

ELEC 377 Operating Systems F22  
Testing Documentation Lab 4

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## Lab2\_3mons.out.Printer

From the lab2\_3mons.out.Printer test cases shown in Figure 1, we can see that the line traces that were extracted from lab2\_3mons.out were correct since the regex expression extracted all line traces that matched a machine printer as indicated by “mP”. Additionally, the time span for the printer thread calculates the correct time difference as 1666976742.814140 - 1666976719.369969 = 23.44 seconds.

```
lab2_3mons.out.Printer X
lab2_3mons.out.Printer
1  ESC[0;33mP [1666976719.369969] Printer Thread: delay 1800ESC[0m
2  ESC[0;33mP [1666976721.173868] access_summary lockedESC[0m
3  ESC[0;33mP [1666976721.173871] Printer StepESC[0m
4  ESC[0;33mP [1666976721.173875] access_summary releasedESC[0m
5  ESC[0;33mP [1666976722.976425] access_summary lockedESC[0m
6  ESC[0;33mP [1666976722.976452] Printer StepESC[0m
7  ESC[0;33mP [1666976722.976571] access_summary releasedESC[0m
8  ESC[0;33mP [1666976724.778277] access_summary lockedESC[0m
9  ESC[0;33mP [1666976724.778306] Printer StepESC[0m
10 ESC[0;33mP [1666976724.778310] access_summary releasedESC[0m
11 ESC[0;33mP [1666976726.582383] access_summary lockedESC[0m
12 ESC[0;33mP [1666976726.582387] Printer StepESC[0m
13 ESC[0;33mP [1666976726.582391] access_summary releasedESC[0m
14 ESC[0;33mP [1666976728.387356] access_summary lockedESC[0m
15 ESC[0;33mP [1666976728.387358] Printer StepESC[0m
16 ESC[0;33mP [1666976728.387363] access_summary releasedESC[0m
17 ESC[0;33mP [1666976730.192261] access_summary lockedESC[0m
18 ESC[0;33mP [1666976730.192263] Printer StepESC[0m
19 ESC[0;33mP [1666976730.192267] access_summary releasedESC[0m
20 ESC[0;33mP [1666976731.995379] access_summary lockedESC[0m
21 ESC[0;33mP [1666976731.995382] Printer StepESC[0m
22 ESC[0;33mP [1666976731.995387] access_summary releasedESC[0m
23 ESC[0;33mP [1666976733.796468] access_summary lockedESC[0m
24 ESC[0;33mP [1666976733.796472] Printer StepESC[0m
25 ESC[0;33mP [1666976733.796476] access_summary releasedESC[0m
26 ESC[0;33mP [1666976735.598666] access_summary lockedESC[0m
27 ESC[0;33mP [1666976735.598670] Printer StepESC[0m
28 ESC[0;33mP [1666976735.598674] access_summary releasedESC[0m
29 ESC[0;33mP [1666976737.403483] access_summary lockedESC[0m
30 ESC[0;33mP [1666976737.403485] Printer StepESC[0m
31 ESC[0;33mP [1666976737.403489] access_summary releasedESC[0m
32 ESC[0;33mP [1666976739.205491] access_summary lockedESC[0m
33 ESC[0;33mP [1666976739.205494] Printer StepESC[0m
34 ESC[0;33mP [1666976739.205520] access_summary releasedESC[0m
35 ESC[0;33mP [1666976741.009263] access_summary lockedESC[0m
36 ESC[0;33mP [1666976741.009267] Printer StepESC[0m
37 ESC[0;33mP [1666976741.009304] access_summary releasedESC[0m
38 ESC[0;33mP [1666976742.814131] access_summary lockedESC[0m
39 ESC[0;33mP [1666976742.814135] Printer StepESC[0m
40 ESC[0;33mP [1666976742.814140] access_summary releasedESC[0m
41 Time Span: 23.44
42
```

