JOBSHEET-3: Javascript

Muhammad Tegar Hibatulloh

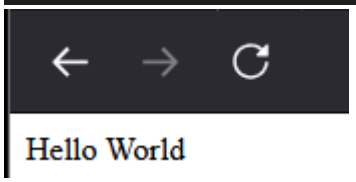
22 / 2341720221/ 2I

Link github: https://github.com/Garrss/Desain-dan-Pemograman-Web/tree/main/week3

Practical Section 1: Creating a Javascript Program

1. Observe what happens to the browser, then record your observations (Question No. 1)

```
week3 > helloworld.html > html > body > script
1   <!DOCTYPE html>
2   <html lang="en">
3     <head>
4       <meta charset="UTF-8" />
5       <meta name="viewport" content="width=device-width, initial-scale=1.0"
6       <title>Hello World Javascript</title>
7     </head>
8     <body>
9       <script>
10        console.log("Saya belajar Javascript");
11        document.write("Hello World");
12      </script>
13    </body>
14  </html>
15
```



Just showing word “Hello World”.

2. Observe what happens in the Console tab, then record your results! (Question No. 2)
   - The message "Saya belajar Javascript" will be printed in the console. This is because of the console.log("Saya belajar Javascript"); statement in the <script> block.
   - The text "Hello World" will be written directly to the document (the web page). This happens because of the document.write("Hello World"); statement in the same <script> block.

3. Why do you think the command is not displayed? (Question No. 3)
   The browser's console is separate from the visible part of the web page. Anything logged using console.log is directed only to the console, not to the page's Document Object Model (DOM). So, if you don't open the console, you won't see this message displayed anywhere on the page.

Practical Section 2: How to Write Javasript Code in HTML

4. Observe what happens to the browser? Record your observations (Question No. 4)

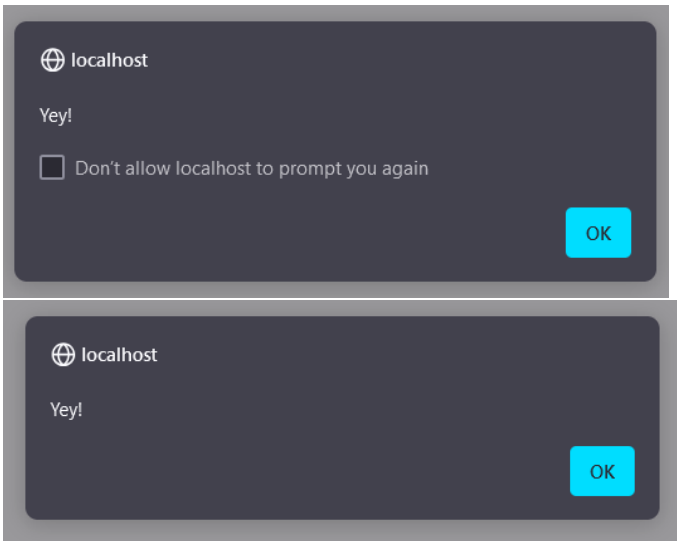
Tutorial Javascript untuk Pemula

- The web page displays the text “Tutorial Javascript untuk Pemula”
- The JavaScript console shows two messages, reflecting the order in which the <script> tags are encountered and executed. The messages confirm that both scripts are executed sequentially as the page loads.

5. Which do you think is better, written in the <head> or <body> tag? (Question No.5)
   For faster page loading and a better user experience, it is generally better to place JavaScript at the end of the <body> tag or use the defer or async attributes if placing scripts in the <head>. Place scripts in the <head> only if they are necessary for configuring the page or for critical functionality that needs to run before the page is fully loaded.

6. Observe what happens to the browser! Record your observations (Question No. 6)

   Klik aku! Klik aku!



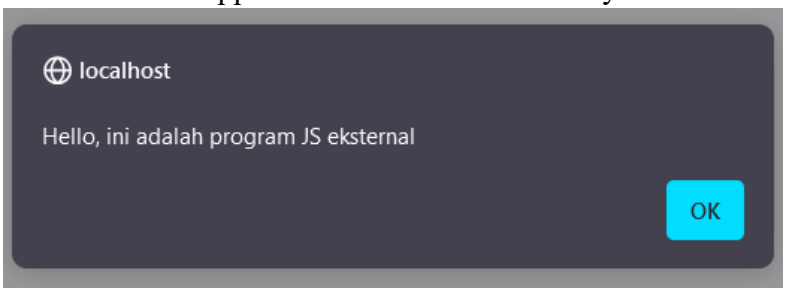
   Both links perform the same action: they display a JavaScript alert box with the message "Yey!" when clicked.

