1. Write a function that prints the numbers from 1 to 100. But for multiples of three, print "Fizz" instead of the number, and for the multiples of five, print "Buzz". For numbers that are multiples of both three and five, print "FizzBuzz".

Ans:

```
function questionone() {

  for (let i = 1; i <= 100; i++) {

    if (i % 3 === 0 && i % 5 === 0) {

      console.log("FizzBuzz");

    } else if (i % 3 === 0) {

      console.log("Fizz");

    } else if (i % 5 === 0) {

      console.log("Buzz");

    } else {

      console.log(i);

    }

  }

}


questionone();
```

2. Write a function that takes a string input representing a simple arithmetic expression (only addition and subtraction) and returns the result.

Ans :

```
function questiontwo(expression) {

  expression = expression.replace(/\s+/g, '');



  const tokens = expression.match(/(\d+|\+|\-)/g);

  if (!tokens) {
    throw new Error("Invalid expression");
  }

  let result = 0;
  let currentOperator = '+';

  tokens.forEach(token => {
    if (token === '+' || token === '-') {
      currentOperator = token;
    } else {
      const number = parseInt(token, 10);
      if (currentOperator === '+') {
        result += number;
      } else if (currentOperator === '-') {
        result -= number;
      }
    }
  });

  return result;
}

const expression = "14 + 25 - 6 + 2 - 12";
const result = questiontwo(expression);
console.log(result);
```

3. Write a function that takes a nested array and returns a flattened array.

Ans :

```
function questionthree(nestedArray) {

  let flatArray = [];

  function flatten(element) {
    if (Array.isArray(element)) {
      element.forEach(flatten);
    } else {
      flatArray.push(element);
    }
  }

  nestedArray.forEach(flatten);

  return flatArray;
}

const nestedArray = [1, [2, [3, 4], 5], [6, 7], 8, [9, [10]]];
const flattened = questionthree(nestedArray);
console.log(flattened);
```

4. Write a function that checks if two given strings are anagrams of each other.

Ans :

```
function questionfour(str1, str2) {
    function cleanString(str) {
        return str.replace(/[^\w]/g, '').toLowerCase().split('').sort().join('');
    }

    const cleanedStr1 = cleanString(str1);
    const cleanedStr2 = cleanString(str2);

    return cleanedStr1 === cleanedStr2;
}

console.log(questionfour("listen", "silent"));
console.log(questionfour("hello", "billion"));
```

5. Write a function that takes an array and returns a new array with duplicates removed.

Ans:

```
function questionfive(arr) {
   return [...new Set(arr)];
}


const arrayWithDuplicates = [1, 2, 2, 3, 4, 4, 5, 5, 6, 7];
const arrayWithoutDuplicates = questionfive(arrayWithDuplicates);
console.log(arrayWithoutDuplicates);
```

6. Write a function that takes a string and capitalizes the first letter of each word in the string.

Ans :

```
function questionsix(str) {

  return str.replace(/\b\w/g, function(match) {

    return match.toUpperCase();

  });

}


const inputString = "good morning, have a nice day !";

const capitalizedString = questionsix(inputString);

console.log(capitalizedString);
```

7. Write a function that generates the first n numbers of the Fibonacci sequence.

Ans :

```
function questionseven(n) {
    let fibSequence = [];
    if (n <= 0) {
        return fibSequence;
    }
    fibSequence.push(0);
    if (n === 1) {
        return fibSequence;
    }
    fibSequence.push(1);
    if (n === 2) {
        return fibSequence;
    }
    for (let i = 2; i < n; i++) {
        fibSequence.push(fibSequence[i - 1] + fibSequence[i - 2]);
    }
    return fibSequence;
}

const n = 10;
const fibNumbers = questionseven(n);
console.log(`First ${n} Fibonacci numbers:`, fibNumbers);
```

8. Implement a simple HashMap class with put, get, and remove methods.

Ans:

```
class questioneight {
    constructor() {
        this.map = {};
    }

    put(key, value) {
        this.map[key] = value;
    }

    get(key) {
        return this.map[key];
    }

    remove(key) {
        if (this.map.hasOwnProperty(key)) {
            delete this.map[key];
        }
    }
}

let myMap = new questioneight();
myMap.put("a", 1);
myMap.put("b", 2);
```

```
console.log(myMap.get("a"));

console.log(myMap.get("b"));

myMap.remove("a");

console.log(myMap.get("a"));
```

9. Write a function that filters out even numbers from an array.

Ans :

```
function questionnine(arr) {
    return arr.filter(num => num % 2 !== 0);
}

const numbers = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10,11];
const filteredNumbers = questionnine(numbers);
console.log(filteredNumbers);
```

10. Write a function that converts a given string to title case (capitalizing the first letter of each word).

Ans :

```
function questionten(str) {

   return str.toLowerCase().replace(/(^|\s)\S/g, function (firstLetter) {

      return firstLetter.toUpperCase();

   });

}



let inputString = "good morning,have a nice day !";

let titleCaseString = questionten(inputString);

console.log(titleCaseString);
```