

ASSIGNMENT-6

6. Find the details about following methods of Array:

find(), findIndex(), filter()

○ **find() Method:**

- Purpose: The *find()* method is used to find the first element in an array that satisfies a provided testing function.
- Syntax: `array.find(callback(element[, index[, array]]), thisArg)`

Parameters:

- callback: A function that defines the test condition. It is invoked with three arguments: *element* (the current array element), *index* (the current index), and *array* (the array on which *find()* was called).
- thisArg (optional): An object to which the *this* value within the callback is set.
- Return Value: The *find()* method returns the first element in the array that satisfies the provided testing function. If no element is found, it returns *undefined*.

○ **findIndex() Method:**

- Purpose: The *findIndex()* method is used to find the index of the first element in an array that satisfies a provided testing function.
- Syntax: `array.findIndex(callback(element[, index[, array]]), thisArg)`

Parameters:

- callback: A function that defines the test condition. It is invoked with three arguments: *element* (the current array element), *index* (the current index), and *array* (the array on which *findIndex()* was called).

- thisArg (optional): An object to which the this value within the callback is set.
- Return Value: The `findIndex()` method returns the index of the first element in the array that satisfies the provided testing function. If no element is found, it returns -1.
- **filter() Method**:
 - Purpose: The `filter()` method is used to create a new array with all elements that satisfy a provided testing function.
 - Syntax: `array.filter(callback(element[, index[, array]]), thisArg)`
 - Parameters:
 - callback: A function that defines the test condition. It is invoked with three arguments: `element` (the current array element), `index` (the current index), and `array` (the array on which `filter()` was called).
 - thisArg (optional): An object to which this value within the callback is set.
 - Return Value: The `filter()` method returns a new array containing all elements that satisfy the provided testing function. If no elements match the condition, it returns an empty array.