7. What is the difference between the two program codes (Question No. 7)
   - First Link:
     - href="#": The href attribute is set to "#", which is a placeholder URL that does not cause the page to navigate. Instead, it keeps the browser on the current page.
     - onclick="alert('Yey!')": The onclick attribute is an event handler that executes the JavaScript code alert('Yey!') when the user clicks the link. This triggers a pop-up alert with the message "Yey!".
   - Second Link:
     - href="javascript:alert('Yey!')": The href attribute uses the javascript: pseudo-protocol to directly execute the JavaScript code alert('Yey!') when

the link is clicked. This also triggers a pop-up alert with the message "Yey!".

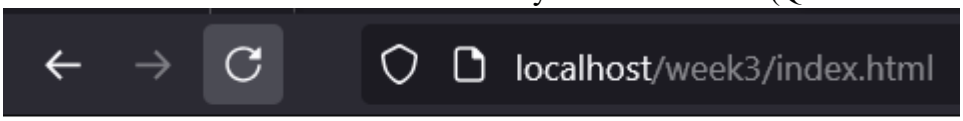
- No separate event handler (like onclick) is used; the JavaScript code is directly embedded within the href attribute.

8. Observe what happens to the browser! Record your observations (Question No. 8)



The external JavaScript file (kode-program.js) is successfully loaded and executed, causing a JavaScript alert to display. The HTML content is displayed on the web page, and the alert appears as expected.

9. Move kode-program.js file to another folder, what will happen if the javascript file is in a different folder? Observe and record your observations (Question No. 9)

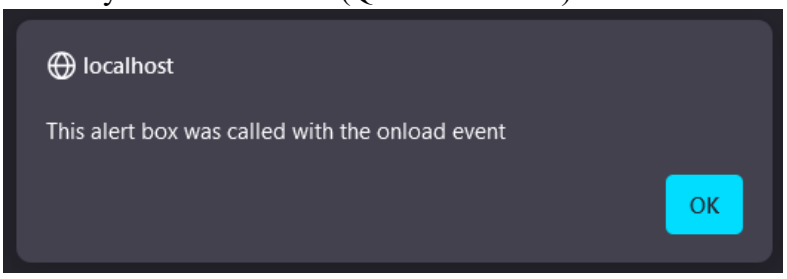


Tutorial Javascript untuk Pemula

If the JavaScript file is moved to another folder and the path in the src attribute is not updated, the JavaScript code will not be executed because the file will not be found. To fix this, you must update the path in the <script> tag to point to the new location of the kode-program.js file.

