CLASS : BE VIII [P8]	SUBJECT : JavaScript	
EXPT. NO. : 3	Roll No.: 42410	DATE :

CODE :

index3.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>
 <style>
 body {
 font-family: 'Times New Roman', sans-serif;
 }
 h1, h2 {
 color: #333;
 }
 h1{
 font-size: 28px;
 }
 h2{
 font-size: 26px;
 }
 label {
 display: inline-block;
 width: 200px;
 margin-bottom: 5px;
 font-size: 20px;
 margin-right: 1px;
 }
 input[type="text"], input[type="number"] {
 width: 250px;
 padding: 5px;
 margin-bottom: 10px;
 font-size: 20px;
 }
 button {
 padding: 8px 16px;
 background-color: #c7c2c2;

 color: rgb(0, 0, 0);
 border: none;
 cursor: pointer;
 font-size: 20px;
 }
```

```
 #output, #palindromeOutput {
 margin-top: 10px;
 font-size: 20px;
 font-weight: bold;
 font-family: 'Times New Roman', Times, serif';
 }
 </style>
</head>
<body>
 <h1>42410_Disha Chinchole</h1>
 <h2>String Operations</h2>
 <label for="inputString">Enter a string: </label>
 <input type="text" id="inputString">
 <label for="replaceInput">Characters to Replace: </label>
 <input type="text" id="replaceInput">
 <label for="newChar">New Character: </label>
 <input type="text" id="newChar" maxlength="1">
 <button onclick="performOperations()">Perform Operations</button>
 <div id="output"></div>
 <hr>
 <h2>Palindrome Check</h2>
 <label for="palindromeInput">Enter a string: </label>
 <input type="text" id="palindromeInput">
 <button onclick="checkPalindrome()">Check Palindrome</button>
 <p id="palindromeOutput"></p>
 <script src="app3.js"></script>
</body>
</html>
```

app3.js

```
function reverseString(str) {
 return str.split('').reverse().join('');
}
function replaceCharacters(str, charsToReplace, newChar) {
 const regex = new RegExp(charsToReplace, 'g');
 return str.replace(regex, newChar);
}
function isPalindrome(str) {
 str = str.toLowerCase().replace(/[^a-z0-9]/g, '');
 const length = str.length;
 for (let i = 0; i < length / 2; i++) {
 if (str[i] !== str[length - 1 - i]) {
 return false;
 }

 }
 return true;
```

```
}
function performOperations() {
 const inputString = document.getElementById('inputString').value;
 const stringLength = inputString.length;
 if (stringLength === 0) {
 document.getElementById('output').textContent = 'Please enter a valid string.';
 return;
 }
 const replaceInput = document.getElementById('replaceInput').value;
 const newChar = document.getElementById('newChar').value;
 const reversed = reverseString(inputString);
 const replaced = replaceCharacters(inputString, replaceInput, newChar);
 const palindromeStatus = isPalindrome(inputString) ? 'is' : 'is not';
 document.getElementById('output').innerHTML = `
 Original String: ${inputString}<br>
 Reversed String: ${reversed}<br>
 String after Replacement: ${replaced}<br>
 Palindrome Status: The input string ${palindromeStatus} a palindrome.
 `;
}
function checkPalindrome() {
 const palindromeInput = document.getElementById('palindromeInput').value;
 const isPalindromeValue = isPalindrome(palindromeInput) ? 'is' : 'is not';
 document.getElementById('palindromeOutput').textContent = `"${palindromeInput}"
${isPalindromeValue} a
palindrome.`;
}
```

OUTPUT :