## Lab2\_3mons.out.Reader

From the lab2\_3mons.out.Printer test cases shown in Figure 1, we can see that the line traces that were extracted from lab2\_3mons.out were correct since the regex expression extracted all line traces that matched a machine reader as indicated by “mR”. Additionally, the time span for the printer thread calculates the correct time difference as  $1666976741.431129 - 1666976719.369965 = 22.06$  seconds.

```
lab2_3mons.out.Reader X
lab2_3mons.out.Reader
1  esc[0;33mR [1666976719.369965] Reader Thread: 3 machinesesc[0m
2  esc[0;33mR [1666976720.370259] Reader Thread loop startesc[0m
3  esc[0;33mR [1666976720.370279] Reader Thread loop accessing_stats lock aquiredesc[0m
4  esc[0;33mR [1666976720.370285] Reader Thread loop accessing_stats lock releasedesc[0m
5  esc[0;33mR [1666976721.323622] Reader Thread loop access_summary lock aquiredesc[0m
6  esc[0;33mR [1666976721.323624] Reader Thread loop access_summary lock releasedesc[0m
7  esc[0;33mR [1666976721.323625] Reader Thread loop endesc[0m
```

```
lab2_3mons.out.Reader X
lab2_3mons.out.Reader
91  esc[0;33mR [1666976735.233773] Reader Thread loop endesc[0m
92  esc[0;33mR [1666976735.233774] Reader Thread loop startesc[0m
93  esc[0;33mR [1666976735.233775] Reader Thread loop accessing_stats lock aquiredesc[0m
94  esc[0;33mR [1666976735.233776] Reader Thread loop accessing_stats lock releasedesc[0m
95  esc[0;33mR [1666976736.304837] Reader Thread loop access_summary lock aquiredesc[0m
96  esc[0;33mR [1666976736.304842] Reader Thread loop access_summary lock releasedesc[0m
97  esc[0;33mR [1666976736.304882] Reader Thread loop endesc[0m
98  esc[0;33mR [1666976736.304883] Reader Thread loop startesc[0m
99  esc[0;33mR [1666976736.304884] Reader Thread loop accessing_stats lock aquiredesc[0m
100  esc[0;33mR [1666976736.304885] Reader Thread loop accessing_stats lock releasedesc[0m
101  esc[0;33mR [1666976737.391864] Reader Thread loop access_summary lock aquiredesc[0m
102  esc[0;33mR [1666976737.391867] Reader Thread loop access_summary lock releasedesc[0m
103  esc[0;33mR [1666976737.391868] Reader Thread loop endesc[0m
104  esc[0;33mR [1666976737.391868] Reader Thread loop startesc[0m
105  esc[0;33mR [1666976737.391870] Reader Thread loop accessing_stats lock aquiredesc[0m
106  esc[0;33mR [1666976737.391871] Reader Thread loop accessing_stats lock releasedesc[0m
107  esc[0;33mR [1666976738.420667] Reader Thread loop access_summary lock aquiredesc[0m
108  esc[0;33mR [1666976738.420670] Reader Thread loop access_summary lock releasedesc[0m
109  esc[0;33mR [1666976738.420670] Reader Thread loop endesc[0m
110  esc[0;33mR [1666976738.420671] Reader Thread loop startesc[0m
111  esc[0;33mR [1666976738.420672] Reader Thread loop accessing_stats lock aquiredesc[0m
112  esc[0;33mR [1666976738.420673] Reader Thread loop accessing_stats lock releasedesc[0m
113  esc[0;33mR [1666976739.470011] Reader Thread loop access_summary lock aquiredesc[0m
114  esc[0;33mR [1666976739.470014] Reader Thread loop access_summary lock releasedesc[0m
115  esc[0;33mR [1666976739.470015] Reader Thread loop endesc[0m
116  esc[0;33mR [1666976739.470015] Reader Thread loop startesc[0m
117  esc[0;33mR [1666976739.470017] Reader Thread loop accessing_stats lock aquiredesc[0m
118  esc[0;33mR [1666976739.470018] Reader Thread loop accessing_stats lock releasedesc[0m
119  esc[0;33mR [1666976740.430561] Reader Thread loop access_summary lock aquiredesc[0m
120  esc[0;33mR [1666976740.430565] Reader Thread loop access_summary lock releasedesc[0m
121  esc[0;33mR [1666976740.430566] Reader Thread loop endesc[0m
122  esc[0;33mR [1666976740.430566] Reader Thread loop startesc[0m
123  esc[0;33mR [1666976740.430568] Reader Thread loop accessing_stats lock aquiredesc[0m
124  esc[0;33mR [1666976740.430569] Reader Thread loop accessing_stats lock releasedesc[0m
125  esc[0;33mR [1666976741.431126] Reader Thread loop access_summary lock aquiredesc[0m
126  esc[0;33mR [1666976741.431129] Reader Thread loop access_summary lock releasedesc[0m
127  esc[0;33mR [1666976741.431129] Reader Thread loop endesc[0m
128  Time Span: 22.06
129
```

