

TidBIT

Did you know that "vector" is actually a theoretical term? In different programming languages, a vector may be implemented with a different name. For example, in Java, the theoretical vector data structure is implemented in a class called "ArrayList".



Required Resources

Textbook: *Data Structures and Algorithms*, Chapter 1 **C** (/d2l/common/dialogs/quickLink/quickLink.d2l?ou=1860222&type=lti&rcode=snhu-2534394&srcou=1040994)

This zyBooks reading will provide you with information on the following topics:

- Programming basics, code, and pseudocode
- Arrays, vectors, iterating through vectors, multiple vectors, vector resizing, inserting
 into vectors, two-dimensional arrays, character arrays, C strings, and string library
 functions

Textbook: *Data Structures and Algorithms*, Chapter 2 **C** (/d2l/common/dialogs/quickLink/quickLink.d2l?ou=1860222&type=lti&rcode=snhu-2534396&srcou=1040994)

This zyBooks reading will provide you with information on the following topics:

 Introduction to algorithms, problem solving, computational problem solving, recursive definitions, recursive algorithms, data privacy, and ethical guidelines



Additional Support (Optional)

Reading: How to Use zyBooks **(**/d2l/common/dialogs/quickLink/quickLink.d2l? ou=1860222&type=lti&rcode=snhu-2534391&srcou=1040994)

This resource will demonstrate how to use zyBooks, an interactive textbook where you will complete your readings and short practice activities for the course. This resource contains important information on how to submit and earn credit for assignments, as well as how to navigate different zyBooks features. As you go through this tutorial, consider the following questions:

- How do you earn credit for practice activities?
- What feedback do zyBooks autograded activities give, and how can you use it to learn?

Website: Stack Overflow (http://www.stackoverflow.com/)

Stack Overflow is an amazing resource for programmers. Type an error message you are getting or a question you have into the search bar, and answers are provided by other programmers from around the world. If you don't find your specific question answered, you can also post your questions for others to answer. If you want a challenge, try answering some of the questions that you see or adding to the answers once you gain a little knowledge. By the end of this class, you should be able to answer some of the basic algorithm and data structure questions that get posted.

Website: Install Visual Studio **()** (https://docs.microsoft.com/en-us/visualstudio/install/visual-studio?view=vs-2019)
Visual Studio is an industry standard IDE for C++ developments. This website will show

you how to install and set up the Visual Studio IDE.

Reading: Setting Up Visual Studio Projects in Apporto **C** (course_documents/CS%20300%20Setting%20Up%20Visual%20Studio%20Projects%C 2%A0in%20Apporto.pdf?isCourseFile=true&ou=1860222)

This resource will help you complete programming assignments in Modules Two, Three, Four, and Five. This resource provides step-by-step instructions to set up your Visual Studio programming assignments. These instructions will help make certain your projects are set up correctly and work using Visual Studio in the Apporto virtual environment. You may also use this resource as a guide if you use Visual Studio on your home computer.

Reading: Debugging Your Program in Visual Studio **C** (course_documents/CS%20300%20Debugging%20Your%20Program%20in%20Visual%2 0Studio.pdf?isCourseFile=true&ou=1860222)

This resource will help you complete programming assignments in Modules Two, Three, Four, and Five. This resource demonstrates how to debug and trace your programming assignments and projects using the Visual Studio IDE's enhanced debugging tools and features.