

## Experiment 4

Roll no: 42405

Batch: Q6

### Output:

The screenshot shows a web application titled "String Functions Playground" running in a Mozilla Firefox browser. The application has a text input field containing "Hello World" and a "Run Functions" button. Below the input field, there are two tables: "Not in Place Methods" and "In Place Methods".

**Not in Place Methods**

Operation	Argument	Output
Index Of	<input type="text" value="e"/>	1
Char At	<input type="text" value="3"/>	I
Char Code At	<input type="text" value="3"/>	108
Concat	<input type="text" value="for cats"/>	Hello World for cats
Pad Start	<input type="text" value="4"/>	----Hello World
Pad End	<input type="text" value="4"/>	Hello World----
Split	<input type="text" value=""/>	["Hello","World"]
Slice	<input type="text" value="0"/> <input type="text" value="8"/>	Hello Wo

**In Place Methods**

Operation	Argument	Output
Replace	<input type="text" value="l"/> → <input type="text" value="r"/>	Herlo World
Replace All	<input type="text" value="l"/> → <input type="text" value="r"/>	Herro World
Splice	Start: <input type="text" value="0"/> Delete: <input type="text" value="5"/> Insert: <input type="text" value="Javascript"/>	Removed: Hello, Result: Javascript World
Trim	-	Pune Institute of Computer Technology
Trim Start	-	Pune Institute of Computer Technology
Trim End	-	Pune Institute of Computer Technology

Below the tables, the browser console shows the output of the JavaScript code. The console output is as follows:

```
Original String Pune Institute of Computer Technology
-----Not in place-----
Length: 37
Upper case: PUNE INSTITUTE OF COMPUTER TECHNOLOGY
Lower case: pune institute of computer technology
Index of (T): 27
Concat with (for cats): Pune Institute of Computer Technology for cats
Pad Start: -----Pune Institute of Computer Technology
Pad End: Pune Institute of Computer Technology-----
Char At: I
Char Code At: 73
Split:  (5) ['Pune', 'Institute', 'of', 'Computer', 'Technology']
Slice: Pune
-----In Place Methods)-----
Trim: Pune Institute of Computer Technology
Trim Start: Pune Institute of Computer Technology
Trim End: Pune Institute of Computer Technology
Replace (u) with (a): Pune Institute of Computer Technology
Replace All (u) with (a): Pune Institute of Computer Technology
Splice: (Removed, Original) Pune , Javascript Institute of Computer Technology
```

### Code:

#### 1. HTML:

```
<!DOCTYPE html>

<html lang="en">
```

```
<head>

<script type="text/javascript" src="string_comp.js"></script>

<link rel="stylesheet" href="style.css">


    <meta charset="UTF-8">

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

    <title>Document</title>

</head>

<body>


<div class="shape-box">

    <div class="form-section">

        <h1>String Functions Playground</h1>

        <label for="string" class="area-label">Enter a String:</label>

        <input type="text" id="string" placeholder="Type something...">

        <button onclick="runAll()">Run Functions</button>

    </div>

</div>


<div class="all">

    <!-- Left Column -->

    <div class="operation">

        <h2>Not in Place Methods</h2>

        <table id="notInPlaceTable">

            <thead>

                <tr>

                    <th>Operation</th>
```

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```

        <th>Argument</th>

        <th>Output</th>

    </tr>

</thead>

<tbody>

    <tr><td>Index Of</td><td><input id="arg-indexof" class="arg-input"
value="T"></td><td id="out-indexof"></td></tr>

    <tr><td>Char At</td><td><input id="arg-charat" type="number"
class="arg-input" value="5"></td><td id="out-charat"></td></tr>

    <tr><td>Char Code At</td><td><input id="arg-charcodeat" type="number"
class="arg-input" value="5"></td><td id="out-charcodeat"></td></tr>

    <tr><td>Concat</td><td><input id="arg-concat" class="arg-input"
value=" for cats"></td><td id="out-concat"></td></tr>

    <tr><td>Pad Start</td><td><input id="arg-padstart" type="number"
class="arg-input" value="10"></td><td id="out-padstart"></td></tr>

