TW-03 TEAM LEAD VERSION

TEAMWORK

CLARUSWAY
WAY TO REINVENT YOURSELF

Meeting Agenda

▶ Icebreaking

▶ Workshop Activities - Tuesday

▶ Teamwork Activities - Friday

   ▶ Questions

   ▶ Interview Questions

▶ Video of the week

▶ Retro meeting

▶ Case study / project

Teamwork Schedule

Ice-breaking   **10m**

- Personal Questions (Study Environment, Kids etc.)
- Any challenges (Classes, Coding, studying, etc.)
- Ask how they're studying, give personal advice.
- Remind that practice makes perfect.

Workshop Activities (Tuesday)   **90m**

1- Reverse Words in a String Without Arrays

- Write a JavaScript function called reverseWordsWithoutArray that takes a sentence as input and returns the sentence with its words reversed, without using arrays:

This JavaScript code challenge involves reversing the words in a given sentence without using arrays. It's a practical exercise that combines string manipulation, loops, and functions.

Expected Outputs :

For example, if the input is `Hello Js World 2023`, the function should return `"2023 World Js Hello"`.

Solution :

```javascript
function reverseWordsWithoutArray(sentence) {
  let reversedSentence = "";
  let word = "";

  for (let i = sentence.length - 1; i >= 0; i--) {
    if (sentence[i] === " " || i === 0) {
      // Append the word (in reverse) to the result
      if (i === 0) {
        word += sentence[i]; // Include the first character of the first word
      }
      for (let j = word.length - 1; j >= 0; j--) {
        reversedSentence += word[j];
      }

      // If not the last word, add a space
      if (i !== 0) {
        reversedSentence += " ";
      }

      // Reset the temporary word
      word = "";
    } else {
      // Build the word
```

```javascript
        word += sentence[i];
      }
    }

    return reversedSentence;
  }

  // Test the function
  const inputSentence = "Hello World";
  const reversedSentence = reverseWordsWithoutArray(inputSentence);
  console.log(reversedSentence); // Output: "World Hello"
```

2- Media Query Challenge

- Make a media query web page as in the example

Team Work Activities (Friday)

Ask Questions   20m

1. What is the primary purpose of Media Queries in CSS?

A. To define the structure of an HTML document

B. To control the layout and styling of a web page based on the characteristics of the device it's being viewed on

C. To specify the font size and color of text on a webpage

D. To create interactive animations

Answer: B

2. Which CSS property is commonly used in Media Queries to set breakpoints for different screen sizes?

A. background-color

B. font-size

C. display

D. width

Answer: D

3. In a Media Query, what does the term "media type" refer to?

A. The type of device or media that the styles should apply to

B. The type of content displayed on the web page

C. The specific font used for text on the webpage

D. The file format of images on the webpage

Answer: A

4. Which of the following is a valid Media Query expression for targeting screens with a maximum width of 768 pixels?

A. screen-width: 768px

B. width <= 768px

C. max-width: 768px

D. @media (width < 768px)

Answer: C

5. What is the purpose of the @media rule in CSS?

A. To apply styles to all elements in a web page

B. To define the font family for text content

C. To specify conditions under which styles should be applied

D. To create responsive images

Answer: C

6. Which notation is used to declare a CSS Variable?

A. --variable-name: value;

B. $variable-name: value;

C. @variable-name: value;

D. #variable-name: value;

Answer: A

7. CSS Variables are scoped to:

A. The entire CSS file

B. The HTML element where they are defined

C. The parent element where they are defined

D. The child elements of the parent element

Answer: B

8. Which advantage do CSS Variables offer over traditional static values in CSS?

A. They can't be changed once set

B. They allow for more complex mathematical calculations

C. They are supported only in modern browsers

D. They make CSS code easier to read and maintain

Answer: D

9. What is a JavaScript function?

A. A reusable block of code that performs a specific task
B. A data type in JavaScript
C. A way to define variables
D. A loop construct

Answer: A

10. What is the purpose of parameters in a JavaScript function?

A. To store global variables
B. To provide input data for the function
C. To define the function's name
D. To control the function's visibility

Answer: B

11. What is the return type of a JavaScript function that doesn't explicitly use the return keyword?

A. null
B. void
C. is not defined
D. undefined

Answer: D

12. Which of the following code snippets correctly defines a JavaScript function with a parameter x that returns the square of x?

- A [ ]

```
function square {
  return x * 2;
};
```

- B [ ]

```
var square = function {
  return x * x;
};
```

- c [ ]

```
function square {
  return x * x;
};
```

- D [X]

```
function square(x) {
  return x * x;
};
```

13. Which of the following is a valid way to concatenate two strings in JavaScript?

A. string1 . string2
B. string1 + string2
C. string1 & string2
D. string1 : string2

Answer: B

14. Which method is used to convert a string to lowercase in JavaScript?

A. toUpper()
B. toUpperCase()
C. toLowerCase()
D. lowerCase()

Answer: C

15. Which of the following statements is true about JavaScript strings?

A. Strings in JavaScript are immutable.
B. Strings in JavaScript cannot contain special characters.
C. Strings in JavaScript can only contain numbers.
D. You can not create empty strings in JavaScript.

Answer: A

16. Create a JS code that calculates the area of a circle using the arrow function.

```
const calculateCircleArea = (radius) => {

  console.log(`The area of the circle with radius ${radius} is ${3.14 * radius**
2}`);

};


calculateCircleArea(5); //The area of the circle with radius 5 is 78.5
```

17. Write a js code that assigns the word `Hello` from originalString to the slicedString with the slice method.

```js
const originalString = 'Hello, World!';

// Extract a portion of the string (substring) using slice
const slicedString = originalString.slice(0, 5); // Extracts characters from index
0 to 4

console.log(slicedString); // Output: 'Hello'
```

Interview Questions   20m

1. Please describe the most important advantages of using JavaScript.

There are several advantages to using JavaScript. Most notable amongst them are listed down as follows:

- Enhanced interactivity – JavaScript allows creating interfaces that react when the user activates them via the keyboard or merely hovers the cursor over the same.
- Immediate feedback – Visitors need not wait for a page reload to see if they had forgotten to enter some important details.
- Low server interaction – JS allows validating user input before sending the webpage to the server. It means less server traffic and hence, less load on the server.
- Rich interfaces – JS has items like drag-and-drop components and sliders to present a richer interface to the website visitors.

2. List some of the disadvantages of JavaScript.

Some of the disadvantages of JavaScript are:

- No support for multithreading
- No support for multiprocessing
- Reading and writing of files is not allowed
- No support for networking applications.

3. What is anonymous function?

It is a function that has no name. These functions are declared dynamically at runtime using the function operator instead of the function declaration. The function operator is more flexible than a function declaration. It can be easily used in the place of an expression.

4. What is CSS Flexbox

CSS3 Flexible boxes also known as CSS Flexbox is a new layout mode in CSS3.

The CSS3 flexbox is used to make the elements behave predictably when they are used with different screen sizes and different display devices. It provides a more efficient way to layout, align and distribute space among items in the container.

It is mainly used to make CSS3 capable to change its item's width and height to best fit all available spaces. It is preferred over the block model.

The CSS3 flexbox contains flex containers and flex items.

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Coffee Break   10m

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Video of the Week   15m

- JavaScript Functions

Case study/Project   15m

The case study will be solved by the students during the week and by the team on Friday Team Work.

- News Project

Retro Meeting on a personal and team level   10m

Ask the questions below:

- What went well?
- What could be improved?
- What will we commit to do better in the next week?

Closing   5m

- Next week's plan

- QA Session