

JSX and JavaScript Concepts Sprint

Problem Statement

You are tasked with building a simple React application that demonstrates various JavaScript concepts such as variable hoisting, function hoisting, array methods (`filter`, `forEach`, `map`), and constructors. This application will display a list of numbers and allow users to filter, map, and iterate over the numbers.

User Stories

1. As a user, I should be able to view a list of numbers.
2. As a user, I should be able to filter the list to show only even numbers.
3. As a user, I should be able to map the list to show each number doubled.
4. As a user, I should be able to iterate over the list and log each number to the console.
5. As a developer, I should be able to demonstrate variable and function hoisting.
6. As a developer, I should be able to demonstrate the use of constructors.

Instructions:

1. **Define Interfaces:** Create an interface for `NumberItem` that includes a property for the `value`.
2. **Implement React components:**
 - Create a `NumberList` component to display the list of numbers.
 - Create a `FilterControls` component to handle filtering and mapping actions.
 - Create a `Logger` component to handle logging each number to the console.
 - Create a `HoistingDemo` component to demonstrate variable and function hoisting.
 - Create a `ConstructorDemo` component to demonstrate the use of constructors.
3. **Combine Components:** Create a parent component `App` that combines all the above components.
4. **Estimated completion time:** 1.5 hours.