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

ACADEMIC YEAR: 2024-25

CLASS	**: BE**	**DIV**	**: 7**	**Batch**	**: R-7**	**DATE**	**:**
Roll No	**42305**	**ABC ID**	**: 810-360-343-871**			**SEMESTER**	**: I**

Experiment No.: 6

HTML ➔

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Array Operations </title>
  <link rel="stylesheet" href="style_6.css">
</head>
<body>
  <div class="container">
    <h1>Array Operations Using Standard & Non-Standard Methods</h1>
    <!—Taking input for array length -->
    <label for="arrayLength">Enter the length of the array: </label>
    <input type="number" id="arrayLength" placeholder="Array length">
    <!—Taking input to delete an element -->
    <label for="deleteElement">Enter the element to delete from the array: </label>
    <input type="text" id="deleteElement" placeholder="Element to delete">
    <!—Taking input to check if a value is present -->
    <label for="checkValue">Enter the value to check in the array: </label>
    <input type="text" id="checkValue" placeholder="Value to check">
```

```
 <button onclick="createRandomArray()">Create Array</button>
   <button onclick="deleteElementStandard()">Delete Element (Standard)</button>
   <button onclick="deleteElementNonStandard()">Delete Element (Non-Standard)</button>
   <button onclick="checkValueStandard()">Check Value (Standard)</button>
   <button onclick="checkValueNonStandard()">Check Value (Non-Standard)</button>
   <button onclick="emptyArrayStandard()">Empty Array (Standard)</button>
   <button onclick="emptyArrayNonStandard()">Empty Array (Non-Standard)</button>
   <div id="result"></div>
   <div class="info">
     <h2>Name: Teena Bambal</h2>
     <h3>Roll Number: 42305</h3>
   </div>
  </div>
  <script src="script_6.js"></script>
</body>
</html>
```

CSS ➔

```
body {
  font-family: Arial, sans-serif;
  background-color: #f0f8ff;
  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;
}
```