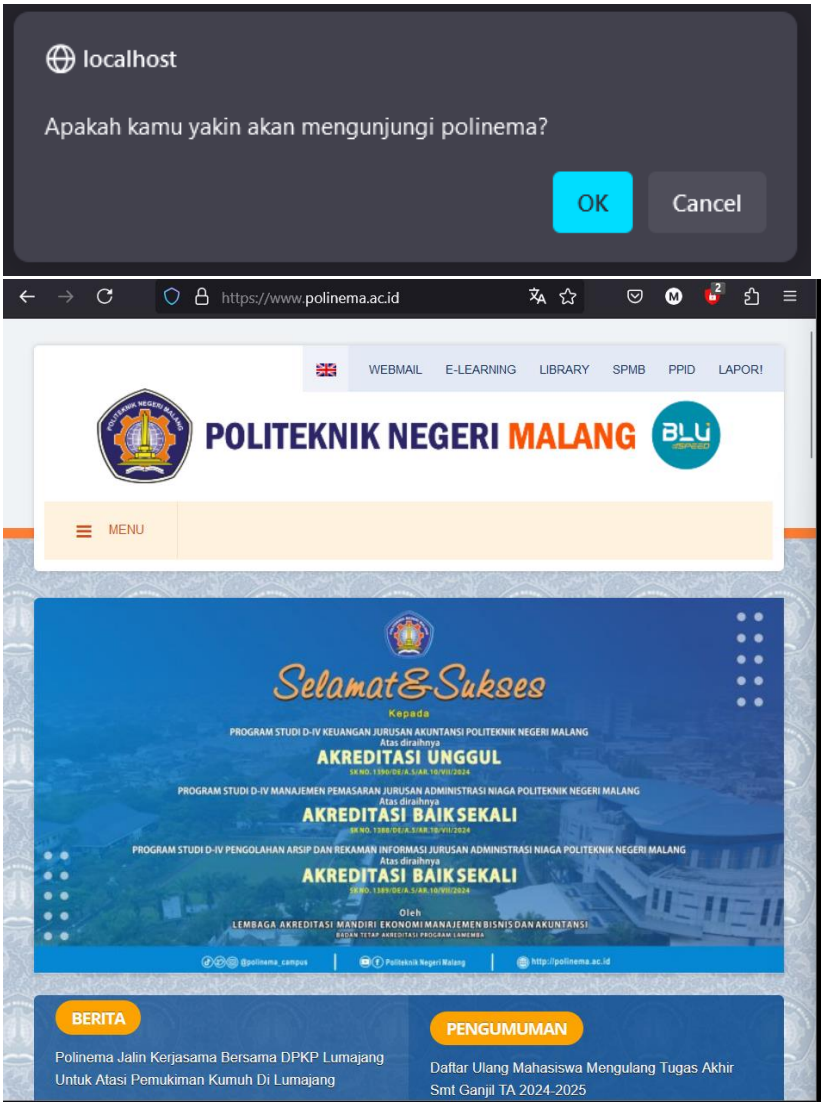
Practical Section 3: Dialogue Window

10. Record your observations (Question No. 10)



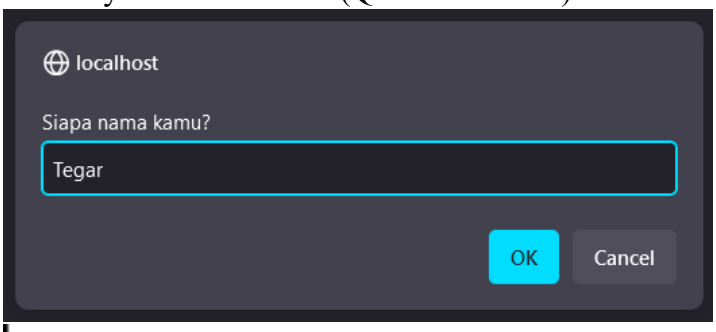
An alert box with the specified message is displayed immediately upon page load. There is no visible content on the web page after the alert is closed because the <body> tag is empty.

11. Record your observations (Question No. 11)



The document.write method is used to display a message if the user cancels the confirmation dialog. This method can overwrite the entire document's content if used after the document has loaded, so it's often better to manipulate the DOM directly with methods like innerHTML or by creating elements dynamically.

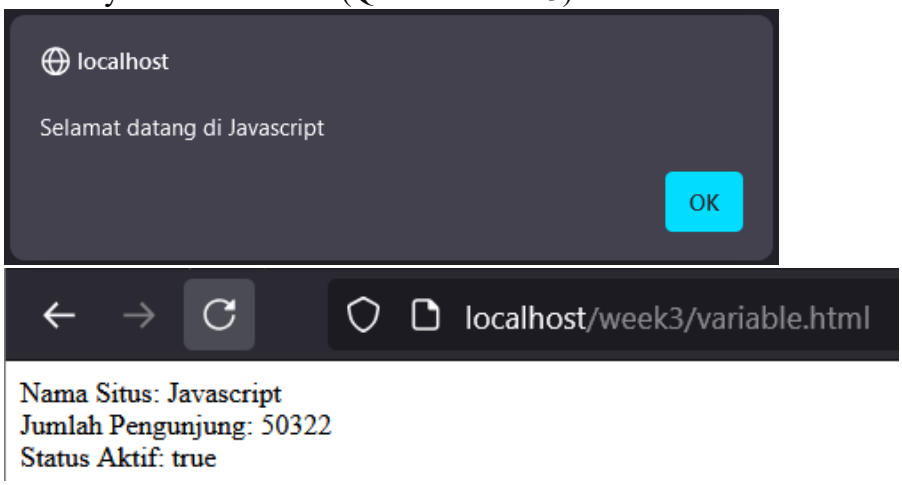
12. Record your observations (Question No. 12)



> Hello Tegar

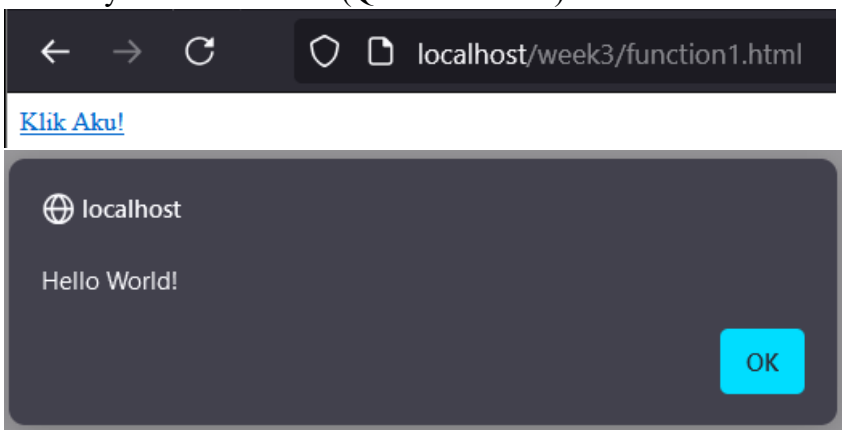
The prompt method collects user input and the document.write method is used to insert the greeting into the HTML.