    <tr><td>Pad End</td><td><input id="arg-padend" type="number"
class="arg-input" value="10"></td><td id="out-padend"></td></tr>

    <tr><td>Split</td><td><input id="arg-split" class="arg-input" value="
"></td><td id="out-split"></td></tr>

    <tr><td>Slice</td>

    <td>

        <input id="arg-slice-start" type="number" class="arg-input"
value="0">

        <input id="arg-slice-end" type="number" class="arg-input"
value="4">

    </td>

    <td id="out-slice"></td>

</tr>

</tbody>

</table>

</div>

```

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```

<!-- Right Column -->

<div class="operation">

    <h2>In Place Methods</h2>

    <table id="inPlaceTable">

        <thead>

            <tr>

                <th>Operation</th>

                <th>Argument</th>

                <th>Output</th>

            </tr>

        </thead>

        <tbody>

            <tr><td>Replace</td><td><input id="arg-replace1" class="arg-input"
value="u"> → <input id="arg-replace2" class="arg-input" value="a"></td><td
id="out-replace"></td></tr>

            <tr><td>Replace All</td><td><input id="arg-replaceall1" class="arg-
input" value="u"> → <input id="arg-replaceall2" class="arg-input"
value="a"></td><td id="out-replaceall"></td></tr>

            <tr><td>Splice</td>

                <td>

                    Start:<input id="arg-splice-start" type="number" class="arg-input"
value="0">

                    Delete:<input id="arg-splice-del" type="number" class="arg-input"
value="4">

                    Insert:<input id="arg-splice-insert" class="arg-input"
value="Javascript">

                </td>

                <td id="out-splice"></td>

            </tr>

            <tr><td>Trim</td><td>-</td><td id="out-trim"></td></tr>

            <tr><td>Trim Start</td><td>-</td><td id="out-trimstart"></td></tr>

```

```

        <tr><td>Trim End</td><td>--</td><td id="out-trimend"></td></tr>

    </tbody>

</table>

</div>

</div>

</body>

```

## 2. Javascript:

```

function runAll() {

    const s = document.getElementById("string").value;

    if (!s) {

        alert("Please enter a string first!");

        return;

    }

    // --- Not in Place ---

    document.getElementById("out-indexof").textContent =
s.indexOf(document.getElementById("arg-indexof").value);

    document.getElementById("out-charat").textContent =
s.charAt(parseInt(document.getElementById("arg-charat").value));

    document.getElementById("out-charcodeat").textContent =
s.charCodeAt(parseInt(document.getElementById("arg-charcodeat").value));

    document.getElementById("out-concat").textContent =
s.concat(document.getElementById("arg-concat").value);

    document.getElementById("out-padstart").textContent = s.padStart(s.length
+ parseInt(document.getElementById("arg-padstart").value), "-");

    document.getElementById("out-padend").textContent = s.padEnd(s.length +
parseInt(document.getElementById("arg-padend").value), "-");

    document.getElementById("out-split").textContent =
JSON.stringify(s.split(document.getElementById("arg-split").value));

    document.getElementById("out-slice").textContent = s.slice(

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```
        parseInt(document.getElementById("arg-slice-start").value),
        parseInt(document.getElementById("arg-slice-end").value)
    );

    // --- In Place ---
    document.getElementById("out-replace").textContent = s.replace(
        document.getElementById("arg-replace1").value,
        document.getElementById("arg-replace2").value
    );

    document.getElementById("out-replaceall").textContent = s.replaceAll(
        document.getElementById("arg-replaceall1").value,
        document.getElementById("arg-replaceall2").value
    );

    let arr = s.split("");
    let removed = arr.splice(
        parseInt(document.getElementById("arg-splice-start").value),
        parseInt(document.getElementById("arg-splice-del").value),
        document.getElementById("arg-splice-insert").value
    ).join("");

    document.getElementById("out-splice").textContent = `Removed: ${removed},
Result: ${arr.join("")}`;

    let orig = "  Pune Institute of Computer Technology  ";
    document.getElementById("out-trim").textContent = orig.trim();
    document.getElementById("out-trimstart").textContent = orig.trimStart();
    document.getElementById("out-trimend").textContent = orig.trimEnd();
}
```