C++ Programming
Step-by-Step

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Abstract
In this chapter we will review functions, follow an example program from planning to completion, and learn two new concepts, namely inline functions and function overloading. A function is a subprogram that specializes in doing one specific task. A function by definition may receive none, one, or many input parameters and output none or one parameter.

15.1 Function Arguments
There can be two types of arguments the functions using, the input and output. The input arguments can be passed-by-value, meaning only copies of the original variables appearing in the calling function are passed to the function. Even if the values of these variables are changed by the function, the original variables will remain unchanged. The output arguments are the returns values from a function. This may be zero return in case of void function or some value as specified by the function arguments. Remember that the function only exists during its execution. Upon return from the function nothing remains of the function. A function is made upon calling it and destroyed upon returning. In order to call the above function, that calculate average of three grades we can write the following statement:

```cpp
averg = findAverage(grade1, grade2, grade3);
```

Since we know that this function returns a float we must put this returned value somewhere; here we receive the result into averg. We could have displayed the result directly on the screen by the statement:

```cpp
cout << findAverage(grade1, grade2, grade3);
```