

Author, Date

Yufan Xue, 05/04/2014

Brief summary of the software

This project implemented a disk scheduling simulator. This will read from a file and use different disk scheduling algorithm to schedule the disk tasks

- FCFS - First-come, first-served
- SSTF - Shortest-seek-time-first
- SCAN
- C-SCAN
- LOOK
- C-LOOK

How to build the software

- 1) Decompress project-05.tar.gz file to any directory you want.
- 2) Open terminal, use commands to go to the directory which you decompressed the file just.
- 3) Type command “make” to compile the c source file

How to use the software

Examples:

```
yufanxues-mbp:project-05 yufanxue$ ./scheduler -h 1404 -d 1  
test.txt
```

```
yufanxues-mbp:project-05 yufanxue$ ./scheduler -h 53 -d 0 test.txt
```

How you tested your software

1) Trying to execute the program by using different test files.

Examples

1) Command line format:

```
yufanxues-mbp:project-05 yufanxue$ ./scheduler -h 1404 -d 1 test.txt
```

```
Queue File           :      test.txt
Num. Disk Cylinders  :      5000
Host Position        :      1404
Head Direction       :          1
```

```
388953    FCFS
8606      SSTF
8578      SCAN
9990      CSCAN
8564      LOOK
9944      CLOOK
```

Known bugs and problem areas

No

Test suites description

1) test1.txt:

Test1.txt purpose: big file, test every scheduling algorithm

Text1.txt expected output :

```
$ ./scheduler -h 1404 -d 1 test/test1.txt
```

```
Queue File           :      test/test1.txt
Num. Disk Cylinders  :      5000
Host Position        :      1404
Head Direction       :          1
```

```
388953    FCFS
```

8606	SSTF
8578	SCAN
9990	CSCAN
8564	LOOK
9944	CLOOK

2) test2.txt:

Test2.txt purpose: small file, test boundary value

Text2.txt expected output:

```
./scheduler -h 0 -d 1 test/test2.txt
```

```
Queue File           : test/test2.txt
Num. Disk Cylinders  : 200
Host Position        : 0
Head Direction       : 1
```

```
-----
    750    FCFS
    183    SSTF
    183    SCAN
    182    CSCAN
    183    LOOK
    183    CLOOK
```

3) test3.txt:

Test3.txt purpose: small file, test boundary value

Text3.txt expected output:

```
./scheduler -h 0 -d 0 test/test3.txt
```

```
Queue File           : test/test3.txt
Num. Disk Cylinders  : 9
Host Position        : 0
Head Direction       : 0
```

```
-----
    41    FCFS
     8    SSTF
     8    SCAN
    16    CSCAN
     8    LOOK
    16    CLOOK
```

4) test4.txt:

Test4.txt purpose: small file, test boundary value

Text4.txt expected output:

```
./scheduler -h 0 -d 0 test/test4.txt
```

```
Queue File           :      test/test4.txt
Num. Disk Cylinders  :      50
Host Position        :      0
Head Direction       :      0
```

```
-----
      216      FCFS
      45      SSTF
      45      SCAN
      95      CSCAN
      45      LOOK
      87      CLOOK
```

5) test5.txt:

Test5.txt purpose: big file, test every scheduling algorithm

Text5.txt expected output:

```
./scheduler -h 1200 -d 0 test/test5.txt
```

```
Queue File           :      test/test5.txt
Num. Disk Cylinders  :      7000
Host Position        :      1200
Head Direction       :      0
```

```
-----
    397846      FCFS
      8768      SSTF
      6192      SCAN
     13974      CSCAN
      6160      LOOK
      9928      CLOOK
```