وزارة التعليم العالي والبحث العلمي

جامعة برج العرب التكنولوجية
BORG AL ARAB TECHNOLOGICAL UNIVERSITY

Lecture Seven:

Built-in Function

COURSE TITLE: WEB PROGRAMMING 1

TOPIC: BUILT-IN FUNCTION

SEMESTER: 1 **DURATION: 10 WEEKS**

Built-in functions

split(separator):

This built-in function is used on strings and splits the string into an array of substrings based on the provided separator.

For example, "Hello, World".split(",") would return ["Hello", " World"]

```
const sentence = "Hello, World";
const wordsArray = sentence.split(" ");
console.log(wordsArray)
// Should print ["Hello,", "World"]
```

Built-in functions

map(callback):

The map() method is used on arrays and applies a given function (the callback)

to each element of the array, creating a new array with the results.

```
// Exercise: Double each number in an array
const numbers = [1, 2, 3, 4, 5];
const doubledNumbers = numbers.map(number => number * 2);
console.log(doubledNumbers);

// Should print [2, 4, 6, 8, 10]
```

Built-in functions

charAt(index):

This string method returns the character at the specified index in a string.

```
// Exercise: Get the character at a specific index in a string
    const text = "JavaScript";
    const character = text.charAt(3);
    console.log(character);

                    // Should print "a"
```

Built-in functions

toUpperCase():

This string method converts all characters in a string to uppercase.

```
// Exercise: Convert a string to uppercase
const lowercaseText = "hello";
const uppercaseText = lowercaseText.toUpperCase();
console.log(uppercaseText);

// Should print "HELLO"
```

Built-in functions

slice(start, end):

The slice() method extracts a portion of a string and returns it as a new string.

It takes two arguments: start and end.

```
// Exercise: Extract a portion of a string
const originalString = "Hello, World";
const extractedString = originalString.slice(0, 5);
console.log(extractedString);

// Should print "Hello"
```

Built-in functions

Math.pow(base, exponent):

This method is used to calculate the value of a base raised to the power of an exponent.

```
// Exercise: Calculate the square of a number
const base = 4;
const exponent = 2;
const result = Math.pow(base, exponent);
console.log(result);
                    // Should print 16
```

Built-in functions

Math.sqrt(number):

The sqrt() function returns the square root of a number.

```
// Exercise: Calculate the square root of a number
const number = 25;
const squareRoot = Math.sqrt(number);
console.log(squareRoot);

// Should print 5
```

Function to Calculate the Area of a Circle:

This function calculates the area of a circle given its radius using the formula π * r^2.

```
function calculateCircleArea(radius) {
    const pi = 3.14159; // Approximation of π
    const area = pi * Math.pow(radius, 2); // Math.pow() raises the radius to the power of 2
    return area;
}
```

Function to Capitalize Words in a Sentence:

```
function capitalizeWords(sentence) {
    const words = sentence.split(' '); // Split the sentence into an array of words
    const capitalizedWords = words.map(word => {
        return word.charAt(0).toUpperCase() + word.slice(1); // Capitalize the first letter
                                                                of each word
    });
    return capitalizedWords.join(' '); // Join the words into a sentence
}
```


THANK
YOU