13. Record your observations (Question No. 13)



- The variable visitorCount: is now consistently used throughout the script, fixing the previous typo. The code will now correctly display the visitor count without errors.
- Var name = “Javascript”; : The name variable is assigned the string “Javascript”
- Var visitorCount = 50322; : The visitorCount variable is assigned the number 50322.
- Var isActive = true; : The isActive variable is assigned the boolean value true.
- The alert() function will display a dialog box with the message "Selamat datang di Javascript" when the page loads. This is functioning as expected.

14. Record your observations (Question No.14)



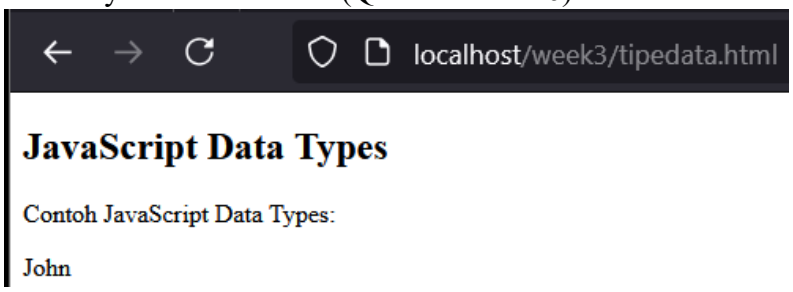
- Arrow Function: var sayHello = () => alert("Hello world"); defines an arrow function named sayHello. Arrow functions are a concise syntax for writing functions in JavaScript.
- Function Body: alert("Hello world") is the body of the sayHello function. It creates a browser alert box that displays the message "Hello world".
- Variable Declaration: var is used to declare the sayHello variable, which holds the function definition. The function is triggered by clicking the link with the onclick event.

15. Record your observations (Question No.15)

> 5

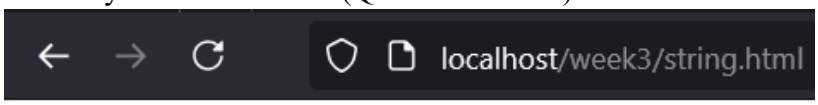
- The function total(numberA, numberB) is defined to return the sum of numberA and numberB. The function is correctly written and will return the sum of two numbers when called.
- Inside the <body> tag, the function total(2, 3) is called using document.write(). This will output the result directly to the web page.
- Since 2 + 3 equals 5, the number 5 will be displayed on the page.
- The JavaScript function is correctly defined in the <head> section, ensuring it's available for use when the script in the <body> section runs.
- The inline script in the <body> tag uses document.write() to display the result of the total function on the page.

16. Record your observations (Question No. 16)



- : An empty paragraph element with the id attribute set to "demo". This is where the result will be displayed.
- var x;: Declares a variable x. Initially, x is undefined. x = 5;: Assigns the value 5 to x. At this point, x holds a number. x = "John";: Changes the value of x to the string "John". Now, x holds a string.
- document.getElementById("demo").innerHTML = x;: Finds the HTML element with the id "demo". Sets its innerHTML property to the value of x, which is "John".

17. Record your observations (Question No. 17)



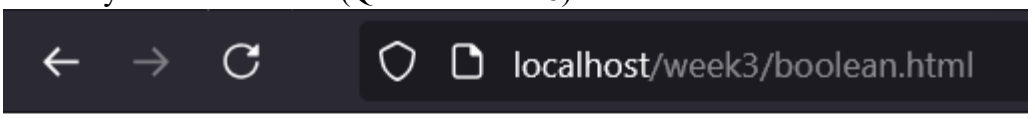
JavaScript Strings

Membuat Javascript String

It's alright
He is called 'Dilan'
He is called "Dilan"

- answer1, answer2, and answer3 are variables storing string values.
- document.getElementById("demo").innerHTML = ...: Sets the HTML content of the element with id="demo".
- answer1 + "
" + answer2 + "
" + answer3: Concatenates the strings stored in the variables with
 tags for line breaks, so the strings are displayed on separate lines.

