

LEARNING

1. Operator in JavaScript. Watch course section 2 part 21 & 41:
[Part 21](#) [Part 41](#)
2. Understanding operator in JavaScript: https://developer.mozilla.org/en-US/docs/Web/JavaScript/Guide/Expressions_and_Operators

TASK

1. Form variable JavaScript day 1
 - a. Use comparison operator with 2 variables from task number 1, display true if the name of books have same name otherwise display false

Compare Favorite Books

Favorite Book 1: The Mountain is You, 101 Essays

Favorite Book 2: 101 Essays, The Mountain is You

Add to Favorite Book 1: Add to Favorite Book 2:

Are the favorite books the same? true

Compare Favorite Books

Favorite Book 1: The Mountain is You, 101 Essays, Why We Sleep

Favorite Book 2: 101 Essays, The Mountain is You

Add to Favorite Book 1: Add to Favorite Book 2:

Are the favorite books the same? false

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Compare Favorite Books</title>
</head>
<body>
  <h1>Compare Favorite Books</h1>

  <p>Favorite Book 1: <span id="favoriteBook1"></span></p>
  <p>Favorite Book 2: <span id="favoriteBook2"></span></p>

  <label for="addBook1">Add to Favorite Book 1:</label>
  <input type="text" id="addBook1" placeholder="Enter new book titles">
  <button onclick="addFavoriteBook(1)">Add</button>
  <button onclick="removeFavoriteBook(1)">Remove</button>
```

```

<label for="addBook2">Add to Favorite Book 2:</label>
<input type="text" id="addBook2" placeholder="Enter new book titles">
<button onclick="addFavoriteBook(2)">Add</button>
<button onclick="removeFavoriteBook(2)">Remove</button>

<button onclick="compareBooks()">Compare Books</button>

<p id="result"></p>

<script>
  function compareBooks() {
    let favoriteBook1 = document.getElementById("favoriteBook1").textContent;
    let favoriteBook2 = document.getElementById("favoriteBook2").textContent;
    let titlesBook1 = favoriteBook1.trim().split(', ').sort();
    let titlesBook2 = favoriteBook2.trim().split(', ').sort();

    let areBooksSame = titlesBook1.length === titlesBook2.length &&
      titlesBook1.every((title, index) => title ===
titlesBook2[index]);

    let resultElement = document.getElementById("result");
    resultElement.textContent = "Are the favorite books the same? " +
areBooksSame;
  }

  function addFavoriteBook(bookNumber) {
    let addBookInput = document.getElementById("addBook" + bookNumber);
    let addedTitles = addBookInput.value;

    if (bookNumber === 1) {
      let favoriteBook1Element = document.getElementById("favoriteBook1");
      favoriteBook1Element.textContent += (favoriteBook1Element.textContent ?
', ' : '') + addedTitles;
    } else if (bookNumber === 2) {
      let favoriteBook2Element = document.getElementById("favoriteBook2");
      favoriteBook2Element.textContent += (favoriteBook2Element.textContent ?
', ' : '') + addedTitles;
    }

    addBookInput.value = "";
  }

  function removeFavoriteBook(bookNumber) {
    let removeBookInput = document.getElementById("addBook" + bookNumber);
    let removeTitles = removeBookInput.value;

    if (bookNumber === 1) {
      let favoriteBook1Element = document.getElementById("favoriteBook1");

```

```

        let titlesBook1 = favoriteBook1Element.textContent.split(' ');
        titlesBook1 = titlesBook1.filter(title =>
!removeTitles.includes(title));
        favoriteBook1Element.textContent = titlesBook1.join(' ');
    } else if (bookNumber === 2) {
        let favoriteBook2Element = document.getElementById("favoriteBook2");
        let titlesBook2 = favoriteBook2Element.textContent.split(' ');
        titlesBook2 = titlesBook2.filter(title =>
!removeTitles.includes(title));
        favoriteBook2Element.textContent = titlesBook2.join(' ');
    }

