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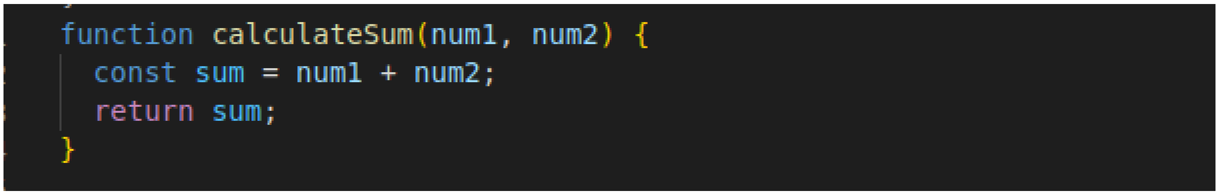
Javascript Functions

Functions are blocks of code grouped together to perform a specific set of tasks. In Javascript and most other programming languages, they help in code reuse and the creation of modular applications. Once a function is declared, it can then be called in various parts of the program, often with a different set of parameters to produce different results, as many times as one wishes (Myers, 5). This paper seeks to explore functions and their use in Javascript.

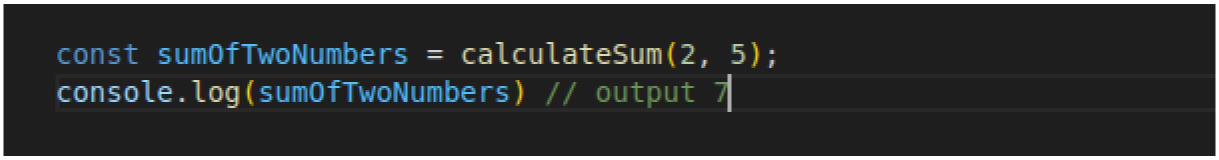
Javascript syntax requires functions to be defined using the "function" keyword followed by "()", with the code to be executed placed between curly braces. Parameters can also be included within the parenthesis, separated by commas. For instance, consider a simple function for adding two numbers:



```
function calculateSum(num1, num2) {
  const sum = num1 + num2;
  return sum;
}
```

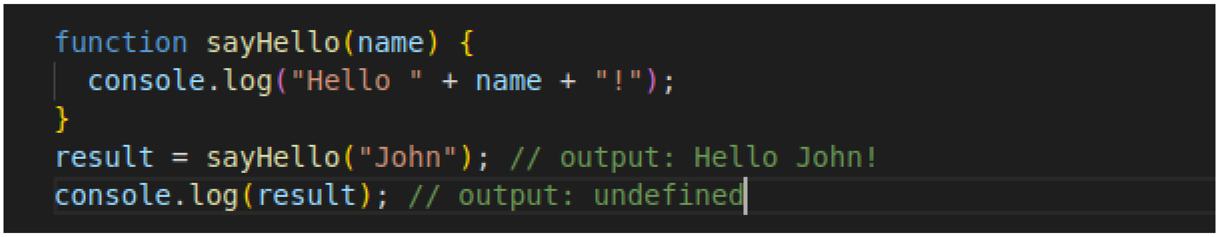
In the above example, "calculateSum" is the function name written using camelcase (a popular convention for naming functions and variables), while num1 and num2 are parameters. The values of these parameters, when passed to the function during invocation, will become arguments and be acted upon to get the sum, which is then returned using the "return" keyword.

The above function can be called in another part of the program by passing the expected arguments (num1 and num2) to a reference of the function as follows:



```
const sumOfTwoNumbers = calculateSum(2, 5);
console.log(sumOfTwoNumbers) // output 7
```

Functions can contain none or any number of parameters, allowing for flexibility in the function’s definition. The return keyword can be used to explicitly return a value to the caller or left out, thus returning “undefined” by default. Consider the function below; it doesn’t explicitly return a value and hence gets an implicit return of “undefined”.



```
function sayHello(name) {
  console.log("Hello " + name + "!");
}
result = sayHello("John"); // output: Hello John!
console.log(result); // output: undefined
```

In conclusion, functions are key components in Javascript development, as they allow a block of code defined in one place of the program to be reused in multiple other places, oftentimes with different parameters to produce different values. As such, Javascript functions enable programmers to reuse code and introduce modularity in development. This, in turn, produces highly efficient, maintainable, and scalable code.

Works Cited

Duckett, Jon. “Introduction.” *JavaScript & jQuery: HTML & CSS*, 1st ed., vol. 1, John Wiley & Sons, Indianapolis, IN, 2014, pp. 1–3.

Myers, Mark. “Lesson 1.” *A Smarter Way to Learn Javascript*, CreateSpace Publishing, Charleston, 2014, pp. 5–10.

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