

## **Assignment 4**

**Roll No – 71      Batch - T14**

**Aim: To study conditional Statements, Loops and Functions in JavaScript.**

### **Theory:**

Conditional Statements:

#### 1. if Statement:

The if statement is used to execute a block of code if a specified condition is true.

#### 2. if...else Statement:

The if...else statement allows you to execute one block of code if the condition is true, and another block if the condition is false.

#### 3. if...else if...else Statement:

The if...else if...else statement lets you check multiple conditions and execute the block associated with the first true condition.

Loops in Javascript:

#### 1. for Loop:

The for loop is used to iterate over a sequence of values, typically numbers. It consists of three parts: initialization, condition, and increment/decrement.

#### 2. while Loop:

The while loop continues to execute a block of code as long as a specified condition is true.

#### 3. do...while Loop:

The do...while loop is similar to the while loop, but it guarantees that the block of code will be executed at least once before checking the condition.

#### 4. for...of Loop:

Introduced in ECMAScript 2015 (ES6), the for...of loop is used to iterate over values of iterable objects such as arrays, strings, maps, and sets.

#### 5. for...in Loop:

The for...in loop iterates over the properties of an object, including enumerable properties inherited from its prototype chain.

## **Functions:**

Regular functions are defined using the function keyword. They have a named identifier and can be used with this keyword.

### **1. Anonymous Functions:**

An anonymous function is a function without a named identifier. It is often used in scenarios where a function is passed as an argument to another function, like in callbacks.

### **2. Arrow Functions:**

Arrow functions provide a more concise syntax for defining functions. They have a shorter syntax, do not bind their own this value, and cannot be used as constructors.

The different types of arrow functions are mentioned in the code file.

## **Spread operation in JavaScript:**

The spread operator (...) in JavaScript is a versatile syntax that allows you to expand elements from one iterable (like an array or string) into another. It can be used in various contexts, such as function calls, array literals, object literals, and more. The spread operator essentially unpacks the elements of an iterable, making it easier to work with collections of data.

## **Conclusion:**

Implemented the given questions which are in the attached code file. Understood functionalities of JavaScript. Used DOM for changing background color after every 5 seconds. Used Spread operator in JavaScript to demonstrated multiple arguments passing to a function.