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Project Name : First fit malloc

Files included : memgrind.c, mymallo.c, mymalloc.h, testcases.txt, readme.pdf, Makefile

What does program do:

mymalloc.c - includes all the function and implmentation of malloc and free
- simulate malloc implementation on static memory of 5000 bytes.

malloc function

- program is based on first fit algorithm which finds first fitting or next fitting block of unallocated memory.
- For space efficiency, we divided base into two group, one for smaller allocated block and one for larger. It will reduce fragmentation if user require big block often.
- malloc will give away block after it checks for block size and current free block, and it also checks for isFree variable which is for detecting free vs allocated block.

free function

- checks for freeing address that are not pointer or those pointers not allocated by malloc
- also checks for redundant free

memgrind

- TestCaseE: Mallocs char pointers from 0-3000 and frees them after. Then does the same action again.
- TestCaseC implementation- Random number- 0- malloc byte 1-free. Chooses random block size and frees it then fills in rest. Frees any leftover.