    removeBookInput.value = "";
}
</script>
</body>
</html>

```

2. Create new 2 variables to contain price of your favourite books
 - a. Compare the variables which one have the highest price

The screenshot shows a web browser window with the title "List of Favorite Books". The address bar shows the file path "D:/MAGANG%20ZETTABYTE/Day%205/day5_2.html". The browser's toolbar includes various icons for Google services and other applications. The main content area displays two tables of favorite books.

Favorite Book 1

Title	Price
The Mountain is You	282000
This is How You Heal	150000
101 Essays	645000

Favorite Book 2

Title	Price
The Catcher in the Rye	480000
To Kill a Mockingbird	722000
Why We Sleep	325000

A. Highest Price
Highest price from Book List 1: 645000
Highest price from Book List 2: 722000
Book List 2 has the highest price.

- b. Find the average price from those 2 variables using arithmetic operator

The screenshot is identical to the previous one, showing the same two tables of favorite books and the highest price comparison. Below the comparison, it adds calculations for the average price of each list.

A. Highest Price
Highest price from Book List 1: 645000
Highest price from Book List 2: 722000
Book List 2 has the highest price.

B. Average Price
Average price from Book List 1: 359000
Average price from Book List 2: 509000

- c. Create new variable to use ternary operator to determine the value of variable, if the average price more than 500000 set value with string “Expensive” if less or equal set “Cheap”

Favorite Book 1

Title	Price
The Mountain is You	282000
This is How You Heal	150000
101 Essays	645000

Favorite Book 2

Title	Price
The Catcher in the Rye	480000
To Kill a Mockingbird	722000
Why We Sleep	325000

A. Highest Price
Highest price from Book List 1: 645000
Highest price from Book List 2: 722000
Book List 2 has the highest price.

B. Average Price
Average price from Book List 1: 359000
Average price from Book List 2: 509000

C. Price Status
Price Status of Book List 1: Cheap
Price Status of Book List 2: Expensive

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>List of Favorite Books</title>
  <style>
    table {
      border-collapse: collapse;
      width: 50%;
      margin: 20px;
    }

    th, td {
      border: 1px solid black;
      padding: 8px;
      text-align: left;
    }

    th {
      background-color: #f2f2f2;
    }
  </style>
</head>
<body>

<script>
  var favoriteBook1 = [
    { title: 'The Mountain is You', price: 282000 },
    { title: 'This is How You Heal', price: 150000 },
```

```

    { title: '101 Essays', price: 645000 },
  ];

  var favoriteBook2 = [
    { title: 'The Catcher in the Rye', price: 480000 },
    { title: 'To Kill a Mockingbird', price: 722000 },
    { title: 'Why We Sleep', price: 325000 },
  ];

  var highestPriceVar1 = Math.max(...favoriteBook1.map(book => book.price));
  var highestPriceVar2 = Math.max(...favoriteBook2.map(book => book.price));

  var averagePriceVar1 = favoriteBook1.reduce((total, book) => total + book.price,
0) / favoriteBook1.length;
  var averagePriceVar2 = favoriteBook2.reduce((total, book) => total + book.price,
0) / favoriteBook2.length;

  var priceStatusVar1 = averagePriceVar1 > 500000 ? "Expensive" : "Cheap";
  var priceStatusVar2 = averagePriceVar2 > 500000 ? "Expensive" : "Cheap";

  document.write('<h2>Favorite Book 1</h2>');
  document.write('<table>');
  document.write('<tr><th>Title</th><th>Price</th></tr>');
  favoriteBook1.forEach(book => {
    document.write('<tr><td>${book.title}</td><td>${book.price}</td></tr>');
  });
  document.write('</table>');

  document.write('<h2>Favorite Book 2</h2>');
  document.write('<table>');
  document.write('<tr><th>Title</th><th>Price</th></tr>');
  favoriteBook2.forEach(book => {
    document.write('<tr><td>${book.title}</td><td>${book.price}</td></tr>');
  });
  document.write('</table>');

  document.write('<p>A. Highest Price</p>');
  document.write('<p>Highest price from Book List 1: ${highestPriceVar1}</p>');
  document.write('<p>Highest price from Book List 2: ${highestPriceVar2}</p>');

  if (highestPriceVar1 > highestPriceVar2) {
    document.write('<p>Book List 1 has the highest price.</p>');
  } else if (highestPriceVar1 < highestPriceVar2) {
    document.write('<p>Book List 2 has the highest price.</p>');
  } else {
    document.write('<p>Book List 1 and Book List 2 have the same highest
price.</p>');
  }

```

```

document.write(`<p>B. Average Price</p>`);
document.write(`<p>Average price from Book List 1: ${averagePriceVar1}</p>`);
document.write(`<p>Average price from Book List 2: ${averagePriceVar2}</p>`);

document.write(`<p>C. Price Status</p>`);
document.write(`<p>Price Status of Book List 1: ${priceStatusVar1}</p>`);
document.write(`<p>Price Status of Book List 2: ${priceStatusVar2}</p>`);
</script>

</body>
</html>

```

Logic Test

1. Maximum of Two Numbers:

https://drive.google.com/file/d/1Vv7a47FKAFkuKZSRgy9-sEzZMGVH5XPK/view?usp=drive_link

The screenshot shows the Visual Studio Code interface. The Explorer panel on the left shows a project named 'DAY 5' with files 'day5_2.html', 'day5.html', 'day5.js', and 'Maximum of Two Numbers.js'. The main editor displays the content of 'Maximum of Two Numbers.js', which contains a function 'max_of_two' and two console log statements. The Output panel at the bottom shows the execution results of the code.

```

function max_of_two(a, b) {
  if (a > b) {
    return a;
  } else {
    return b;
  }
}

console.log(max_of_two(10, 5));
console.log(max_of_two(45, 66));

```

Output:

```

[Running] node "d:\WAGANG ZETTABYTE\Day 5\Maximum of Two Numbers.js"
undefined
undefined

[Done] exited with code=0 in 0.112 seconds

[Running] node "d:\WAGANG ZETTABYTE\Day 5\Maximum of Two Numbers.js"
10
66

[Done] exited with code=0 in 0.191 seconds

```

```

function max_of_two(a, b) {
  if (a > b) {
    return a;
  } else {
    return b;
  }
}

console.log(max_of_two(10, 5));
console.log(max_of_two(45, 66));

```

Output :

10
66