Assignment No: 2

Design and develop a website to demonstrate (a) searching and sorting array for integer elements using JavaScript (b) array for named entities using JavaScript. You can make the use of bootstrap as well as jQuery.

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Roll No: 66

Batch: D3

HTML:

```
<!DOCTYPE html>
<html>

<head>
    <title>Searching and Sorting</title>
    <link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css">
    <style>
        body {
            font-family: Arial, sans-serif;
            background-color: #f4f4f4;
        }

        .container {
            padding: 50px;
        }

        .array-container {
            margin-top: 30px;
            margin-bottom: 30px;
        }

        .array-container h3 {
            margin-bottom: 20px;
        }

        .array-container button {
            margin-top: 20px;
            background-color: #7FFFD4;
            border-color: #000000;
```

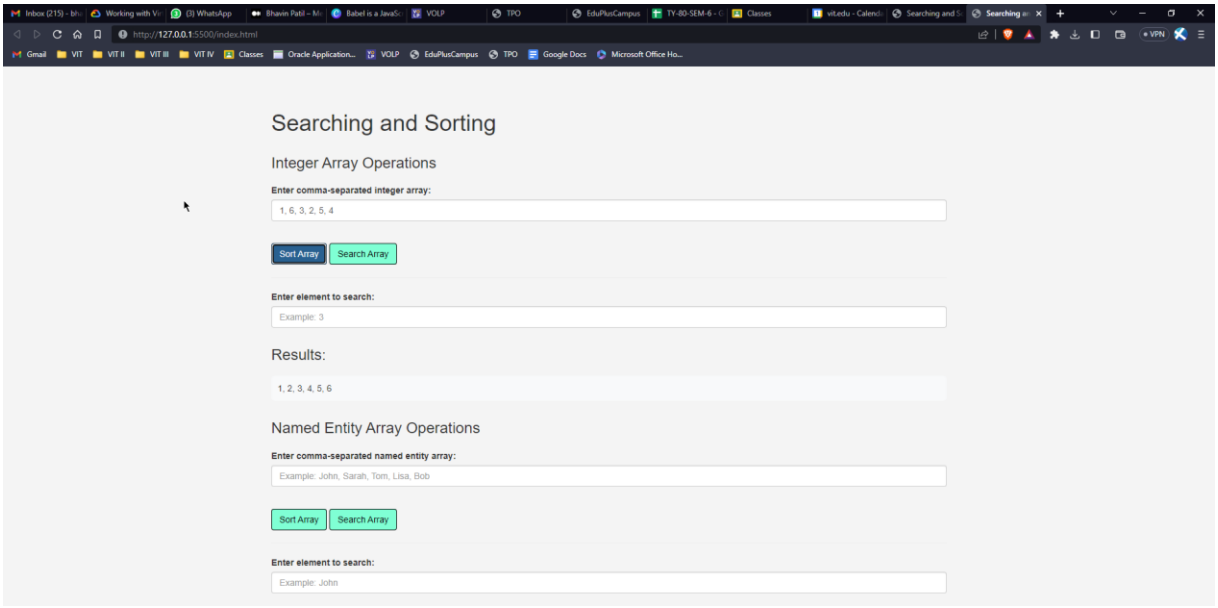
```
            color: #000000;

        }

        .array-container button:hover {
            background-color: #088F8F;
            /* Green */
            color: white;
        }

        .result-container {
            margin-top: 30px;
            display: none;
        }

        .result-container h3 {
            margin-bottom: 20px;
        }

        .result-container p {
            background-color: #f8f9fa;
            padding: 10px;
            border-radius: 5px;
        }
    </style>
</head>

<body>
    <div class="container">
        <h1>Searching and Sorting</h1>
        <div class="array-container">
            <h3>Integer Array Operations</h3>
            <div class="form-group">
                <label for="integer-array">Enter comma-separated integer
array:</label>
                <input type="text" class="form-control" id="integer-array"
placeholder="Example: 1, 5, 3, 2, 4">
            </div>
            <button class="btn btn-primary" id="sort-integer-array-btn">Sort
Array</button>
            <button class="btn btn-primary" id="search-integer-array-
btn">Search Array</button>
            <div class="form-group">
                <hr>
                <label for="search-integer-array-input">Enter element to
search:</label>
                <input type="text" class="form-control" id="search-integer-
array-input" placeholder="Example: 3">
```