18. Record your observations (Question No. 18)



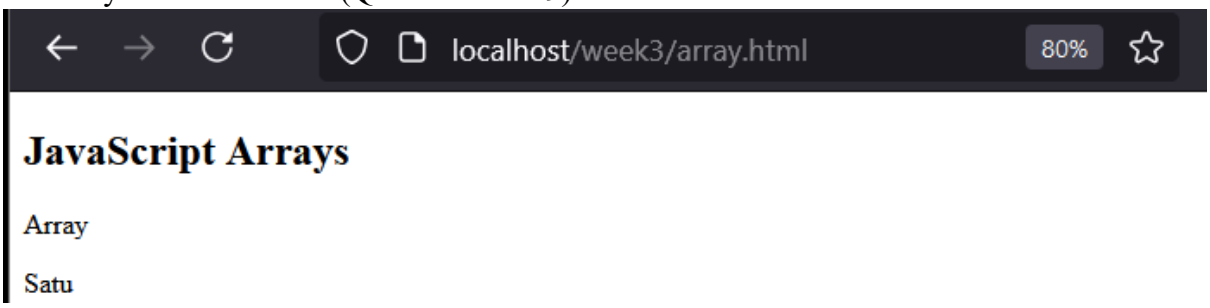
JavaScript Booleans

Booleans hanya memiliki nilai true dan false

true
false

- The <h2> and elements provide context by introducing the topic "JavaScript Booleans" and explaining that booleans only have true or false values.
- The tag serves as a placeholder where the result of the JavaScript code will be inserted.
- Three variables are declared: x = 5, y = 5, and z = 6.
- The document.getElementById("demo").innerHTML is used to insert the result of two boolean expressions into the paragraph with the ID demo:
    - (x == y) compares if x is equal to y. Since both are 5, this expression evaluates to true.
    - (x == z) compares if x is equal to z. Since x is 5 and z is 6, this expression evaluates to false.
- When the boolean expressions (x == y) and (x == z) are concatenated with a string using the + operator, the booleans are implicitly converted to strings:
    - True becomes “true”
    - False becomes “false”

19. Record your observations (Question No. 19)



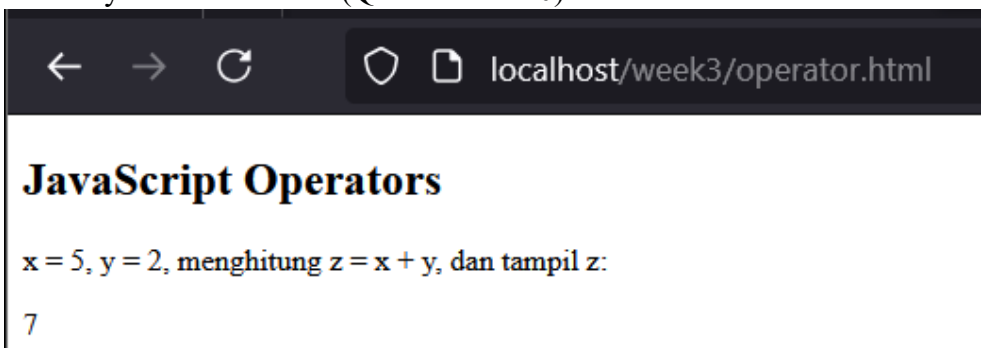
JavaScript Arrays

Array

Satu

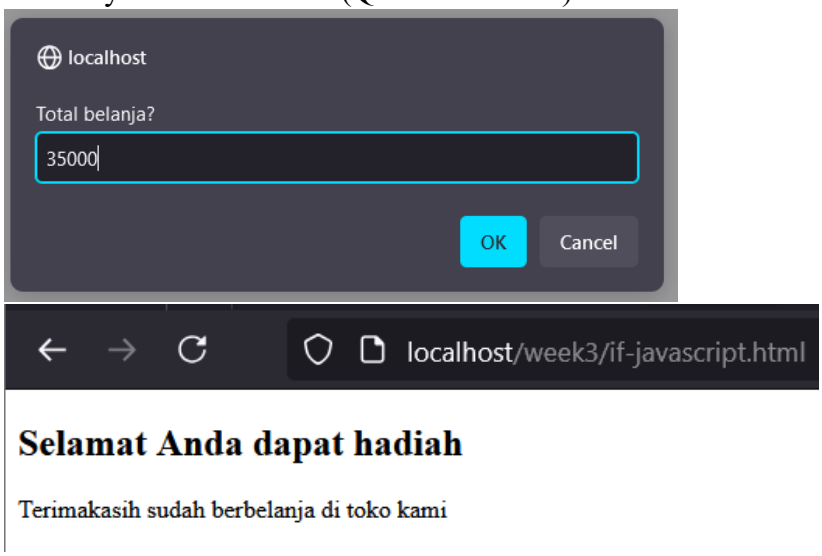
- An empty paragraph ( ) serves as a placeholder for displaying the array element.
- An array cars is created with three string values: "Satu", "dua", and "Tiga".
- Using document.getElementById("demo").innerHTML, the first item of the cars array (cars[0], which is "Satu") is inserted into the element with the ID "demo."
- When the page is loaded, the word "Satu" will be displayed in the paragraph.

