than or equal to 10". We no longer have to create a temporary value and compare that to zero, which was an uninteresting detail. Part of the power of programming languages is that they take care of uninteresting details for us.

At the end of the program, after the while construct has finished, theconsole.log operation is applied to the result in order to write it as output.

Finally, here is what the program could look like if we happened to have the convenient operations range and sum available, which respectively create a collection of numbers within a range and compute the sum of a collection of numbers:

```
console.log(sum(range(1, 10))); // \rightarrow 55
```

The moral of this story is that the same program can be expressed in long and short, unreadable and readable ways. The first version of the program was extremely obscure, whereas this last one is almost English: log the sum of therange of numbers from 1 to 10. (We will see in <u>later chapters</u> how to build operations like sum and range.)

A good programming language helps the programmer by allowing them to talk about the actions that the computer has to perform on a higher level. It helps omit uninteresting details, provides convenient building blocks (such as whileand console.log), allows you to define your own building blocks (such as sumand range), and makes those blocks easy to compose.

What is JavaScript?

JavaScript was introduced in 1995 as a way to add programs to web pages in the Netscape Navigator browser. The language has