■ Week 3 Exercises – Rest/Spread Operators & Array Methods

■ rest-spread-operator/rest.js

- Ex1: Write a function using the rest operator to collect all arguments passed in and console log them.
- Ex2: Write a function to get the first and second arguments separately, and use the rest operator to collect the remaining arguments. Console log all of them.
- Ex3: Use the rest operator to get the first 3 elements of an array, and collect the rest. Console log them.
- Ex4: Use the rest operator to get name, age, married, music, and collect the rest of the properties from an object. Console log them.

■ rest-spread-operator/spread.js

- Ex1: Use the spread operator to copy an array and an object. Console log the copies.
- Ex2: Use the spread operator to merge two arrays and two objects. Console log the merged results.
- Ex3: Use the spread operator to add an element to the start and end of an array.
- Ex4: Use the spread operator to add a key-value pair to the start and end of an object.
- Ex5: Merge two arrays using the spread operator, and also add an element at the start and one at the end. Console log the final array.
- Ex6: Merge two objects using the spread operator, and also add a key-value pair at the start and one at the end. Console log the final object.

■ array-methods/push-pop-shift-unshift.js

- Ex1: Add a new fruit to the end of the array using push.
- Ex2: Remove the last element of the array using pop.
- Ex3: Add a new city to the start of the array using unshift.
- Ex4: Remove the first element of the array using shift.
- Ex5: Combine multiple operations (push, pop, shift, unshift) and console log the array after each operation.

■ array-methods/slice.js

- Ex1: Get the first 3 elements of an array using slice.
- Ex2: Get the last 2 elements of an array.
- Ex3: Get a middle portion of an array, excluding 'red' and 'purple'.
- Ex4: Get the third element to the third last element of an array.

■ array-methods/foreach.js

- Ex1: Use forEach to console log the area of a circle for each radius in an array.
- Ex2: Use forEach to print a welcome message for each person in an array.
- Ex3: Use forEach to display the price of each item after tax.

■ array-methods/filter.js

- Ex1: Create a new array containing only the even numbers from a given array.
- Ex2: Filter a list of people to get only those who are 30 or older.
- Ex3: Filter products to get only those whose price after tax is greater than 200.
- Ex4: Filter teams that have won a champion league.
- Ex5: Filter girl groups to get only those with less than 6 members.

■ array-methods/map.js

- Ex1: Create a new array containing the square of each number in a given array.
- Ex2: Use map and the spread operator to add a new key 'hobby' with the value 'Coding' to each object in an array.
- Ex3: Use map to create a new array of full names from an array of objects with firstName and lastName.