```
button {
  padding: 10px 20px;
  margin: 10px;
  background-color: #4caf50;
  color: white;
  border: none;
  border-radius: 4px;
  cursor: pointer;
}
button:hover {
  background-color: #45a049;
}
h1 {
  color: #333;
}
div {
  margin-top: 20px;
  color: #333;
}
h2,
h3 {
  margin: 5px;
  color: #4caf50;
}
```

JS ➔

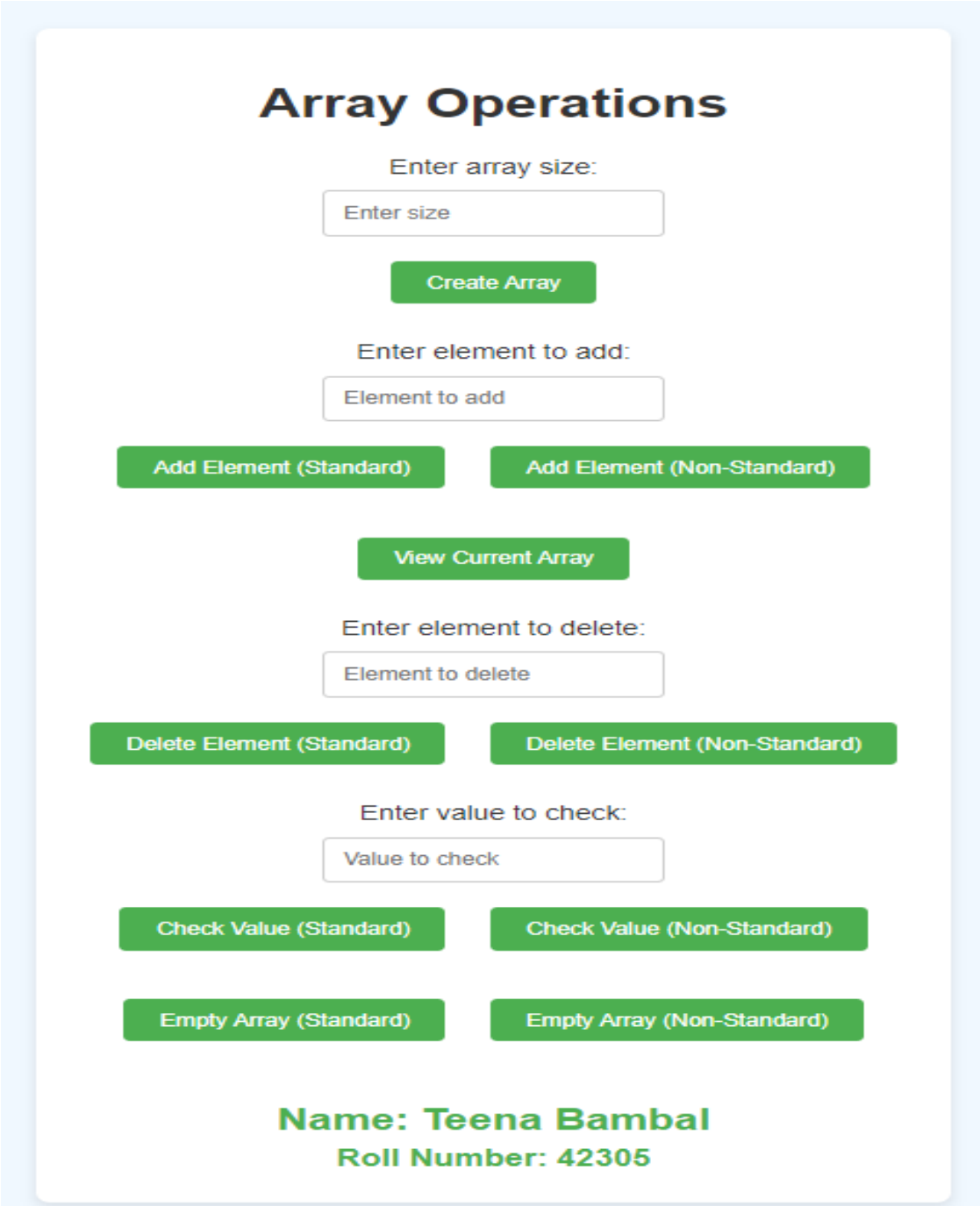
```
let randomArray = [];
// Creating an array with the specified length
function createRandomArray() {
  let length = document.getElementById("arrayLength").value;
  length = parseInt(length);
  let min = 10; // minimum value of the random numbers
  let max = 1000; // maximum value of the random numbers
  randomArray = Array.from(
    { length },
    () => Math.floor(Math.random() * (max - min + 1)) + min
  );
  document.getElementById(
    "result"
  ).innerHTML = `Random Array: [${randomArray}]`;
}
// Deleting element from array using splice method
function deleteElementStandard() {
  let element = parseInt(document.getElementById("deleteElement").value);
  let index = randomArray.indexOf(element);
  if (index !== -1) {
    randomArray.splice(index, 1); // Removes the element at that index
    document.getElementById(
      "result"
    ).innerHTML = `Array after deletion (Standard): [${randomArray}]`;
  } else {
    document.getElementById("result").innerHTML = `Element not found in array.`;
  }}
```

```
// Deleting  element from array using manual looping  method
function deleteElementNonStandard() {
  let element = parseInt(document.getElementById("deleteElement").value);
  let newArray = [];
  for (let i = 0; i < randomArray.length; i++) {
    if (randomArray[i] !== element) {
      newArray.push(randomArray[i]); // Add element to new array if it's not the one to delete
    }
  }
  randomArray = newArray;
  document.getElementById(
    "result"
  ).innerHTML = `Array after deletion (Non-Standard): [${randomArray}]`;
}
// Checking  if value exists in the array using includes method
function checkValueStandard() {
  let value = parseInt(document.getElementById("checkValue").value);
  if (randomArray.includes(value)) {
    document.getElementById(
      "result"
    ).innerHTML = `Value ${value} exists in the array (Standard).`;
  } else {
    document.getElementById(
      "result"
    ).innerHTML = `Value ${value} does not exist in the array.`;
  }
}
```

