JavaScript Exercises

1. First try to understand this exercise on w3schools.com. Then change h1 "What can JavaScript Do?" to "JavaScript can do many things."

2. Change the first image to another page as shown on the example below. Your task is to put other images than these bulbs. First, try to understand this exercise.

```html
<!DOCTYPE html>
<html>
<body>

<h2>What Can JavaScript Do?</h2>

<p>JavaScript can change HTML attribute values.</p>

<p>In this case JavaScript changes the value of the src (source) attribute of an image.</p>

<button onclick="document.getElementById('myImage').src='pic_bulbon.gif'">Turn on the
light</button>

<img id="myImage" src="pic_bulboff.gif" style="width:100px">

<button onclick="document.getElementById('myImage').src='pic_bulboff.gif'">Turn off the
light</button>

</body>
</html>
```

What Can JavaScript Do?

JavaScript can change HTML attribute values.

In this case JavaScript changes the value of the src (source) attribute of an image.

[Turn on the light]   [Turn off the light]

3. To begin with, get into this exercise (about changing CSS) below. Then make the paragraph **bold** by clicking on the button.

Changing the style of an HTML element, is a variant of changing an HTML attribute:

Example

```
document.getElementById("demo").style.fontSize = "35px";
```

Try it Yourself »

4. First, try to understand these two exercises about **Showing** and **Hiding**, and make two clickable buttons. With the first button, it needs to appear today's date (manually) and by clicking on the second button it needs to disappear.

JavaScript Can Hide HTML Elements

Hiding HTML elements can be done by changing the `display` style:

Example

```
document.getElementById("demo").style.display = "none";
```

Try it Yourself »
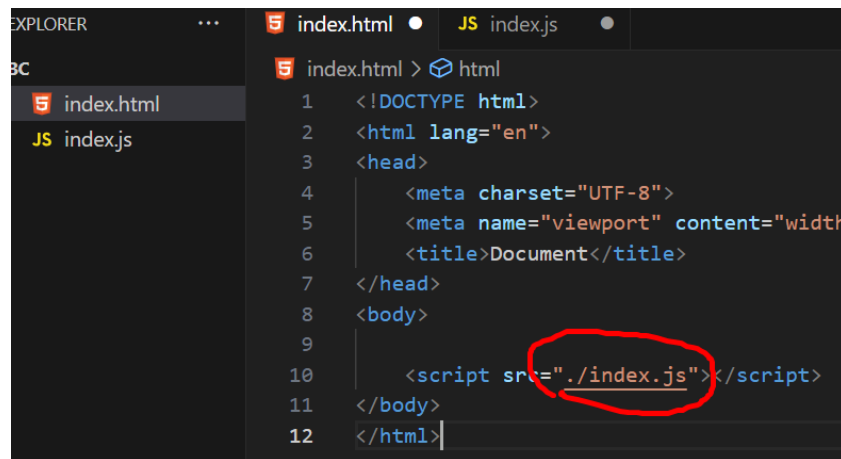
JavaScript Can Show HTML Elements

Showing hidden HTML elements can also be done by changing the `display` style:

Example

```
document.getElementById("demo").style.display = "block";
```
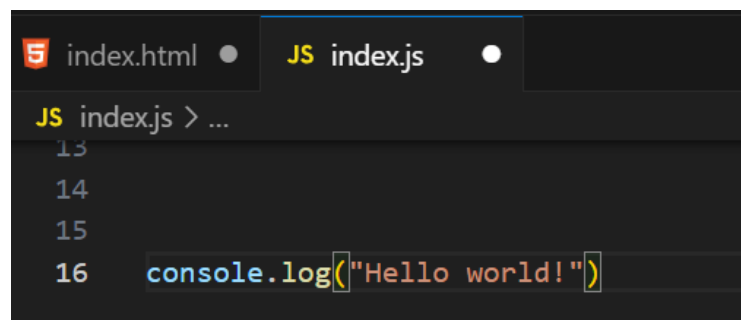
Try it Yourself »

5. Now we need to connect our JS file in the **external way** as in the example:

And we will type our JS code inside the **index.js** file. Let's print "Hello world" on JS with console.log:

