

JavaScript Destructuring Assignment

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Assignment Overview:

This assignment focuses on the destructuring assignment syntax in JavaScript, which allows you to unpack values from arrays or properties from objects into distinct variables.

Objectives:

- Practice using array and object destructuring.
- Understand how to extract multiple properties or values with a single statement.
- Apply destructuring in function parameters.

Sample Data:

```
```javascript
```

```
// Sample array
```

```
const fruits = ["Apple", "Banana", "Cherry"];
```

```
// Sample object
```

```
const user = {
```

```
 firstName: "John",
```

```
 lastName: "Doe",
```

```
 age: 30,
```

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```
email: "john.doe@example.com"
```

```
};
```

```
...
```

### ### Tasks:

#### 1. **Array Destructuring**:

- Using the `fruits` array, extract the first and third fruit into two separate variables.
- Print these variables to the console.

#### 2. **Object Destructuring**:

- Destructure the `user` object to extract the `firstName`, `lastName`, and `email`.
- Print these values to the console.

#### 3. **Nested Object Destructuring**:

- Suppose `user` now includes an `address` object with properties `street` and `city`.
- Modify the `user` object accordingly and extract `street` and `city` using nested destructuring.
- Print `street` and `city` to the console.

#### 4. **Destructuring in Function Parameters**:

- Write a function that takes an object as a parameter and uses destructuring to extract `firstName` and `email` from it.
- Call this function with the `user` object and print the extracted values.

### ### Expected Output:

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- For each task, provide the expected console output demonstrating the correct use of destructuring.

### ### Submission Guidelines:

- Submit a JavaScript file containing your solutions for the tasks.
- Include comments to explain your approach to using destructuring in each task.

### ### Assessment Criteria:

- Correct application of array and object destructuring.
- Ability to handle nested objects and apply destructuring in function parameters.
- Code readability and use of comments to guide the reader through your logic.

Destructuring is a powerful feature in JavaScript that simplifies the process of accessing and using values from arrays or properties from objects.