1. **What is the advantage of the ChunkList approach as opposed to a standard the link list implementation?**

The chunk list a dynamic list-based data structure that would separate large amounts of data into specifically sized chunks, each of which should be able to be searched at the exact same time by searching each chunk on a separate thread.

1. What would be the implications of increasing the size of ARRAY\_SIZE to a very large value? For example, what if you plan to use this structure to store around 1,000 values and you made ARRAY\_SIZE 1,000?

There wll be Two major Drawbacks of Doing this:

* Program will run less efficently and may take more time to traverse through a Chunk
* More and More Space would be consumed even if a person wants to store only one value a chunk of size 1000 would be allocated space

1. What is the Big O of: (1 point each)

|  |  |
| --- | --- |
| Function | Big O |
| Append | 1 |
| Remove | n |
| GetLength | 1 |
| GetIndex | n |
| Contains | n |
|  |  |

4.Compare placing a new element into the FIRST available empty space versus placing a new element in the tail chunk. What are the advantages and disadvantages to automatically placing values at the tail node? (1 point)

* One Advantage of this would br that most recent elemets would be nearer to access and search
* Disadvantage would be that when the first chunk becomes full we have to add a new node between head and tail for more data insertion