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| PICTLOGO | **SCTR’s PUNE INSTITUTE OF COMPUTER TECHNOLOGY, PUNE - 411043** |
| **DEPARTMENT OF ELECTRONICS & TELECOMMUNICATION ENGINEERING** |

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| **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** |

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| **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: Tanmay Deo</h2>

      <h3>Roll Number: 42315</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

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

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

A screenshot of a computer

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A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

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

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

1. Empty the array

A screenshot of a computer screen

Description automatically generated

A screenshot of a computer screen

Description automatically generated

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| Date: |  | Course Teacher Sign |