

Phase 2

MyMalloc

Changes:

Here I introduced new function that adds a splitting mechanism to my malloc implementation. Where in my unoptimized code, I would use a first fit approach to find the first free block that matches the size I wanted but this caused a lot of leftover wasted space. Here, I would also find the first free block but I would cut it so that I would have just the size I wanted, and the remaining space that I didn't need is cut out to be a free block in the linked list.

MyFree

Changes:

Here I added a extra attribute to my block structure, I added a link that links the previous block to my current block. This essentially makes my linked list of blocks and doubly linked list as it can go both ways. I use this new feature in my Free code to check if the previous block of the block that I want to free has already been freed, if so: then I will replace both blocks with a new big block that is equivalent to both blocks put together to reduce fragmentation, otherwise: it behaves just like it does in my previous file