20. Record your observations (Question No.20)



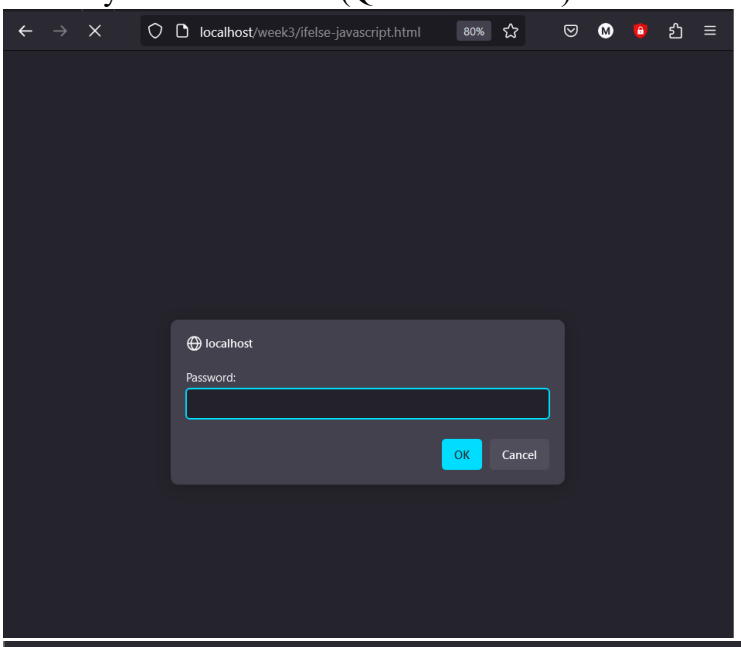
- The document includes a heading (<h2>) and a description ( ) explaining the operation. An empty paragraph ( ) is used to display the result.
- Two variables x and y are initialized with values 5 and 2.
- A third variable z is calculated as the sum of x + y, which is 7.
- The result (z) is displayed in the paragraph with the ID "demo" using innerHTML

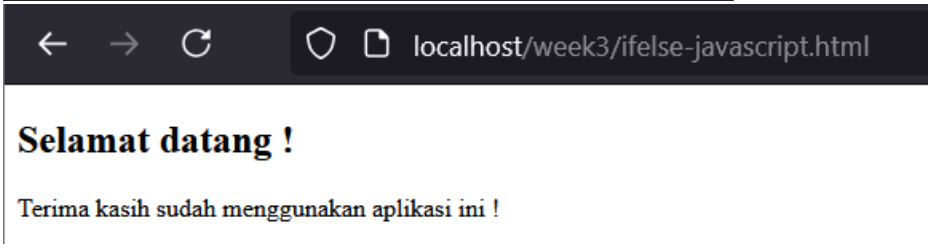
21. Record your observations (Question No. 21)



- If (totalBelanja > 30000) so print document.write (“<h2> Selamat Anda dapat hadiah</h2>”);
- If (totalBelanja < 30000) so print document.write (" Terimakasih sudah berbelanja di toko kami ");

22. Record your observations (Question No. 22)



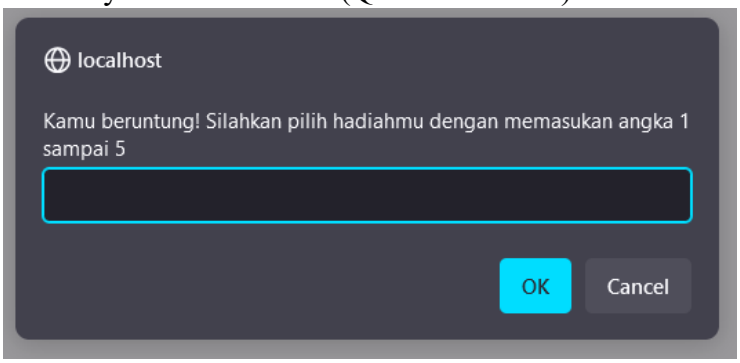


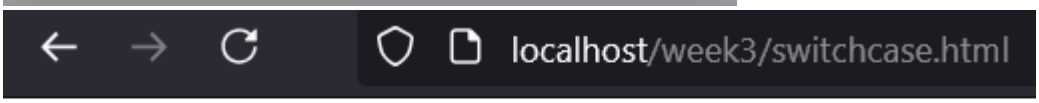
Selamat datang !

Terima kasih sudah menggunakan aplikasi ini !

