

# Module Seven

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## Learning Objectives

By the end of this module, you will meet these learning objectives:

- ☑ Apply vectors and arrays in a programming application
- ☑ Apply a binary search tree to a programming application
- ☑ Analyze the runtime and memory for search algorithms using different data structures
- ☑ Determine the appropriate application of coding best practices in basic C++ programs

## Module Overview

Welcome to Module Seven! In this module, you have the opportunity to implement the design that you developed in Project One. Be sure you start early in order to get the help you may need. As you are writing the code, make sure to keep in mind how much memory is being used and the running time of the data structures you are using.

Even though a data structure may seem to be the easiest to implement, it may not be the best. On the other hand, there is no reason to overly complicate your code just to try to use a specific data structure. Make sure you always start with the problem and find the

best solution, rather than starting with a data structure and trying to make it fit a given problem.

## Module at a Glance

This is the recommended plan for completing the reading assignments and activities within the module. Additional information can be found in the module Resources section and on the module table of contents page.

- 1** Submit Project Two.
- 2** Review the Module Seven resources.
- 3** Create your GitHub repository and invite your instructor.