



# JAVASCRIPT MASTERY

## 1. Working with Strings in JavaScript

JavaScript provides various methods to manipulate and work with strings. Since strings are immutable, any modification results in a new string.

### 1. `slice()`

- Extract a section of a string and returns a new string without modifying the original.
- Example:

```
let str = "Hello World";
console.log(str.slice(0, 5)); // Output: "Hello"
```

## 2. Template Strings

- Uses backticks(`) to allow embedding expressions within a string.
- Example:

```
let name = "John";
console.log(`Hello, ${name}!`); // Output: "Hello, John!"
```

## 3. `split()`

- Splits a string into an array based on a separator.
- Example:

```
let words = "Hello World".split(" ");
console.log(words); // Output: ["Hello", "World"]
```



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### 4. Replace()

- Replaces a specified substring with another.
- Example:

```
let text = "Hello";
console.log(text.replace("H", "J")); // Output: "Jello"
```

### 5. includes()

- Checks if a substring exists within a string.
- Example:

```
console.log("JavaScript".includes("Java")); // Output: true
```



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## 2. Conditional Operators in JavaScript

### 1. if statement

- Executes code if a condition is true.
- Example:

```
let x = 10;
if (x > 5) {
    console.log("Big number");
}
```

### 2. if-else statement

- Runs different code blocks based on a condition.
- Example:

```
let num = 4;
if (num > 5) {
    console.log("Greater than 5");
} else {
    console.log("Less than or equal to 5");
}
```



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## 2. Conditional Operators in JavaScript

### 3. else-if ladder

- Used for multiple conditions.
- Example:

```
let score = 85;
if (score >= 90) {
  console.log("A grade");
} else if (score >= 80) {
  console.log("B grade");
} else {
  console.log("Below B grade");
}
```

### 4. Ternary Operator

- Shorter way to write an if-else statement.
- Example:

```
let age = 18;
let status = age >= 18 ? "Adult" : "Minor";
console.log(status); // Output: "Adult"
```



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## 2. Conditional Operators in JavaScript

### 5. Switch statement

- Alternative to multiple if-else conditions.
- Example:

```
let day = "Monday";
switch (day) {
    case "Monday":
        console.log("Start of the week");
        break;
    case "Friday":
        console.log("Weekend is coming!");
        break;
    default:
        console.log("Normal day");
}
```