- If the password matches the string "teh", a message saying "Selamat Datang!" (Welcome) is displayed using document.write().
- If the password is incorrect, a message saying "Password salah, coba lagi!" (Wrong password, try again) is displayed.
- Regardless of the outcome, a final message "Terima Kasih sudah menggunakan aplikasi ini" (Thank you for using this application) is always displayed.

23. Record your observations (Question No. 23)





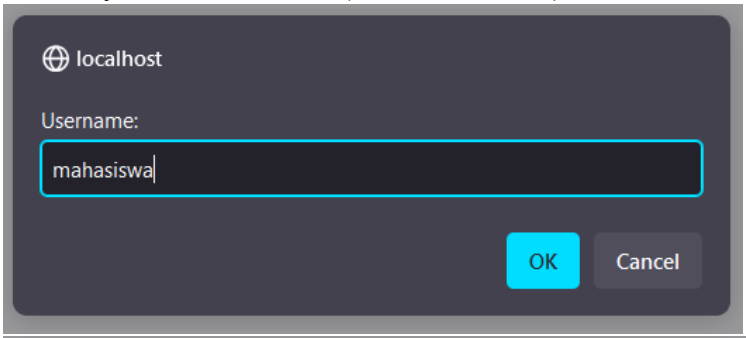
Opps! anda salah pilih

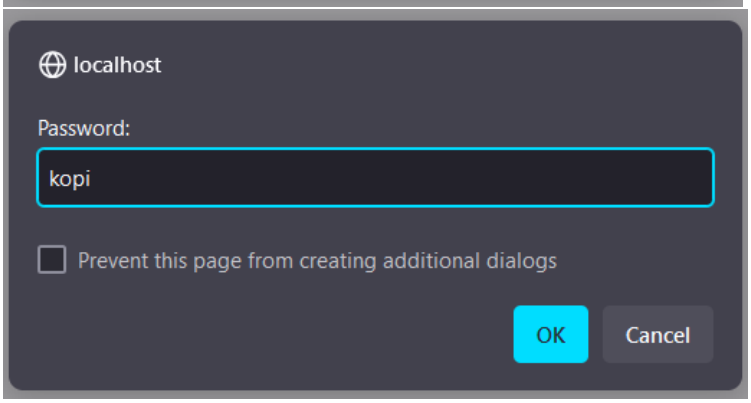
Kamu gagal mendapat hadiah

Selamat kamu mendapatkan Minyak Goreng

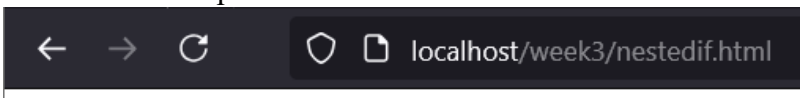
- A switch statement assigns a prize to the variable hadiah based on the user's input. If the input matches a case, the prize is displayed in an <h2> tag. If the input is invalid, an error message is shown. The script also ensures that if no valid prize is selected, it displays a failure message.

24. Record your observations (Question No.24)





If username and password correct:



Selamat datang

If username is correct but the password wrong:

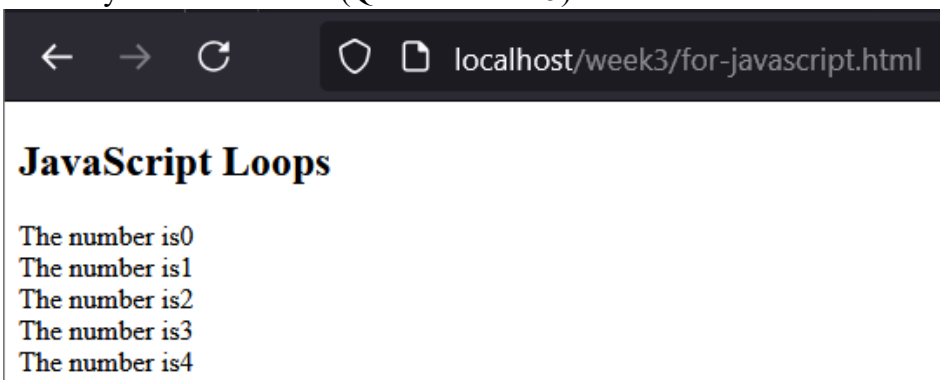
Password salah, coba lagi !

If username and password wrong:

Anda tidak terdaftar !

