

**Assignment 08**

**Training Program:** MERN Stack Development

**Trainer:** Ahsan Javed

**Topic:** Working with Higher-Order Functions and Arrow Functions

**Due Date:** August 21, 2024

**Task 1: Filter and Map**

* Use the following data (array of objects):

const students = [

  { name: 'Saghar', age: 22, score: 45 },

  { name: 'Qamar', age: 20, score: 75 },

  { name: 'Shams', age: 23, score: 60 },

  { name: 'Maher', age: 21, score: 30 },

  { name: 'Farhan', age: 24, score: 50 },

];

* Write an arrow function that filters out students who scored less than 50.
* After filtering, use another arrow function to map the remaining students to a new array containing **only** their names.
* Fetch the record of student named *Shams*.
* Check if there is a student whose name ends with ‘r’.
* Give sum of all students’ scores.

**Task 2: Implement a Function Composition**

* Write two simple arrow functions:
  1. One that squares a number
  2. One that doubles a number
* Create a third arrow function that composes these two functions, applying them sequentially to a given number.
* For example, if we input 3 the answer will be 32 + 2 = 18.

**Task 3: Working with ‘this’ in Arrow Functions**

* Create an object calculator with a **value** property and a **multiply** method.
* The multiply method should take a number as an argument and multiply the value by that number.
* Use an arrow function inside the multiply method to ensure this refers to the calculator object.
* For example, if you give *value = 10* to object and call *calculator.multiply(5)*, the output will be 5\*10 = 50.

**Submission Guidelines**

* Create a JS file and write code in it. Save it as **fname-lname-a-08.js**, where fname is your first name and lname is your last name.
* Send the file at [ahsanjaved@skilovate.com](mailto:ahsanjaved@skilovate.com) with subject **Assignment 08**.