Assignment 1:

mymalloc.c

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The purpose of this assignment was to create our own version of malloc using a 4096 byte array to emulate system memory. In order to properly address our data, a small header called metadata needs to inserted at the beginning of each block of memory to make it easily accessible.

My metadata implementation uses a linked list with the following values contained:

Typedef struct block {

Struct block *next: An address to the next block of metadata

Unsigned Short size: the size of the block. An unsigned short has a max value of 65,535 and the size should never be negative, we can save 2 bytes instead of using size_t (unsigned int) for our metadata.

Unsigned Short isfree: this value is 1 if the memory block is available or 0 if the block is being used.

}memblock;

Mymalloc() returns an increment of the pointer to provide the data portion.

Myfree() decrements the pointer provided to the start of the address in order to access values in the linked list.