## Lab2\_4mons.out.Printer

For lab2\_4mons.out.Printer, we see the similar results with lab2\_3mons.out.Printer. This indicates that the bash script is working even with different input files.

```
lab2_4mons.out.Printer X
lab2_4mons.out.Printer
1  [0;33mP [1667150508.423117] Printer Thread: delay 1800[0m
2  [0;33mP [1667150510.225490] access_summary locked[0m
3  [0;33mP [1667150510.225511] Printer Step[0m
4  [0;33mP [1667150510.225515] access_summary released[0m
5  [0;33mP [1667150512.030231] access_summary locked[0m
6  [0;33mP [1667150512.030235] Printer Step[0m
7  [0;33mP [1667150512.030239] access_summary released[0m
8  [0;33mP [1667150513.833279] access_summary locked[0m
9  [0;33mP [1667150513.833283] Printer Step[0m
10 [0;33mP [1667150513.833287] access_summary released[0m
11 [0;33mP [1667150515.636301] access_summary locked[0m
12 [0;33mP [1667150515.636332] Printer Step[0m
13 [0;33mP [1667150515.636444] access_summary released[0m
14 [0;33mP [1667150517.441359] access_summary locked[0m
15 [0;33mP [1667150517.441361] Printer Step[0m
16 [0;33mP [1667150517.441366] access_summary released[0m
17 [0;33mP [1667150519.243317] access_summary locked[0m
18 [0;33mP [1667150519.243320] Printer Step[0m
19 [0;33mP [1667150519.243325] access_summary released[0m
20 [0;33mP [1667150521.045155] access_summary locked[0m
21 [0;33mP [1667150521.045158] Printer Step[0m
22 [0;33mP [1667150521.045163] access_summary released[0m
23 [0;33mP [1667150522.849501] access_summary locked[0m
24 [0;33mP [1667150522.849505] Printer Step[0m
25 [0;33mP [1667150522.849509] access_summary released[0m
26 [0;33mP [1667150524.654067] access_summary locked[0m
27 [0;33mP [1667150524.654069] Printer Step[0m
28 [0;33mP [1667150524.654074] access_summary released[0m
29 [0;33mP [1667150526.457140] access_summary locked[0m
30 [0;33mP [1667150526.457142] Printer Step[0m
31 [0;33mP [1667150526.457147] access_summary released[0m
32 [0;33mP [1667150528.260374] access_summary locked[0m
33 [0;33mP [1667150528.260377] Printer Step[0m
34 [0;33mP [1667150528.260382] access_summary released[0m
35 [0;33mP [1667150530.062423] access_summary locked[0m
36 [0;33mP [1667150530.062426] Printer Step[0m
37 [0;33mP [1667150530.062431] access_summary released[0m
38 [0;33mP [1667150531.865081] access_summary locked[0m
39 [0;33mP [1667150531.865090] Printer Step[0m
40 [0;33mP [1667150531.865105] access_summary released[0m
41 Time Span: 23.44
42
```

