unless used with named function)
123
124  function handleClick() {
125
126    console.log("Clicked!");
127  }
128
129  newDiv.addEventListener("dblclick", handleClick);
130
131  newDiv.removeEventListener("dblclick", handleClick);
132
133  // 13. setAttribute
134
135  newDiv.setAttribute("id", "newly-created-div");
136
137  // 14. removeAttribute
138
139  newDiv.removeAttribute("id");
140
141  // 15. getAttribute
142
143  let hasClass = heading.getAttribute("id");
144  console.log("Heading ID:", hasClass);
145
146  // 16. style
147
148  heading.style.backgroundColor = "yellow";
149
150  // 17. title
151
```

```
152   document.title = "Manipulated Title";

153

154   // 18. URL

155

156   console.log("Page URL:", document.URL);

157

158   // 19. firstChild

159

160   console.log("First Child of Body:", document.body.firstChild);

161

162   // 20. lastChild

163

164   console.log("Last Child of Body:", document.body.lastChild);

165

166   // 21. parentNode

167

168   console.log("Parent of heading:", heading.parentNode);

169

170   // 22. childNodes

171

172   console.log("Child nodes of body:", document.body.childNodes);

173

174   // 23. innerHTML

175

176   newDiv.innerHTML = "<b>Replaced with innerHTML</b>";

177

178   // 24. textContent

179

180   heading.textContent = "Updated Heading with textContent";

181

182   // 25. location

183

184   console.log("Location object:", document.location);

185

186   // 26. firstElementChild

187

188   console.log("First Element Child of Body:", document.body.firstElementChild);

189
```

```
190  // 27. lastElementChild
191
192  console.log("Last Element Child of Body:", document.body.lastElementChild);
193
194  // 28. previousElementSibling
195
196  let para = document.querySelector("p");
197  console.log("Previous Sibling of Paragraph:", para.previousElementSibling);
198
199  // 29. nextElementSibling
200
201  console.log("Next Sibling of Paragraph:", para.nextElementSibling);
202
203  // 30. Bonus: Modify title again for clarity
204
205  document.title = "DOM Methods Tested";
```