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JavaScript

Basics of JS

1. alert("Hello");

2. Guide for modern JavaScript development: https://github.com/rwaldron/idiomatic.js

3. "String".length

4. /.../ or /*...*/

5. "bread".slice(1, 3); → "re" | "bread".slice(0, 2); → "br" | "bread".slice(4, 5); → "d" | slice(slice from, slice upto but not including);

6. "name".toUpperCase(); → "Name"

7. "NaMe".toLowerCase(); → "name"

8. x = x + 1 → x++ | x = x - 1 → x— | x += 2 | x += y

9. function getMilk() { ... } → Defining a function | getMilk(); → Calling a function

10. Math.floor(3.44); → 3

11. Math.pow(base, exponent); → Math.pow(2, 3); → cube of 2 = 8;

12. Math.round(12.5); → 13

Document Object Model

1. Adding JS to HTML: <script src="index.js" charset="utf-8"></script>

2. JS should be added just before the ending body tag.

3. Example:
   document.firstElementChild.lastElementChild.querySelector("ul").lastElementChild.innerHTML = "Angela";

4. document.get**Elements**ByTagName("li"); → returns the array of all list items in HTML. (Here Elements is plural)

5. getElementsByTagName("li")[2].style.color="red";

6. document.getElementsByTagName("li").length; → 3

7. document.getElementsByClassName("btn")[0].style.color="blue";

8. document.getElementById("title").innerHTML="HELLO";

9. document.querySelector("Use CSS Selectors"); → Ex: "li a", ".className", "#id", "h1" [Returns the first item that satisfy the particulat selector].

10. document.querySelectorAll("Use CSS Selectors"); [Returns all the items that satisfy the particulat selector].

11. https://www.w3schools.com/jsref/dom_obj_style.asp → List of style properties to change using JS.
    [Since CSS doesn't follow camelCase, JS has defined camelCase for all the style properties. | font-size → fontSize]
    Example: document.querySelector("h1").style.fontSize="4rem"; [Remember value must quoted as a string]

12. document.querySelector("button").classList.add("invisible"); [You can add CSS for class invisible in CSS Style sheet itself]
    This method adds class invisible to button tag.

13. document.querySelector("button").classList.remove("invisible"); |
    document.querySelector("button").classList.toggle("invisible");
    toggle means if class invisible is already applied, then remove it, else vice versa.

14. Example:

   ```
   <h1><strong>Hello</strong><h1>
   ```

document.querySelector("h1").innerHTML; → "Hello"
document.querySelector("h1").textContent; → "Hello"
document.querySelector("h1").innerHTML="Hello"; → *Hello*

15. document.querySelector("a").attributes; → Returns the list of attributes attached to anchor tag
    document.querySelector("a").getAttribute("href"); → www.google.com
    document.querySelector("a").setAttribute("href", "https://www.bing.com"); → redirects to bing.com

16. document.querySelector("button").addEventListener("click", onClickBtn);
    document.querySelectorAll(".drum").addEventListener("click", **functionNameWithoutBrackets**); → (Passing a function as argument).

17. Playing sounds in website:

```javascript
var audio = new Audio("sounds/tom-1.mp3");
audio.play();
```

18. Adding image to a div:

```css
.div {
background-image: url("images/tom1.png");
}
```

19. Objects

```javascript
var bellBoy = {
   "name": "Jane",
   "age": 34,
   "languages": ["english", "french"],
   "yearsOfExp": 5,
   "moveSuitCase": function () {
      alert("I will help you in moving suit case");
   }
}

bellBoy.moveSuitCase();

console.log(bellBoy.name); // Jane

// Constructor → Naming should start with Capital letter to indicate that it is a constructor
function BellBoy(name, age, languages, yearsOfExp) {
   this.name = name;
   this.age = age;
   this.languages=languages;
   this.yearsOfExp=yearsOfExp;
   this.moveSuitCase = function () {
      alert("I will help you in moving suit case");
   }
}

var bellBoy1 = new BellBoy("Jacob", 34, ["English", "Hindi"], 4);
bellBoy1.moveSuitCase();
console.log(bellBoy1.age); // 34
```

20. Adding KeyBoard Event Listeners

```javascript
    // Higher Order function    │ CallBack function
document.addEventListener("keypress", function(event) {
```

```
    console.log(event.key); // To know which key is pressed
});
```

21. The function that takes another function as input is called Higher Order function. The function that is passed as a argument to Higher order function is called CallBack function.

22. setTimeOut

```
setTimeout(function (){
    activeButton.classList.remove("pressed");
}, 100);
```