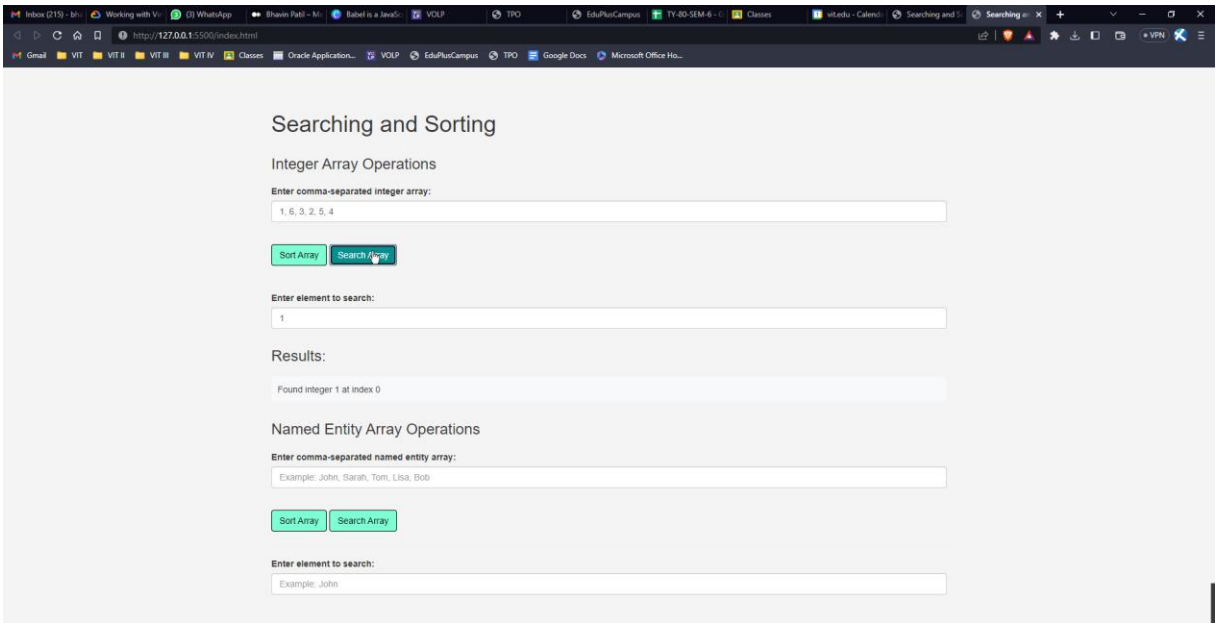
```
            </div>
            <div class="result-container" id="integer-array-result-container">
                <h3>Results:</h3>
                <p id="integer-array-result"></p>
            </div>
        </div>
        <div class="array-container">
            <h3>Named Entity Array Operations</h3>
            <div class="form-group">
                <label for="named-entity-array">Enter comma-separated named
entity array:</label>
                <input type="text" class="form-control" id="named-entity-
array"
                    placeholder="Example: John, Sarah, Tom, Lisa, Bob">
            </div>
            <button class="btn btn-primary" id="sort-named-entity-array-
btn">Sort Array</button>
            <button class="btn btn-primary" id="search-named-entity-array-
btn">Search Array</button>
            <div class="form-group">
                <hr>
                <label for="search-named-entity-input">Enter element to
search:</label>
                <input type="text" class="form-control" id="search-named-
entity-input" placeholder="Example: John">
            </div>
            <div class="result-container" id="named-entity-array-result-
container">
                <h3>Results:</h3>
                <p id="named-entity-array-result"></p>
            </div>
        </div>
    </div>
    <script src="https://code.jquery.com/jquery-3.3.1.min.js"></script>
    <script
src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/js/bootstrap.min.js"></sc
ript>
    <script>
        $("#sort-integer-array-btn").click(function () {
            var integerArray = $("#integer-array").val().split(",");
            var sortedArray = integerArray.sort(function (a, b) {
                return a - b;
            });
            $("#integer-array-result-container").show();
            $("#integer-array-result").text(sortedArray.join(", "));
        });

        $("#search-integer-array-btn").click(function () {
```