```
// Checking if value exists in the array using manual looping  method
function checkValueNonStandard() {
  let value = parseInt(document.getElementById("checkValue").value);
  let found = false;
  for (let i = 0; i < randomArray.length; i++) {
    if (randomArray[i] === value) {
      found = true;
      break;
    }
  }
  if (found) {
    document.getElementById(
      "result"
    ).innerHTML = `Value ${value} exists in the array (Non-Standard).`;
  } else {
    document.getElementById(
      "result"
    ).innerHTML = `Value ${value} does not exist in the array.`;
  }
}
// Emptying  the array using standard method (setting length to 0)
function emptyArrayStandard() {
  randomArray.length = 0; // Set array length to 0
  document.getElementById(
    "result"
  ).innerHTML = `Array emptied (Standard): [${randomArray}]`;
}
```

Output ➔

1. Creating an array



Array Operations

Enter array size:

4

Create Array

Enter element to add:

4

Add Element (Standard) | Add Element (Non-Standard)

View Current Array

Enter element to delete:

Element to delete

Delete Element (Standard) | Delete Element (Non-Standard)

Enter value to check:

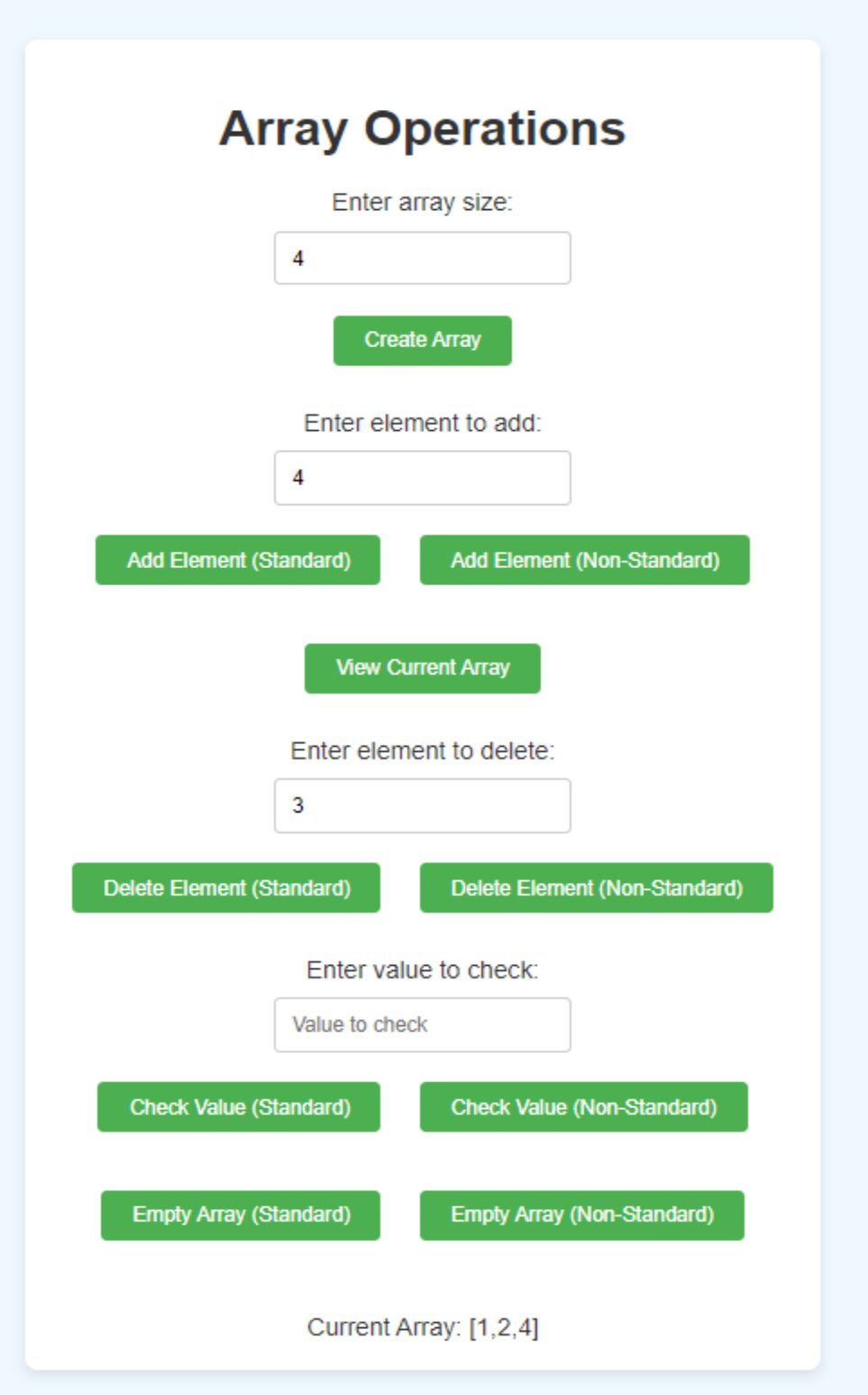
Value to check

Check Value (Standard) | Check Value (Non-Standard)

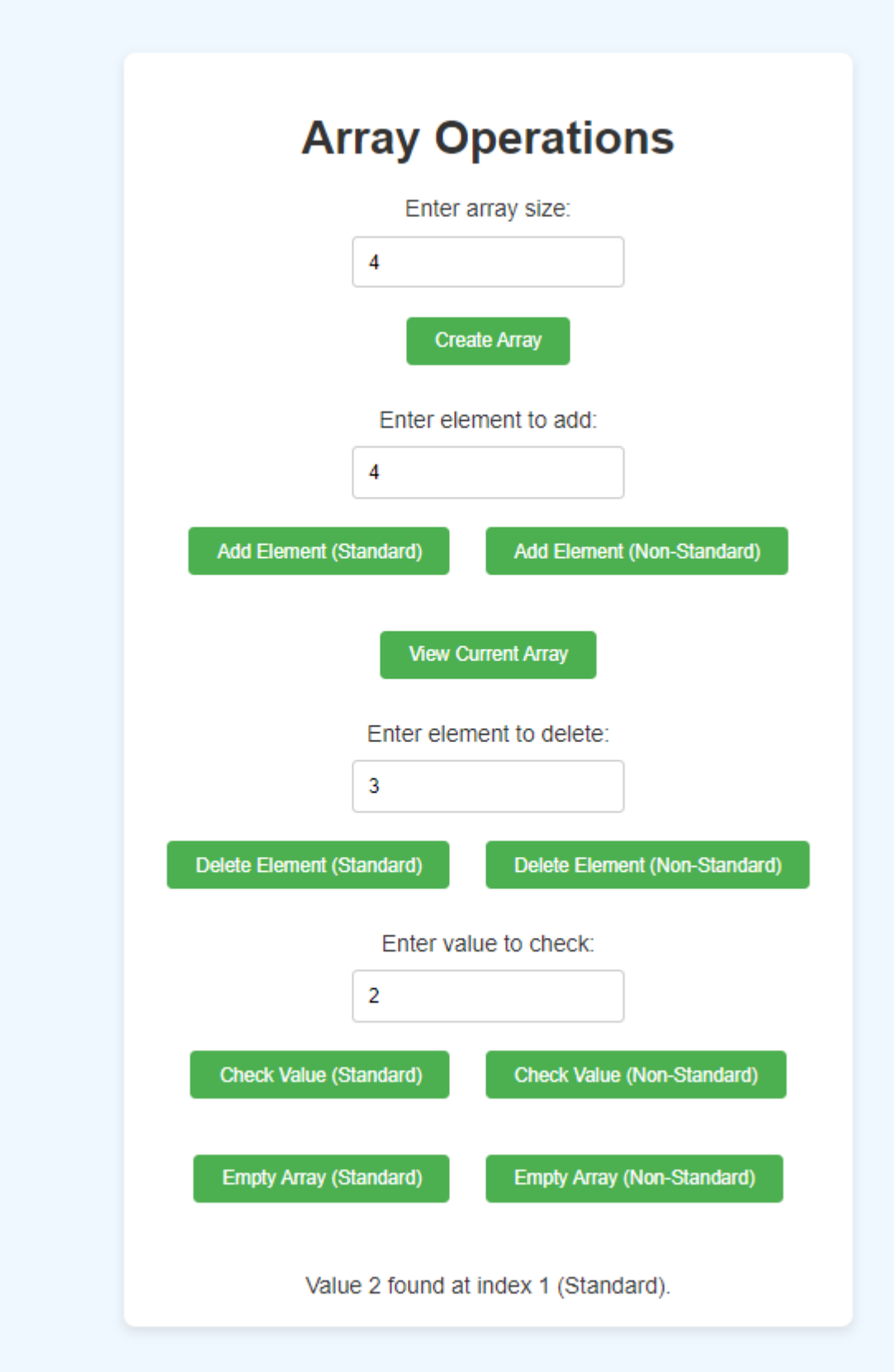
Empty Array (Standard) | Empty Array (Non-Standard)

Array after adding (Standard): [1,2,3,4]

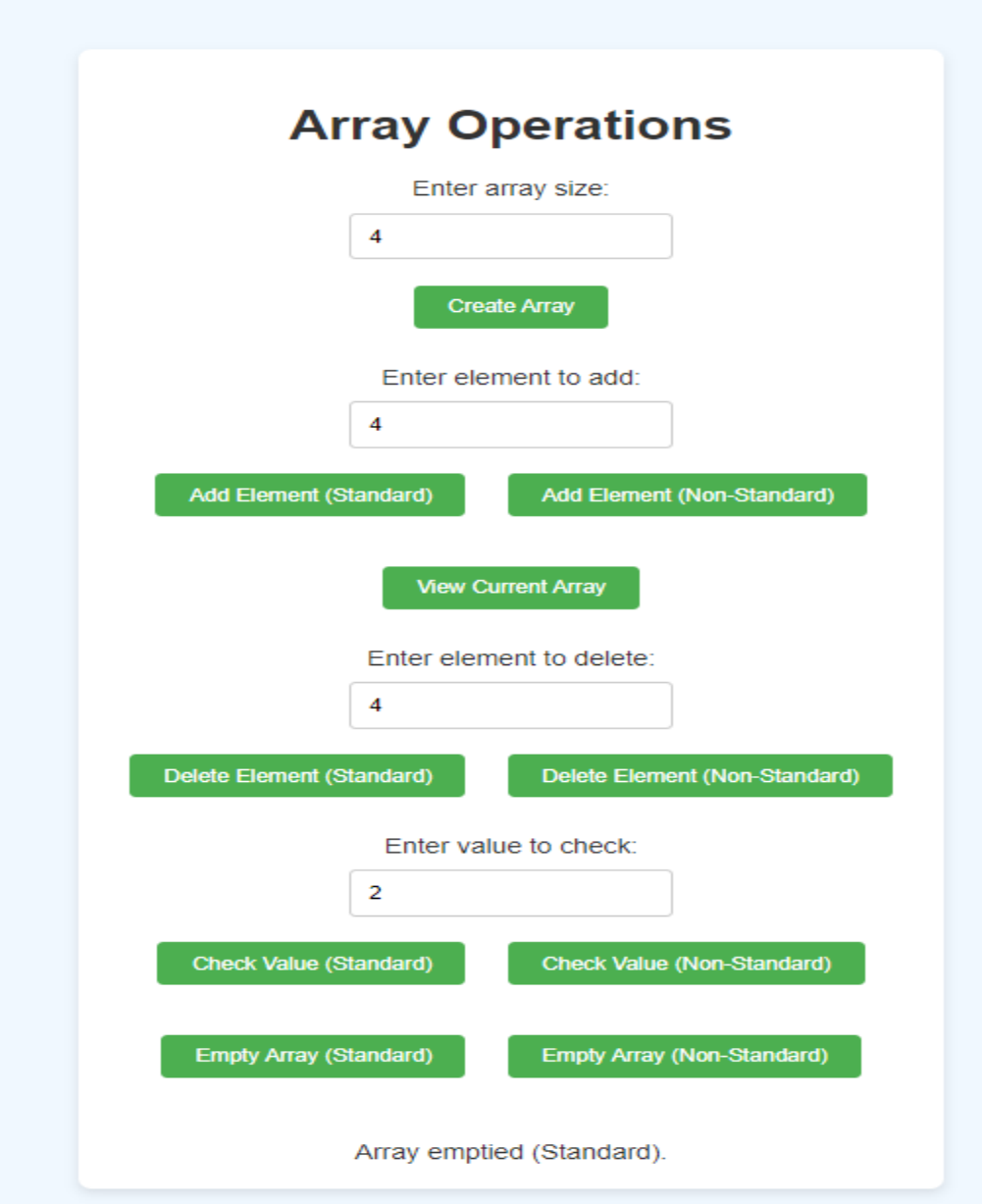
2. Deleting an element from array (if the element is present in the array)



3. Checking if value entered by user is present in the array



4. Empty the array



Date: Course Teacher Sign