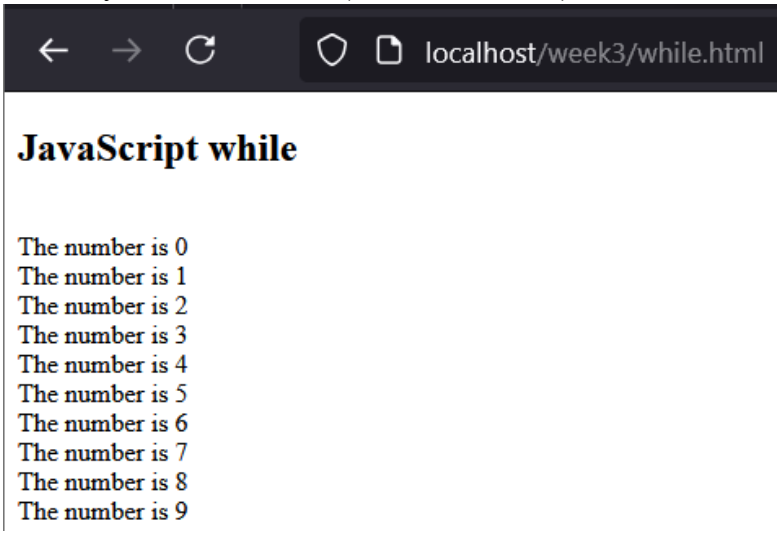
- If the username is "mahasiswa" and the password is "kopi", a welcome message is shown. If the username is correct but the password is wrong, it shows a "wrong password" message. If the username doesn't match, it displays a message saying the user is not registered. The logic is handled with nested if statements.

25. Record your observations (Question No. 25)



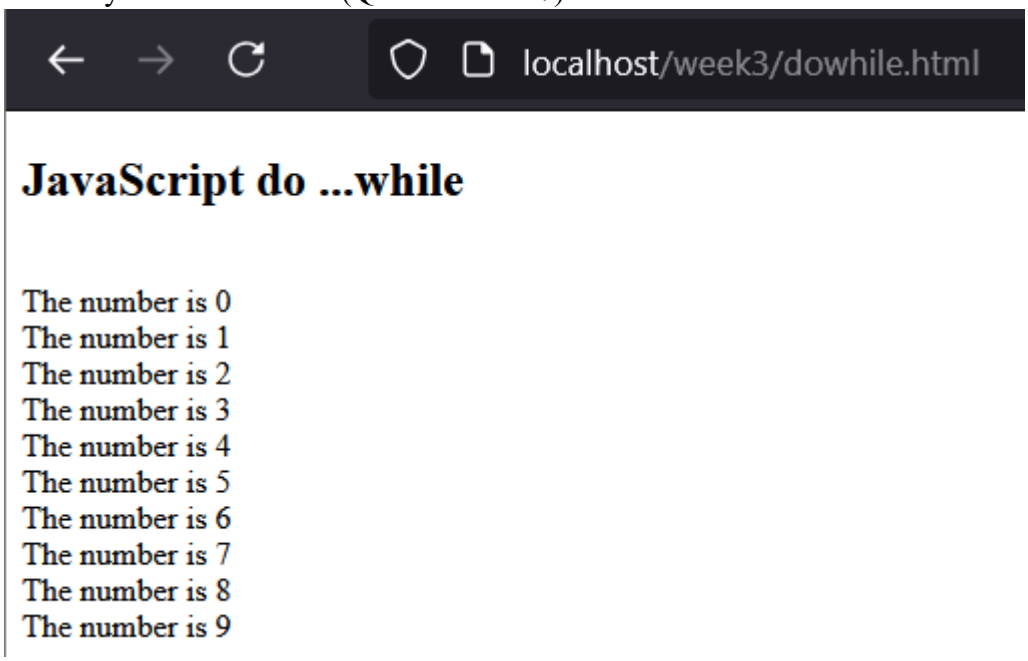
- The loop runs 5 times, starting from i = 0 and incrementing i by 1 each time, stopping when I reaches 5. In each iteration, it adds the phrase "The number is" followed by the current value of i and a line break (
).
- After the loop finishes, the content of the text variable is inserted into the HTML element with the id="demo" using document.getElementById("demo").innerHTML

26. Record your observations (Question No. 26)



- This script uses a while loop to repeatedly append text to the text variable as long as i is less than 10. Each iteration adds the phrase "The number is" followed by the current value of i and a line break (
). The variable i is incremented by 1 in each loop iteration.
- Once the loop finishes, the content of text is inserted into the HTML element with id="demo", displaying the numbers from 0 to 9.

27. Record your observations (Question No.27)



- This script uses a do...while loop to append text to the text variable. The loop first runs the code inside the do block (adding the phrase "The number is" followed by the current value of i and a line break) before checking the condition. It increments i by 1 and repeats this process as long as i is less than 10.
- After the loop finishes, the content of text is inserted into the HTML element with id="demo", displaying numbers from 0 to 9 .