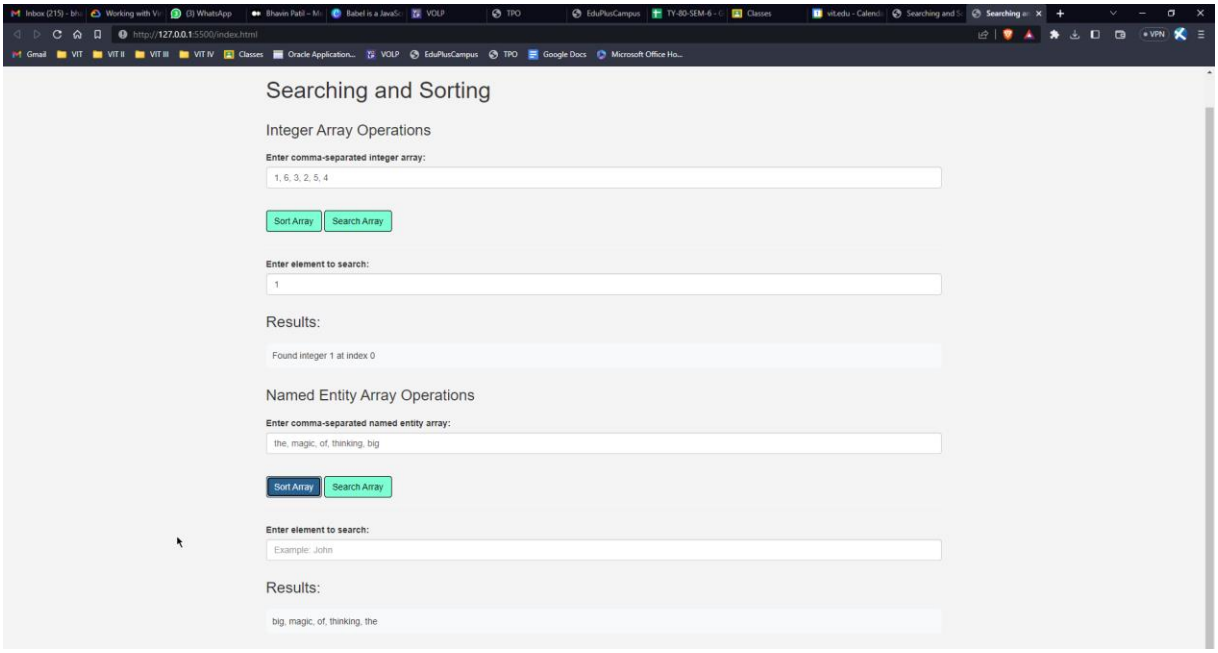
```
            var integerArray = $("#integer-array").val().split(",");
            var searchQuery = $("#search-integer-array-input").val().trim();
            var matchingIntegers = [];
            for (var i = 0; i < integerArray.length; i++) {
                if (integerArray[i] === searchQuery) {
                    matchingIntegers.push(integerArray[i]);
                }
            }
            $("#integer-array-result-container").show();
            if (matchingIntegers.length > 0) {
                $("#integer-array-result").text("Found integer " + searchQuery
+ " at index " + integerArray.indexOf(searchQuery));
            }
            else {
                $("#integer-array-result").text("Integer " + searchQuery + "
not found.");
            }
        });

        $("#sort-named-entity-array-btn").click(function () {
            var namedEntityArray = $("#named-entity-array").val().split(",");
            var sortedArray = namedEntityArray.sort();
            $("#named-entity-array-result-container").show();
            $("#named-entity-array-result").text(sortedArray.join(", "));
        });

        $("#search-named-entity-array-btn").click(function () {
            var namedEntityArray = $("#named-entity-array").val().split(",");
            var searchQuery = $("#search-named-entity-input").val();
            var matchingEntities = [];
            for (var i = 0; i < namedEntityArray.length; i++) {
                if (namedEntityArray[i].includes(searchQuery)) {
                    matchingEntities.push(namedEntityArray[i]);
                }
            }
            $("#named-entity-array-result-container").show();
            if (matchingEntities.length > 0) {
                $("#named-entity-array-result").text(matchingEntities.join(",
"));
            }
            else {
                $("#named-entity-array-result").text("No matching entities
found.");
            }
        });

    </script>
</body>
```