## Lab2\_4mons.out.Reader

For lab2\_4mons.out.Reader, we see the similar results with lab2\_3mons.out.Reader. This indicates that the bash script is working even with different input files.

```
lab2_4mons.out.Reader X
lab2_4mons.out.Reader
1  esc[0;33mR [1667150508.423102] Reader Thread: 4 machinesesc[0m
2  esc[0;33mR [1667150509.427342] Reader Thread loop startesc[0m
3  esc[0;33mR [1667150509.427361] Reader Thread loop accessing_stats lock aquiredesc[0m
4  esc[0;33mR [1667150509.427369] Reader Thread loop accessing_stats lock releasedesc[0m
5  esc[0;33mR [1667150510.448369] Reader Thread loop access_summary lock aquiredesc[0m
6  esc[0;33mR [1667150510.448372] Reader Thread loop access_summary lock releasedesc[0m
7  esc[0;33mR [1667150510.448373] Reader Thread loop endesc[0m
8  esc[0;33mR [1667150510.448373] Reader Thread loop startesc[0m
9  esc[0;33mR [1667150510.448375] Reader Thread loop accessing_stats lock aquiredesc[0m
10 esc[0;33mR [1667150510.448427] Reader Thread loop accessing_stats lock releasedesc[0m
```

```
lab2_4mons.out.Reader X
lab2_4mons.out.Reader
87  esc[0;33mR [1667150523.646679] Reader Thread loop accessing_stats lock aquiredesc[0m
88  esc[0;33mR [1667150523.646680] Reader Thread loop accessing_stats lock releasedesc[0m
89  esc[0;33mR [1667150524.647853] Reader Thread loop access_summary lock aquiredesc[0m
90  esc[0;33mR [1667150524.647856] Reader Thread loop access_summary lock releasedesc[0m
91  esc[0;33mR [1667150524.647857] Reader Thread loop endesc[0m
92  esc[0;33mR [1667150524.647857] Reader Thread loop startesc[0m
93  esc[0;33mR [1667150524.647859] Reader Thread loop accessing_stats lock aquiredesc[0m
94  esc[0;33mR [1667150524.647860] Reader Thread loop accessing_stats lock releasedesc[0m
95  esc[0;33mR [1667150525.643253] Reader Thread loop access_summary lock aquiredesc[0m
96  esc[0;33mR [1667150525.643256] Reader Thread loop access_summary lock releasedesc[0m
97  esc[0;33mR [1667150525.643257] Reader Thread loop endesc[0m
98  esc[0;33mR [1667150525.643257] Reader Thread loop startesc[0m
99  esc[0;33mR [1667150525.643259] Reader Thread loop accessing_stats lock aquiredesc[0m
100 esc[0;33mR [1667150525.643260] Reader Thread loop accessing_stats lock releasedesc[0m
101 esc[0;33mR [1667150526.654589] Reader Thread loop access_summary lock aquiredesc[0m
102 esc[0;33mR [1667150526.654592] Reader Thread loop access_summary lock releasedesc[0m
103 esc[0;33mR [1667150526.654593] Reader Thread loop endesc[0m
104 esc[0;33mR [1667150526.654594] Reader Thread loop startesc[0m
105 esc[0;33mR [1667150526.654595] Reader Thread loop accessing_stats lock aquiredesc[0m
106 esc[0;33mR [1667150526.654596] Reader Thread loop accessing_stats lock releasedesc[0m
107 esc[0;33mR [1667150527.667545] Reader Thread loop access_summary lock aquiredesc[0m
108 esc[0;33mR [1667150527.667549] Reader Thread loop access_summary lock releasedesc[0m
109 esc[0;33mR [1667150527.667588] Reader Thread loop endesc[0m
110 esc[0;33mR [1667150527.667589] Reader Thread loop startesc[0m
111 esc[0;33mR [1667150527.667590] Reader Thread loop accessing_stats lock aquiredesc[0m
112 esc[0;33mR [1667150527.667591] Reader Thread loop accessing_stats lock releasedesc[0m
113 esc[0;33mR [1667150528.668293] Reader Thread loop access_summary lock aquiredesc[0m
114 esc[0;33mR [1667150528.668296] Reader Thread loop access_summary lock releasedesc[0m
115 esc[0;33mR [1667150528.668296] Reader Thread loop endesc[0m
116 esc[0;33mR [1667150528.668297] Reader Thread loop startesc[0m
117 esc[0;33mR [1667150528.668298] Reader Thread loop accessing_stats lock aquiredesc[0m
118 esc[0;33mR [1667150528.668300] Reader Thread loop accessing_stats lock releasedesc[0m
119 esc[0;33mR [1667150529.755049] Reader Thread loop access_summary lock aquiredesc[0m
120 esc[0;33mR [1667150529.755052] Reader Thread loop access_summary lock releasedesc[0m
121 esc[0;33mR [1667150529.755053] Reader Thread loop endesc[0m
122 esc[0;33mR [1667150529.755053] Reader Thread loop startesc[0m
123 esc[0;33mR [1667150529.755055] Reader Thread loop accessing_stats lock aquiredesc[0m
124 esc[0;33mR [1667150529.755056] Reader Thread loop accessing_stats lock releasedesc[0m
125 esc[0;33mR [1667150530.769176] Reader Thread loop access_summary lock aquiredesc[0m
126 esc[0;33mR [1667150530.769179] Reader Thread loop access_summary lock releasedesc[0m
127 esc[0;33mR [1667150530.769180] Reader Thread loop endesc[0m
128 Time Span: 22.35
129
```

