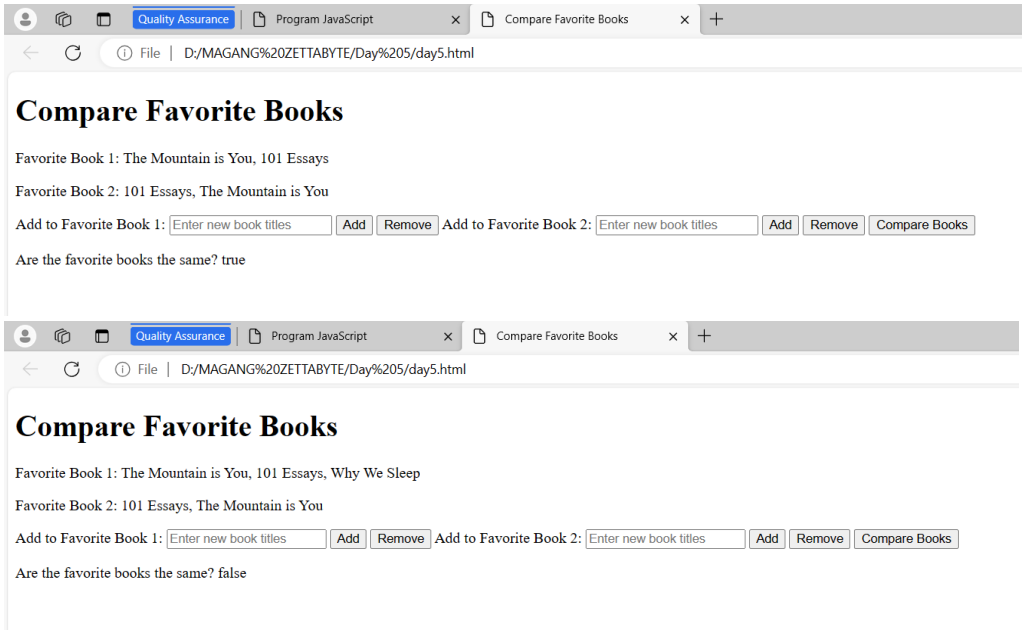
# LEARNING

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

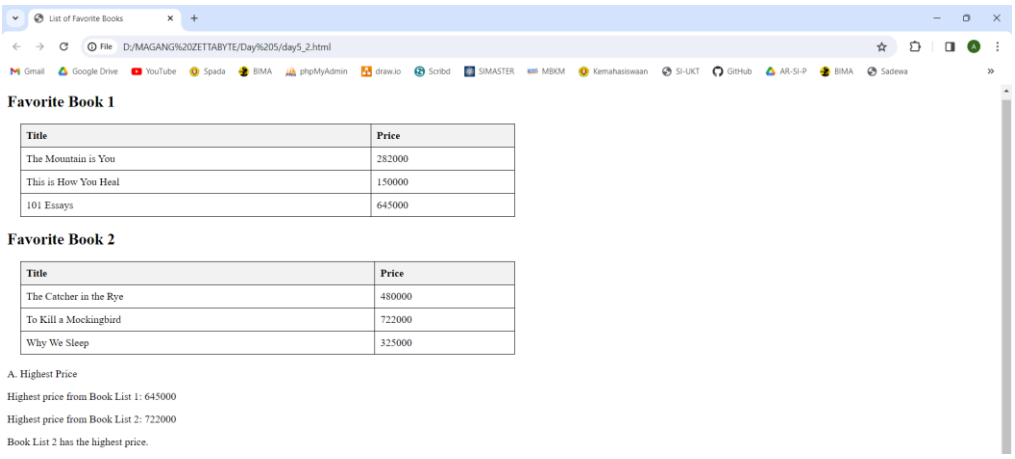



```html
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Compare Favorite Books</title>
</head>
<body>
  <h1>Compare Favorite Books</h1>

  <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



**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 |

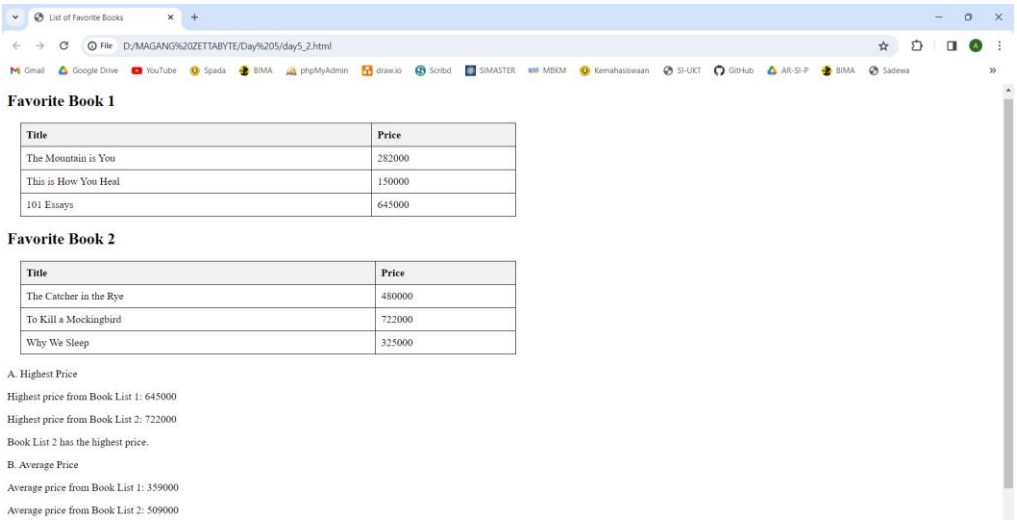
A. Highest Price

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



**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

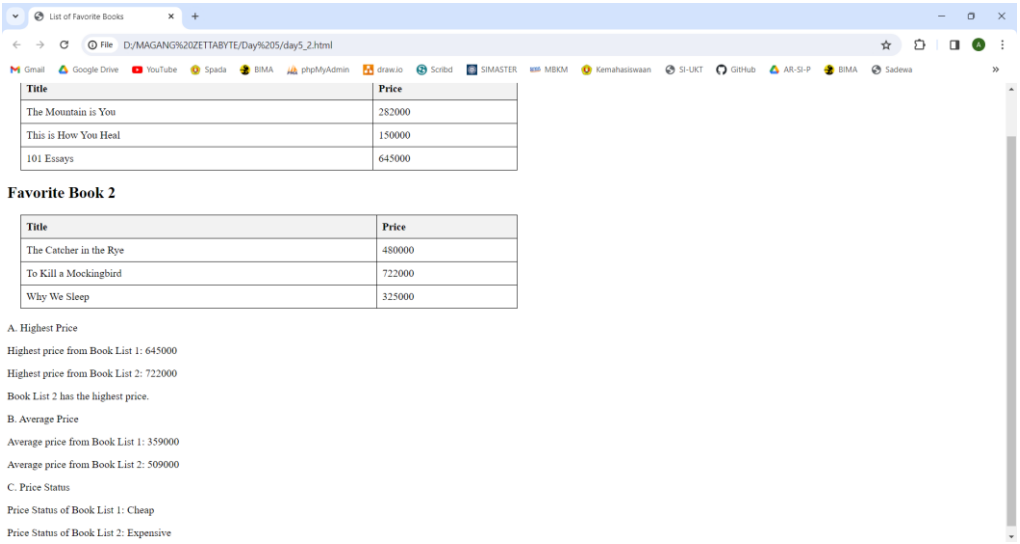
