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Hopefully this time moodle receives this assignment properly,
and this can make up for the previous problems.

Program can be run writing things such as:

./myStringApp 1000 worst
./myStringApp 128000 first
./myStringApp 16000 best

Where the number is the size of the heap, followed by the alloc mode.
The file to read from has been hardcoded in myStringApp.c file, and can be modified at line 45.

Discussion (Doing this here so you don't have to get lost through the wall of data):

Whith small heaps and files, the algorithms seem to perform almost identically.
Best and first fit seem to perform very similary for this exercise.
Worst fit however does get slightly bigger and more numerous holes as the heapsize and file get bigger, with some data loss.

Results(wall of data):

SMALL_FILE:
    1K HEAP:
        First:
            Heap used ratio = 99%
            Number of free holes = 2
            Average size of holes = 2
            Number of allocated chunks = 30

        Best:
            Heap used ratio = 99%
            Number of free holes = 2
            Average size of holes = 2
            Number of allocated chunks = 30

        Worst:
            Heap used ratio = 99%
            Number of free holes = 2
            Average size of holes = 2
            Number of allocated chunks = 30

    16K HEAP:
        First:
            Heap used ratio = 99%
            Number of free holes = 4
            Average size of holes = 3
            Number of allocated chunks = 425

        Best:
            Heap used ratio = 99%
            Number of free holes = 4
            Average size of holes = 3
            Number of allocated chunks = 425

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        Worst:
              Heap used ratio = 99%
              Number of free holes = 4
              Average size of holes = 3
              Number of allocated chunks = 425

    128K HEAP:
        First:
              Heap used ratio = 12%
              Number of free holes = 4
              Average size of holes = 27911
              Number of allocated chunks = 437


        Best:
              Heap used ratio = 12%
              Number of free holes = 4
              Average size of holes = 27911
              Number of allocated chunks = 437

        Worst:
              Heap used ratio = 12%
              Number of free holes = 4
              Average size of holes = 27911
              Number of allocated chunks = 437




MEDIUM_FILE:
    1K HEAP:
        First:
              Heap used ratio = 99%
              Number of free holes = 2
              Average size of holes = 2
              Number of allocated chunks = 30

        Best:

              Heap used ratio = 99%
              Number of free holes = 2
              Average size of holes = 2
              Number of allocated chunks = 30

        Worst:

              Heap used ratio = 99%
              Number of free holes = 2
              Average size of holes = 2
              Number of allocated chunks = 30




    16K HEAP:
        First:
              Heap used ratio = 99%
              Number of free holes = 5
              Average size of holes = 3
              Number of allocated chunks = 427
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        Best:
              Heap used ratio = 99%
              Number of free holes = 5
              Average size of holes = 3
              Number of allocated chunks = 427

        Worst:
              Heap used ratio = 99%
              Number of free holes = 7
              Average size of holes = 3
              Number of allocated chunks = 432


    128K HEAP:
        First:
              Heap used ratio = 85%
              Number of free holes = 11
              Average size of holes = 1640
              Number of allocated chunks = 2794

        Best:
              Heap used ratio = 85%
              Number of free holes = 11
              Average size of holes = 1640
              Number of allocated chunks = 2794

        Worst:
              Heap used ratio = 85%
              Number of free holes = 22
              Average size of holes = 833
              Number of allocated chunks = 2785



LARGE_FILE:
    1K HEAP:
        First:
              Heap used ratio = 99%
              Number of free holes = 2
              Average size of holes = 2
              Number of allocated chunks = 30


        Best:
              Heap used ratio = 99%
              Number of free holes = 2
              Average size of holes = 2
              Number of allocated chunks = 30

        Worst:
              Heap used ratio = 99%
              Number of free holes = 2
              Average size of holes = 2
              Number of allocated chunks = 30



    16K HEAP
        First:
              Heap used ratio = 99%
              Number of free holes = 5
              Average size of holes = 3
              Number of allocated chunks = 427
```

```
      Best:
            Heap used ratio = 99%
            Number of free holes = 5
            Average size of holes = 3
            Number of allocated chunks = 427

      Worst:
            Heap used ratio = 99%
            Number of free holes = 7
            Average size of holes = 3
            Number of allocated chunks = 432



128 HEAP
      First:
            Heap used ratio = 99%
            Number of free holes = 14
            Average size of holes = 2
            Number of allocated chunks = 3251

      Best:
            Heap used ratio = 99%
            Number of free holes = 14
            Average size of holes = 2
            Number of allocated chunks = 3251


      Worst:
            Heap used ratio = 99%
            Number of free holes = 32
            Average size of holes = 3
            Number of allocated chunks = 3271
```