



## Lab Practice -2 [404184C] : ELECTIVE-III(C) - JavaScript

ACADEMIC YEAR: 2024-25

CLASS	: BE	DIV	: 7	Batch	: R-7	DATE	:
Roll No	42315	ABC ID	: 187-311-403-781	SEMESTER	: I		

Experiment No.: 3

HTML →

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
<meta charset="UTF-8">
```

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

```
<title>String Operations</title>
```

```
<link rel="stylesheet" href="style_3.css">
```

```
</head>
```

```
<body>
```

```
<div class="container">
```

```
<h1>String Operations</h1>
```

```
<label for="stringInput">Enter a string:</label>
```

```
<input type="text" id="stringInput" placeholder="Enter a string">
```

```
<label for="replaceChar">Character to replace:</label>
```

```
<input type="text" id="replaceChar" placeholder="Character to replace">
```

```
<label for="replaceWith">Replace with:</label>
```

```
<input type="text" id="replaceWith" placeholder="New character">
```

```
<button onclick="reverseString()">Reverse String</button>
```

```
<button onclick="replaceCharacter()">Replace Character</button>
```

<br><br>

<label for="palindromeInput">Enter a string to check Palindrome:</label>

<input type="text" id="palindromeInput" placeholder="Check if Palindrome">

<button onclick="checkPalindrome()">Check Palindrome</button>

<br><br>

<label for="substringInput">Enter substring to replace:</label>

<input type="text" id="substringInput" placeholder="Substring to replace">

<label for="replaceWithSubstring">Replace with:</label>

<input type="text" id="replaceWithSubstring" placeholder="New substring">

<button onclick="replaceSubstring()">Replace Substring</button>

<div id="resultOutput"></div>

<div class="info">

<h2>Name: Tanmay Deo</h2>

<h3>Roll Number: 42315</h3>

</div>

</div>

<script src="script\_3.js"></script>

</body>

</html>

## CSS ➔

```
body {  
  font-family: Arial, sans-serif;  
  background-color: #f0f0f0;  
  display: flex;  
  justify-content: center;  
  align-items: center;  
  height: 100vh;  
  margin: 0;  
}  
  
.container {  
  background-color: white;  
  padding: 20px;  
  border-radius: 8px;  
  box-shadow: 0px 4px 8px rgba(0, 0, 0, 0.1);  
  text-align: center;  
}  
  
input {  
  display: block;  
  margin: 10px auto;  
  padding: 10px;  
  border: 1px solid #ccc;  
  border-radius: 4px;  
  width: 80%;  
}  
  
button {  
  padding: 10px 20px;  
  margin-top: 10px;
```

```
background-color: #4caf50;

color: white;

border: none;

border-radius: 4px;

cursor: pointer;

}

button:hover {

    background-color: #45a049;

}

h1 {

    color: #333;

}

#resultOutput {

    margin-top: 20px;

    background-color: #e0f7fa;

    padding: 10px;

    border-radius: 4px;

    color: #333;

}
```

## JavaScript ➔

// Function to reverse a string

```
function reverseString() {
```

```
    let str = document.getElementById("stringInput").value;
```

```
    // Using standard method
```

```
    let reversed = str.split("").reverse().join("");
```

```
    // Display result
```

```
    document.getElementById(
```

```
        "resultOutput"
```

```
    ).innerHTML = `Reversed String: ${reversed}`;
```

```
    /* Manual logic for reversing a string
```

```
    let reversed = "";
```

```
    for (let i = str.length - 1; i >= 0; i--) {
```

```
        reversed += str[i];
```

```
    }
```

```
    */
```

```
}
```

// Function to replace characters in a string

```
function replaceCharacter() {
```

```
    let str = document.getElementById("stringInput").value;
```

```
    let charToReplace = document.getElementById("replaceChar").value;
```

```
    let replaceWith = document.getElementById("replaceWith").value;
```

```
    // Using standard method
```

```
    let replaced = str.split(charToReplace).join(replaceWith);
```

```
    document.getElementById(
```

```
        "resultOutput"
```

```
    ).innerHTML = `Replaced String: ${replaced}`;
```

```
/* Manual logic for replacing characters

let replaced = "";
for (let i = 0; i < str.length; i++) {
    if (str[i] === charToReplace) {
        replaced += replaceWith;
    } else {
        replaced += str[i];
    }
}

