



Computer Science
Illuminated

Nell Dale *and* John Lewis *Fourth Edition*

Chapter 8

Abstract Data Types and Subprograms

Chapter Goals

- Distinguish between an **array-based** visualization and a **linked** visualization
- Distinguish between an **array** and a **list**
- Distinguish between and a **unsorted list** and a **sorted list**
- Distinguish between the behavior of a **stack** and a **queue**
- Distinguish between the **binary tree** and a **binary search tree**

Chapter Goals

- Draw the **binary search tree** that is built from inserting a series of items
- Understand the difference between a **tree** and a **graph**
- Explain the concept of **subprograms** and **parameters** and distinguish between **value** and **reference** parameters