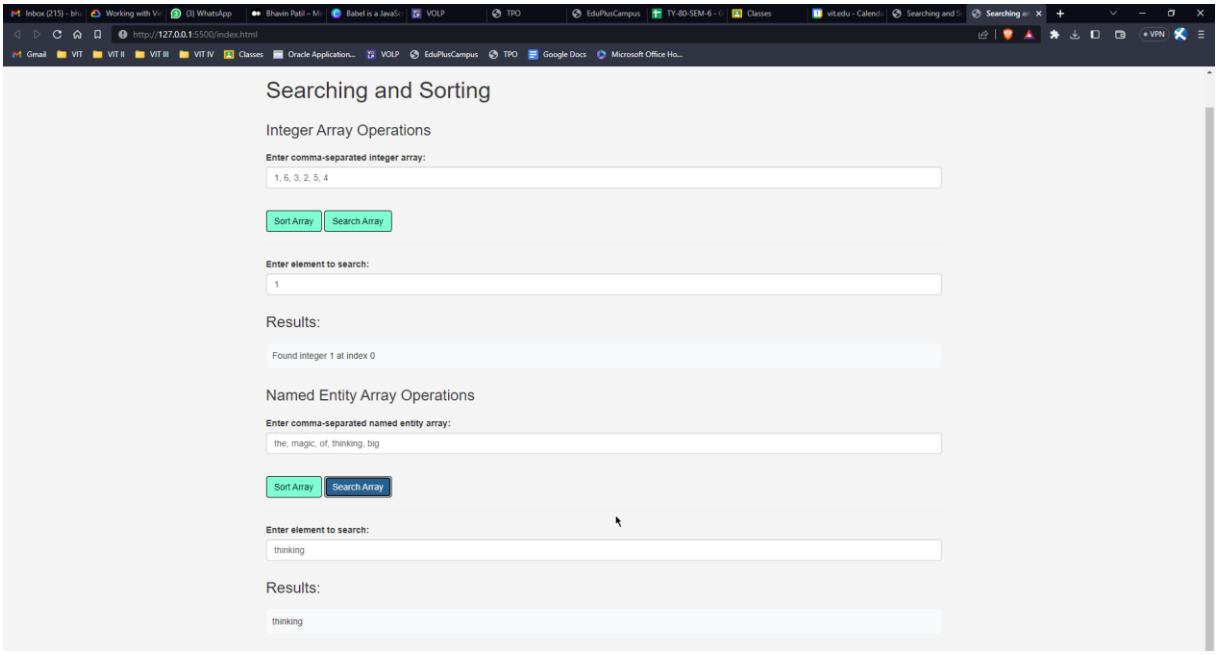
```
</html>
```

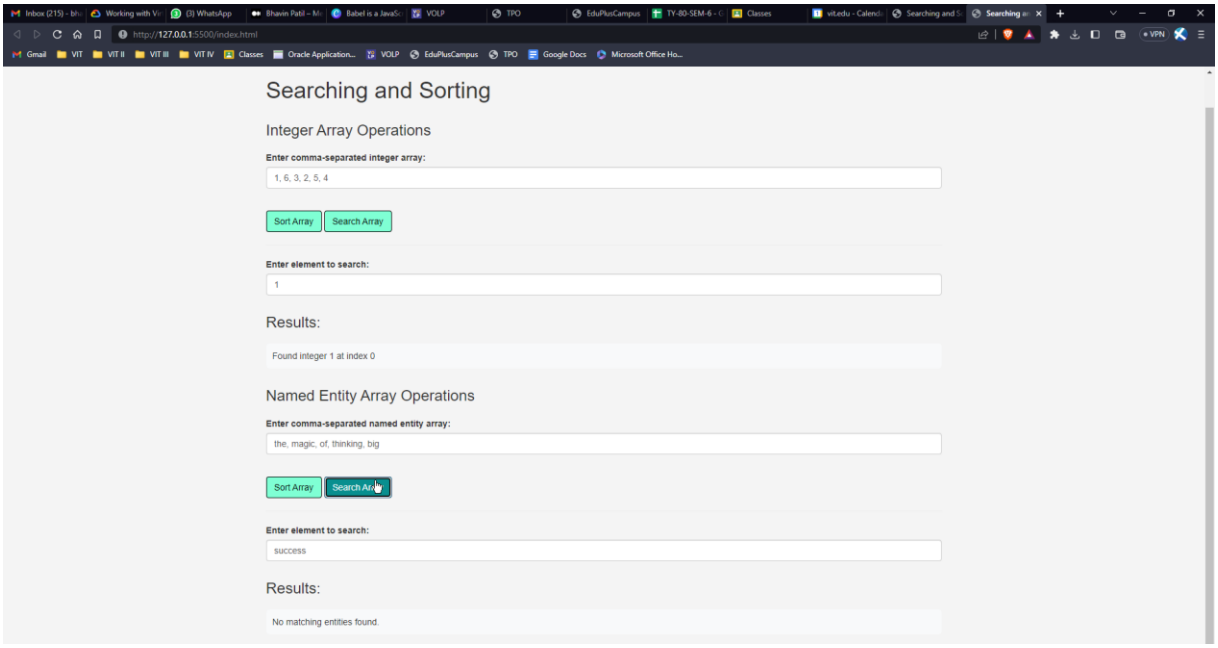
Outputs:






Searching and Sorting
Integer Array Operations
Enter comma-separated integer array:
1, 6, 3, 2, 5, 4
Sort Array
Search Array
Enter element to search:
1
Results:
Found integer 1 at index 0
Named Entity Array Operations
Enter comma-separated named entity array:
the, magic, of, thinking, big
Sort Array
Search Array
Enter element to search:
Example: John
Results:
big, magic, of, thinking, the


Searching and Sorting
Integer Array Operations
Enter comma-separated integer array:
1, 6, 3, 2, 5, 4
Sort Array
Search Array
Enter element to search:
1
Results:
Found integer 1 at index 0
Named Entity Array Operations
Enter comma-separated named entity array:
the, magic, of, thinking, big
Sort Array
Search Array
Enter element to search:
thinking
Results:
thinking


Searching and Sorting
Integer Array Operations
Enter comma-separated integer array:
1, 6, 3, 2, 5, 4
Sort Array
Search Array
Enter element to search:
1
Results:
Found integer 1 at index 0
Named Entity Array Operations
Enter comma-separated named entity array:
the, magic, of, thinking, big
Sort Array
Search Array
Enter element to search:
success
Results:
No matching entities found.