## Lab 2 Test Cases

The following images are the test results from running the bash script on the lab2 test files. Each of these images produces a similar output as the test cases above. This shows that the script is running accordingly as the correct line traces for reader and printer machines are being extracted in their appropriate files, and the proper time span is being calculated.



## Test1.txt.Printer

```
Test1.txt.Printer X
Test1.txt.Printer
1  [0;33mP [1667505899.206394] Printer Thread: delay 1500[0m
2  [0;33mP [1667505900.706469] Printer Step[0m
3  [0;33mP [1667505902.206543] Printer Step[0m
4  [0;33mP [1667505903.706624] Printer Step[0m
5  [0;33mP [1667505905.206702] Printer Step[0m
6  [0;33mP [1667505906.706803] Printer Step[0m
7  [0;33mP [1667505908.206912] Printer Step[0m
8  [0;33mP [1667505909.706978] Printer Step[0m
9  [0;33mP [1667505911.207045] Printer Step[0m
10 [0;33mP [1667505912.707112] Printer Step[0m
11 [0;33mP [1667505914.207178] Printer Step[0m
12 [0;33mP [1667505915.707244] Printer Step[0m
13 [0;33mP [1667505917.207309] Printer Step[0m
14 [0;33mP [1667505918.707374] Printer Step[0m
15 [0;33mP [1667505920.207437] Printer Step[0m
16 [0;33mP [1667505921.707615] Printer Step[0m
17 Time Span: 22.50
18
```