Book List 2 has the highest price.

B. Average Price

Average price from Book List 1: 359000

Average price from Book List 2: 509000

c. 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”



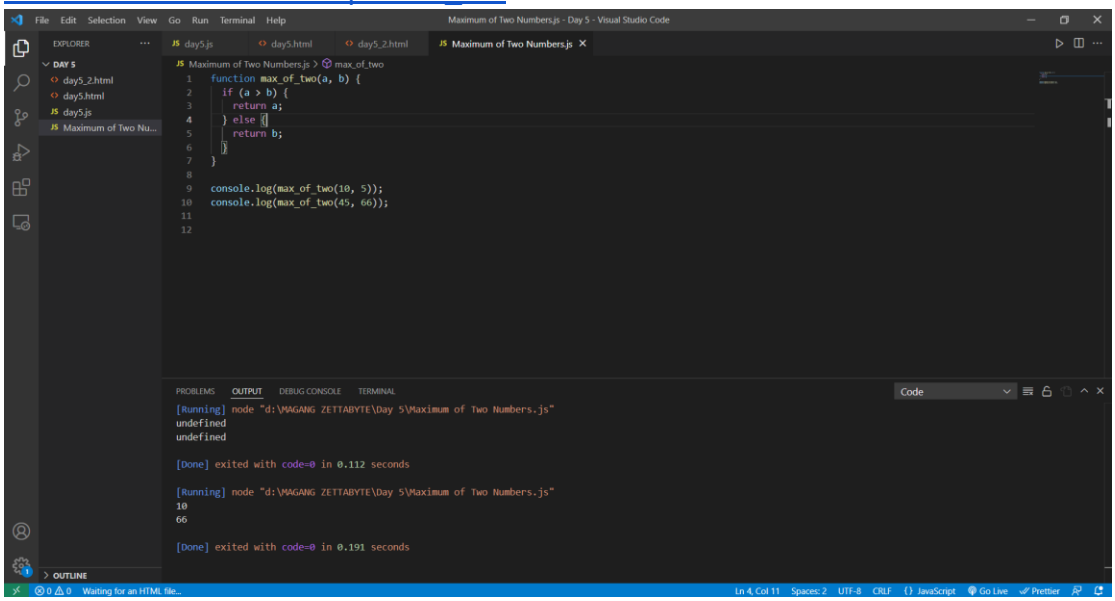

```html
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>List of Favorite Books</title>
  <style>
    table {
      border-collapse: collapse;
      width: 50%;
      margin: 20px;
    }

    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




```
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