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CS-260 Data Structures and Algorithms

Module Three: 3-1 Programming Journal

• **Evaluate the pair** (i.e., the data structure and algorithm) that you applied in this module. Specifically, answer the following questions:

* What were the **strengths** of the pair in solving the problem? In other words, why do you think the provided data structure and algorithm made sense as a pair for the given task? Support your claims with specific evidence from the course materials.

Lists and Searches, thinking back on this week those two make a great pair! C++ has some incredible tools to help make lists and searching very easy, particularly pointers and operators. Utilizing and understanding pointers makes both lists and searches much simpler.

* What were the **weaknesses** in the pair for solving the given problem? In other words, what was it about either the data structure or the algorithm that might make you consider alternatives? Alternatively, if you feel there were no significant weakness in the pairing, provide a circumstance where this pairing would be inadequate for solving a problem. Support your claims with specific evidence from the course materials.

Specific disadvantages of Linked Lists are memory usage, traversal, and reverse traversal. More memory is required to store elements in linked lists compared to array, because linked list each node contains a pointer, and it requires extra memory for itself. Node traversal is difficult in not being able to randomly access any element

* Brainstorm **other possible applications** for the pair. How could the pair be used to solve problems relating to your own personal or professional interests? Illustrate your response with specific details.
* Be sure that your response is appropriately articulated (i.e., no major errors in grammar, spelling, and organization) so that your instructor can clearly understand your ideas.