

JavaScript Strings Review

String Basics

- **Definition:** A string is a sequence of characters wrapped in either single quotes, double quotes or backticks. Strings are primitive data types and they are immutable. Immutability means that once a string is created, it cannot be changed.
- **Accessing Characters from a String:** To access a character from a string you can use bracket notation and pass in the index number. An index is the position of a character within a string, and it is zero-based.

Example Code

```
const developer = "Jessica";  
  
developer[0] // J
```

- **\n (Newline Character):** You can create a newline in a string by using the \n newline character.

Example Code

```
const poem = "Roses are red,\nViolets are blue,\nJavaScript is fun,\nAnd so are you.";  
  
console.log(poem);
```

- **Escaping Strings:** You can escape characters in a string by placing backslashes (\) in front of the quotes.

Example Code

```
const statement = "She said, \"Hello!\"";  
  
console.log(statement); // She said, "Hello!"
```

Template Literals (Template Strings) and String Interpolation

- **Definition:** Template literals are defined with backticks (`). They allow for easier string manipulation, including embedding variables directly inside a string, a feature known as string interpolation.

Example Code

```
const name = "Jessica";
```

```
const greeting = `Hello, ${name}!`; // "Hello, Jessica!"
```

ASCII, the `charCodeAt()` Method and the `fromCharCode()` Method

- **ASCII:** ASCII, short for American Standard Code for Information Interchange, is a character encoding standard used in computers to represent text. It assigns a numeric value to each character, which is universally recognized by machines.
- **The `charCodeAt()` Method:** This method is called on a string and returns the ASCII code of the character at a specified index.

Example Code

```
const letter = "A";  
  
console.log(letter.charCodeAt(0)); // 65
```

- **The `fromCharCode()` Method:** This method converts an ASCII code into its corresponding character.

Example Code

```
const char = String.fromCharCode(65);  
  
console.log(char); // A
```

Other Common String Methods

- **The `indexOf` Method:** This method is used to search for a substring within a string. If the substring is found, `indexOf` returns the index (or position) of the first occurrence of that substring. If the substring is not found, `indexOf` returns -1, which indicates that the search was unsuccessful.

Example Code

```
const text = "The quick brown fox jumps over the lazy dog.";  
  
console.log(text.indexOf("fox")); // 16  
  
console.log(text.indexOf("cat")); // -1
```

- **The `includes()` Method:** This method is used to check if a string contains a specific substring. If the substring is found within the string, the method returns true. Otherwise, it returns false.

Example Code

```
const text = "The quick brown fox jumps over the lazy dog.";
```

```
console.log(text.includes("fox")); // true
```

```
console.log(text.includes("cat")); // false
```

- **The slice() Method:** This method extracts a portion of a string and returns a new string, without modifying the original string. It takes two parameters: the starting index and the optional ending index.

Example Code

```
const text = "freeCodeCamp";
```

```
console.log(text.slice(0, 4)); // "free"
```

```
console.log(text.slice(4, 8)); // "Code"
```

```
console.log(text.slice(8, 12)); // "Camp"
```

- **The toUpperCase() Method:** This method converts all the characters to uppercase letters and returns a new string with all uppercase characters.

Example Code

```
const text = "Hello, world!";
```

```
console.log(text.toUpperCase()); // "HELLO, WORLD!"
```

- **The toLowerCase() Method:** This method converts all characters in a string to lowercase.

Example Code

```
const text = "HELLO, WORLD!"
```

```
console.log(text.toLowerCase()); // "hello, world!"
```

- **The replace() Method:** This method is used to find a specified value (like a word or character) in a string and replace it with another value.

Example Code

```
const text = "I like cats";
```

```
console.log(text.replace("cats", "dogs")); // "I like dogs"
```

- **The repeat() Method:** This method is used to repeat a string a specified number of times.

Example Code

```
const text = "Hello";  
  
console.log(text.repeat(3)); // "HelloHelloHello"
```

- **The trim() Method:** This method is used to remove whitespaces from both the beginning and the end of a string.

Example Code

```
const text = " Hello, world! ";  
  
console.log(text.trim()); // "Hello, world!"
```

- **The trimStart() Method:** This method removes whitespaces from the beginning (or "start") of the string.

Example Code

```
const text = " Hello, world! ";  
  
console.log(text.trimStart()); // "Hello, world! "
```

- **The trimEnd() Method:** This method removes whitespaces from the end of the string.

Example Code

```
const text = " Hello, world! ";  
  
console.log(text.trimEnd()); // " Hello, world!"
```

- **The prompt() Method:** This method of the window is used to get information from a user through the form of a dialog box. This method takes two arguments. The first argument is the message which will appear inside the dialog box, typically prompting the user to enter information. The second one is a default value which is optional and will fill the input field initially.

Example Code

```
const answer = window.prompt("What's your favorite animal?"); // This will
```