To get the output, open your index.html with "Live Server" and click on Inspect (F12):
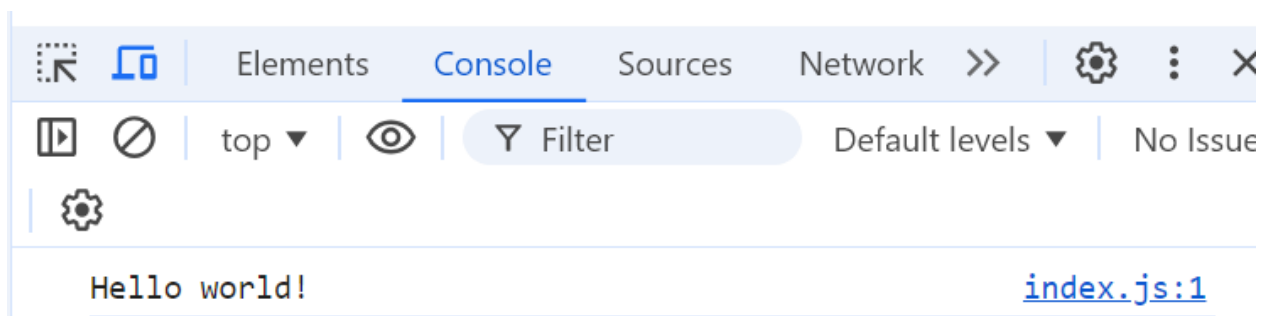
Now, I want you to print two sentences about yourself with console.log.

6. After that you need to work with "let" declaration and "data types" (for now number, string and boolean).
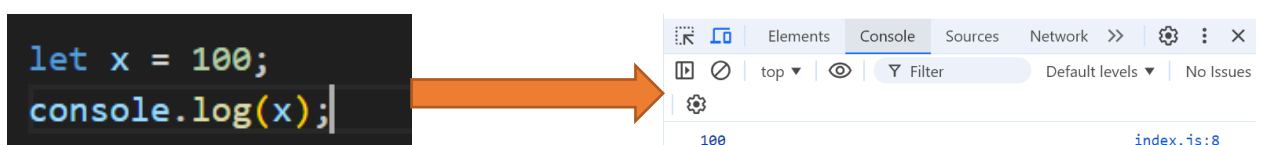
```
let myName = "Alisher";
console.log(`My name is ${myName}`);
```

⚙

My full name is Alisher Amirov   index.js:17
Live reload enabled.   index.html:39

As a task, I want you from you to use string, number and Boolean and show me three sentences.

Note! *Now, from the 7ᵗʰ exercise, I want you to do the exercises without step-by-step instructions. Please, use w3schools.com and lectures and any other internet resources to better understand the subject.*

7. Write an arithmetic program with **prompt** and show the result on HTML.

8. Get the current date with JS code on the HTML website.

9. Write a JavaScript program to determine whether a given year is a leap year or not.

10. Write a JavaScript program to calculate multiplication and division of two numbers on HTML file as shown below:

1st Number : 12

2nd Number: 10

[Multiply] [Divide]

The Result Is :
120

11. Write a JavaScript program to convert temperatures to and from Celsius, Fahrenheit.
[Formula: $c/5 = (f-32)/9$ [where c = temperature in Celsius and f = temperature in Fahrenheit]
***Expected Output*:**

60°C is 140 °F
45°F is 7.222222222222222°C

12. Write a JS (in input) function that checks if a given number is **even** or **odd** and prints the result.

13. Write a function that takes three numbers and prints the largest and least one.

14. Write JavaScript program calculates the area of a triangle with sides of lengths 5, 6, and 7 using Heron's formula (You have to write in input). It first computes the semi-perimeter (s) of the triangle, then uses it to find the area, which is logged to the console. The result must show on the HTML website.

15. Write a function in JS that calculates the factorial of a number.

16. Write a JavaScript program to count the number of vowels and consonants in a given string.

17. Write a JavaScript application that transforms a provided second into hours and minutes. F/e: if you type 1100, it will be 16,6667 minutes.

18. Write a JavaScript program to find the number appearing most frequently in a given array of integers.

19. Write a JS code to calculate the Fibonacci formula.

20. Write a JavaScript program to calculate the days left before the New Year.