Phase 1

MyMalloc

Here, I used a linked list data structure to construct my Heap. I used a void pointer called base to keep track of the memory address of the heap. I have 2 helper functions that I use to implement $MyMalloc$:

1. Find Chunk
- This function's purpose is to find a free chunk of memory, it takes in the last known pointer to a block of memory and use it to traverse my linked list until I find a block of memory that satisfies the size parameter that is passed into this function, the function then returns the memory address of that block of viable memory or NULL if we couldn't find one
2. Extend
- This is the function I use to move my program break, it takes in the last block of memory in the linked list, moves the program break and creates a new chunk and links it to the previous last block of memory

I have 2 cases In mymalloc, one where we call it for the first time, so we have to immediately call extend. The other is when we already have a heap and are just traversing the list to find suitable blocks, and we can extend if there are no suitable blocks

MyFree

- I simply take the head of the list and find the memory address taken in as the parameter and set the free value of that block to the size