*/

}

// Function to check if a string is a palindrome
function checkPalindrome() {
    let str = document.getElementById("palindromeInput").value;
    let originalStr = str.replace(/\s/g, "").toLowerCase();
    let reversedStr = originalStr.split("").reverse().join("");
    // Check palindrome using standard method
    if (originalStr === reversedStr) {
        document.getElementById(
            "resultOutput"
        ).innerHTML = `The string "${str}" is a palindrome.`;
    } else {
        document.getElementById(
            "resultOutput"
        ).innerHTML = `The string "${str}" is not a palindrome.`;
    }
}
```

```

/* Manual logic for checking palindrome

let isPalindrome = true;

for (let i = 0; i < originalStr.length / 2; i++) {

    if (originalStr[i] !== originalStr[originalStr.length - 1 - i]) {

        isPalindrome = false;

        break;

    }

}

if (isPalindrome) {

    document.getElementById("resultOutput").innerHTML = `The string "${str}" is a
palindrome.`;

} else {

    document.getElementById("resultOutput").innerHTML = `The string "${str}" is not a
palindrome.`;

}

*/

}

// Function to replace a substring in a string

function replaceSubstring() {

    let str = document.getElementById("stringInput").value;

    let substringToReplace = document.getElementById("substringInput").value;

    let replaceWith = document.getElementById("replaceWithSubstring").value;

    let replacedStr = str.replace(substringToReplace, replaceWith);

    document.getElementById(

        "resultOutput"

    ).innerHTML = `String after substring replacement: ${replacedStr}`;

```

```
/* Manual logic for replacing a substring

let replacedStr = "";

let i = 0;

while (i < str.length) {

    if (str.substr(i, substringToReplace.length) === substringToReplace) {

        replacedStr += replaceWith;

        i += substringToReplace.length;

    } else {

        replacedStr += str[i];

        i++;

    }

}

*/

}
```



## Output ➔

### 1. Reversing a String

### String Operations

Enter a string:

Character to replace:

Replace with:

Reverse String Replace Character

Enter a string to check Palindrome:

Check Palindrome

Enter substring to replace:

Replace with:

Replace Substring

**Name: Tanmay Deo**  
**Roll Number: 42315**

### String Operations

Enter a string:

Character to replace:

Replace with:

Reverse String Replace Character

Enter a string to check Palindrome:

Check Palindrome

Enter substring to replace:

Replace with:

Replace Substring

**Reversed String: naidni ma i**

**Name: Tanmay Deo**  
**Roll Number: 42315**

## 2. Replacing characters of String

### String Operations

Enter a string:

Character to replace:

Replace with:

[Reverse String](#) [Replace Character](#)

Enter a string to check Palindrome:

[Check Palindrome](#)

Enter substring to replace:

Replace with:

[Replace Substring](#)

Replaced String: i pm indipn

**Name: Tanmay Deo**  
**Roll Number: 42315**

## 3. Checking if String is palindrome

### String Operations

Enter a string:

Character to replace:

Replace with:

[Reverse String](#) [Replace Character](#)

Enter a string to check Palindrome:

[Check Palindrome](#)

Enter substring to replace:

Replace with:

[Replace Substring](#)

The string "radar" is a palindrome.

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**Roll Number: 42315**

### String Operations

Enter a string:

Character to replace:

Replace with:

Reverse String Replace Character

Enter a string to check Palindrome:

Check Palindrome

Enter substring to replace:

Replace with:

Replace Substring

The string "indian" is not a palindrome.

**Name: Tanmay Deo**  
**Roll Number: 42315**

#### 4. Replacing the Substring in the String

### String Operations

Enter a string:

Character to replace:

Replace with:

Reverse String Replace Character

Enter a string to check Palindrome:

Check Palindrome

Enter substring to replace:

Replace with:

Replace Substring

String after substring replacement: i am not indian

**Name: Tanmay Deo**  
**Roll Number: 42315**

Date:

Course Teacher Sign