**Why Pointers?**

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Now that you know what a pointer is, you may be wondering why you need them. One reason for using pointers is application performance.  In our simple examples thus far, the amount of data that we have passed into functions has been small.  But if we were using large data structures, as class files can sometimes be, or if need to perform repetitive operations on lookup tables, then it is far more efficient to pass a pointer, which is just the memory address, than it is to pass the entire data structure.  
  
As you saw in the code example that passed a variable by reference, pointers can also be used to modify the value in the variable passed in.  Once again, the pointer provides a direct link to the underlying value of the variable allowing you to change the value without the overhead of copying the value into the function.  
  
Pointers also allow you to dynamically allocate memory in your application.  You may run across a requirement for this when creating arrays and objects in your C++ code.  Dynamically allocating means that you do not need to know the size of memory that will be needed for an object at compile time but rather that the size will be allocated during runtime of the application.