

### Question - 1

Arrays are objects

SCORE: 5 points

Arrays are objects: true or false?

- ☒ True
- ☐ False

### Question - 2

Asynchronous Programming

SCORE: 5 points

Which of the following are an important facet of asynchronous programming? (select all that apply)

- ☐ Future
- ☒ Promise
- ☒ async / await primitives
- ☒ Function Callback

### Question - 3

pass-by-reference

SCORE: 5 points

What is the advantage of the pass-by-reference function semantics for objects?

- ☐ Reduced memory footprint
- ☐ Direct modification of the original value
- ☐ No need for an additional return statement within the function
- ☒ All of the above

### Question - 4

Basic Types

SCORE: 5 points

Which of the following is NOT a basic type?

- ☐ String
- ☒ Integer
- ☐ Number

☐ Boolean

## Question - 5

### Array

SCORE: 5 points

Which is array method? (select all that apply)

- ☒ map
- ☒ forEach
- ☒ split
- ☐ length

## Question - 6

### Asynchronous Programming/Web Dev

SCORE: 5 points

Why is asynchronous programming important in the context of web development?

- ☐ It is strictly required on all new web pages
- ☐ Save memory and / or CPU cycles
- ☐ It is easier to reason about and fits better in overall design of the modern Internet
- ☒ To make sure the web page does not block / hang

## Question - 7

### Objects

SCORE: 5 points

What is the conventional way to easily define an object?

- ☐ Marking a variable with the appropriate modifier
- ☐ Through a method call
- ☒ With the object literal syntax (e.g. curly braces)
- ☐ N/A, you can only use built-in objects

## Question - 8

### Primitives

SCORE: 5 points

The primitives null and undefined have the exact same semantics: true or false?

- ☐ True
- ☒ False

### Question - 9

#### Identifiers

SCORE: 5 points

Identifiers defined with let/const can be accessed outside the block (as long as they are not already defined outside): true or false?

- ☐ True
- ☒ False

### Question - 10

#### Functions

SCORE: 5 points

Functions can be assigned to variables: true or false?

- ☒ True
- ☐ False

### Question - 11

#### React: Country Filter

SCORE: 50 points

- React
- Front-End Frameworks
- Component State Management
- Easy
- Cross Platform
- Hooks

Given a partially completed React application with the HTML template built and ready, implement a filter that searches and displays matching countries in a list.

[Hide animation](#)



Enter Country Name

Afghanistan

Albania

Algeria

Andorra

Angola

Anguilla

Antigua & Barbuda

Argentina

Armenia

The application has 2 components:

1. The `Search` view, which has the input box where the user can type to filter countries.
2. The `CountryList` view, which renders the list of countries that are filtered.

The entire list of countries to display is stored in a variable named `response` inside the file `src/response.js`.

The app should implement the following functionalities:

- The initial view should render an empty input box with all countries appearing in the same order as in the `response` variable.
- When a character is typed, each country containing the set of typed characters should be filtered and displayed.
- The filtering should be case insensitive.
- When there is no character typed in the search box, it should show all countries.

Note:

- Get the list of countries to be displayed from the `response.js` file.
- The order in which each country appears should follow the same order in the `response.js` file, even after filtering.

The following data-testid attributes are required in the component for the tests to pass:

- The country filter field `<input>` tag should have the data-testid attribute 'filterInput'.
- The countries wrapper `<ul>` tag should have the data-testid attribute 'countryList'.

Please note that the component has these data-testid attributes for test cases. They should not be changed.