	PUNE INSTITUTE OF COMPUTER TECHNOLOGY, PUNE - 411043
	DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGG.
	ACADEMIC YEAR : 2022-23 SEM: 1

CLASS : BE VIII [P8]	SUBJECT : JavaScript
EXPT. NO. : 7	Roll No.: 42410	DATE :

CODE :

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Batch : P8

Problem Statement: : Append an object to an array and check an object is an array using vanilla JavaScript.

Code : HTML

```html
<!DOCTYPE html>
<html>

<head>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width">
  <title>experiment 7</title>
  <link href="style.css" rel="stylesheet" type="text/css" />
<style>
table {
  border-collapse: collapse;
  width: 100%;
}
th,td {
  border: 1px solid black;
  padding: 8px;
  text-align: left;
}
th {
  background-color: #f2f2f2;
}
</style>
</head>

<body style="text-align: center;">
  <h2>Array and Object Operations</h2>
<!-- User input for array length and elements -->
<label for="arrayLength">Enter the length of the array:</label>
<input type="number" id="arrayLength">
<button onclick="getArrayElements()">Add Elements to Array</button>
<button onclick="resetForm()">Reset</button> <!-- Add Reset Button -->
<br>
<br>
```

```html
<!-- Array input form -->
<div id="arrayInput"></div>
<br>


<!-- Display the array -->
<div id="arrayOutput"></div>
<br>
<!-- Input form to get two objects -->
<label for="object1">Enter the first object:</label>
<input type="text" id="object1">
<br>
<br>
<label for="object2">Enter the second object:</label>
<input type="text" id="object2">
<br>
<br>
<button onclick="displayAndAddObjectPair()">Display Object Pair</button>
<br>
<br>
<!-- Display the object pair -->
<div id="objectPairOutput"></div>
<br>
<!-- Button to add the object pair to the array -->
<button onclick="appendObjectPair()">Add Object Pair to Array</button>
<br>
<br>
<!-- Button to create and display the table -->
<button onclick="createAndDisplayTable()">Create Table</button>
<br>
<br>
<!-- Table to display array elements, data types, and isArray check -->
<h3>Array Elements and Data Types</h3>
<table id="arrayTable">
  <thead>
    <tr>
      <th>Element</th>
      <th>Data Type</th>
      <th>Is Array?</th>
    </tr>
  </thead>
  <tbody id="arrayTableBody"></tbody>
</table>

<script src="exp_7.js"></script>
```

```
</body>

</html>
```

Code : SCRIPT

```javascript
let userArray = [];
// Function to get array elements from the user
function getArrayElements() {
  const arrayLength = parseInt(document.getElementById("arrayLength").value);
  userArray = [];
  const arrayInputDiv = document.getElementById("arrayInput");
  arrayInputDiv.innerHTML = "";
  for (let i = 0; i < arrayLength; i++) {
    const input = document.createElement("input");
    input.type = "text";
    input.placeholder = `Element ${i + 1}`;
    arrayInputDiv.appendChild(input);
  }
  const addElementsButton = document.createElement("button");
  addElementsButton.textContent = "Add Elements";
  addElementsButton.onclick = () => {
    userArray = Array.from(arrayInputDiv.querySelectorAll("input")).map(input =>
      input.value);
    displayArray();
  };
  arrayInputDiv.appendChild(addElementsButton);
}
// Function to display the array
function displayArray() {
  const arrayOutputDiv = document.getElementById("arrayOutput");
  arrayOutputDiv.innerHTML = `Array: [${userArray.map(obj =>
    JSON.stringify(obj)).join(", ")}]`;
}
// Function to create and display the table
function createAndDisplayTable() {
  const tableBody = document.getElementById("arrayTableBody");
  tableBody.innerHTML = "";
  for (let i = 0; i < userArray.length; i++) {
    const element = userArray[i];
    const dataType = typeof element;
    const isArray = Array.isArray(element);
    const row =
      `<tr><td>${JSON.stringify(element)}</td><td>${dataType}</td><td>${isArray}</td></tr>`;
```

```javascript
    tableBody.innerHTML += row;
  }
}
// Function to display the object pair
function displayAndAddObjectPair() {
  const object1 = document.getElementById("object1").value;
  const object2 = document.getElementById("object2").value;
  const objectPair = { object1, object2 };

  displayObjectPair(objectPair);
}
// Function to display the object pair
function displayObjectPair(objectPair) {
  const objectPairOutputDiv = document.getElementById("objectPairOutput");
  objectPairOutputDiv.innerHTML = `Object Pair: { object1: "${objectPair.object1}",
object2: "${objectPair.object2}" }`;
}
// Function to append the object pair to the array
function appendObjectPair() {
  const object1 = document.getElementById("object1").value;
  const object2 = document.getElementById("object2").value;
  const objectPair = { object1, object2 };
  userArray.push(objectPair);
  // Display the updated array
  displayArray();
}
// Function to reset the form
function resetForm() {
  userArray = [];
  document.getElementById("arrayLength").value = ''; // Clear the input field for array length
  document.getElementById("arrayInput").innerHTML = ''; // Clear the input fields for array
elements
  document.getElementById("arrayOutput").textContent = ''; // Clear the display for the array
  document.getElementById("object1").value = ''; // Clear the input field for the first object
  document.getElementById("object2").value = ''; // Clear the input field for the second object
  document.getElementById("objectPairOutput").textContent = ''; // Clear the display for the object
pair
  const tableBody = document.getElementById("arrayTableBody");
  tableBody.innerHTML = ''; // Clear the table body
}
```