Learning Objective	Practice	Reading / Lecture
Binary Trees		
Explain and implement a Binary Tree.	Binary Tree Project	Binary Tree Reading, Trees Video
Identify the three types of tree traversals: pre-order, in-order, and post-order.	Binary Tree Project	Binary Tree Reading, Trees Video
Explain and implement a Binary Search Tree.	BST Project	BST Reading, Trees Video
Graphs		
Explain and implement a Graph.	Graph Project	Graphs Introduction, Graphs Video
Traverse a graph.	Graph Project	Graph Traversal, Graphs Video
Network Models		
Describe the structure and function of network models from the perspective of a developer.		
- TCP/IP Model		TCP/IP Model
- OSI Model		OSI Model
IP Suite		
Identify the correct fields of an IPv6 header.		Internet Protocol
Distinguish an IPv4 packet from an IPv6.		Internet Protocol
Describe the following subjects and how they relate to one another: IP Addresses, Domain Names, and DNS.		Internet Protocol, DNS
Identify use cases for the TCP and UDP protocols.		Transport Protocols, TCP vs. UDP Video
Describe the following subjects and how they relate to one another: MAC Address, IP Address, and a port.		Internet Protocol, Transport Protocol, Network Hardware
*** OPTIONAL *** Identify the fields of a TCP segment.		(Optional) TCP Connections
*** OPTIONAL *** Describe how a TCP connection is negotiated.		(Optional) TCP Connections
Explaining the difference between network devices like a router and a switch.		Network Hardware
Network Tools - (Not directly assessed)		
Use traceroute to show routes between your computer and other computers.	Use traceroute Project	Use traceroute Project
Use Wireshark to show/inspect network traffic.	Install and Use Wireshark Project	Install and Use Wireshark Project