## Test1.txt.Reader

```
Test1.txt.Reader X
Test1.txt.Reader
1  [0;33mR [1667505899.206403] Reader Thread: 3 machines[0m
2  [0;33mR [1667505900.206562] Reader Thread loop start[0m
3  [0;33mR [1667505900.206570] Reader Thread loop accessing_stats lock acquired[0m
4  [0;35mR [1667505900.206573] Total procs: 12, Load Factor: 1.100000, Packets per second: 16, Discards per second: 38[0m
5  [0;33mR [1667505900.206580] Reader Thread loop accessing_stats lock released[0m
6  [0;33mR [1667505901.425478] Reader Thread loop end[0m
7  [0;33mR [1667505901.425484] Reader Thread loop start[0m
8  [0;33mR [1667505901.425485] Reader Thread loop accessing_stats lock acquired[0m
9  [0;35mR [1667505901.425486] Total procs: 23, Load Factor: 1.400000, Packets per second: 97, Discards per second: 69[0m
10 [0;33mR [1667505901.425491] Reader Thread loop accessing_stats lock released[0m
11 [0;33mR [1667505902.591796] Reader Thread loop end[0m

Test1.txt.Reader X
Test1.txt.Reader
93 [0;35mR [1667505915.455534] Total procs: 38, Load Factor: 3.700000, Packets per second: 263, Discards per second: 119[0m
94 [0;35mR [1667505915.455534] Total procs: 38, Load Factor: 3.700000, Packets per second: 263, Discards per second: 119[0m
95 [0;33mR [1667505915.455538] Reader Thread loop accessing_stats lock released[0m
96 [0;33mR [1667505916.266569] Reader Thread loop end[0m
97 [0;33mR [1667505916.266572] Reader Thread loop start[0m
98 [0;33mR [1667505916.266573] Reader Thread loop accessing_stats lock acquired[0m
99 [0;35mR [1667505916.266573] Total procs: 38, Load Factor: 3.700000, Packets per second: 263, Discards per second: 119[0m
100 [0;33mR [1667505916.266576] Reader Thread loop accessing_stats lock released[0m
101 [0;33mR [1667505917.032501] Reader Thread loop end[0m
102 [0;33mR [1667505917.032504] Reader Thread loop start[0m
103 [0;33mR [1667505917.032505] Reader Thread loop accessing_stats lock acquired[0m
104 [0;35mR [1667505917.032506] Total procs: 38, Load Factor: 3.700000, Packets per second: 263, Discards per second: 119[0m
105 [0;33mR [1667505917.032509] Reader Thread loop accessing_stats lock released[0m
106 [0;33mR [1667505917.808746] Reader Thread loop end[0m
107 [0;33mR [1667505917.808749] Reader Thread loop start[0m
108 [0;33mR [1667505917.808750] Reader Thread loop accessing_stats lock acquired[0m
109 [0;35mR [1667505917.808751] Total procs: 38, Load Factor: 3.700000, Packets per second: 263, Discards per second: 119[0m
110 [0;33mR [1667505917.808754] Reader Thread loop accessing_stats lock released[0m
111 [0;33mR [1667505918.630881] Reader Thread loop end[0m
112 [0;33mR [1667505918.630883] Reader Thread loop start[0m
113 [0;33mR [1667505918.630884] Reader Thread loop accessing_stats lock acquired[0m
114 [0;35mR [1667505918.630885] Total procs: 43, Load Factor: 4.100000, Packets per second: 269, Discards per second: 128[0m
115 [0;33mR [1667505918.630888] Reader Thread loop accessing_stats lock released[0m
116 [0;33mR [1667505919.409804] Reader Thread loop end[0m
117 [0;33mR [1667505919.409807] Reader Thread loop start[0m
118 [0;33mR [1667505919.409808] Reader Thread loop accessing_stats lock acquired[0m
119 [0;35mR [1667505919.409809] Total procs: 43, Load Factor: 4.100000, Packets per second: 269, Discards per second: 128[0m
120 [0;33mR [1667505919.409811] Reader Thread loop accessing_stats lock released[0m
121 [0;33mR [1667505920.174938] Reader Thread loop end[0m
122 [0;33mR [1667505920.174941] Reader Thread loop start[0m
123 [0;33mR [1667505920.174941] Reader Thread loop accessing_stats lock acquired[0m
124 [0;35mR [1667505920.174942] Total procs: 44, Load Factor: 4.800000, Packets per second: 271, Discards per second: 147[0m
125 [0;33mR [1667505920.174944] Reader Thread loop accessing_stats lock released[0m
126 [0;33mR [1667505920.988460] Reader Thread loop end[0m
127 Time Span: 21.78
128
```

## Test2.txt.Printer

```
Test2.txt.Printer X
Test2.txt.Printer
1  ESC[0;33mP [1667505930.741812] Printer Thread: delay 1500ESC[0m
2  ESC[0;33mP [1667505932.241886] Printer StepESC[0m
3  ESC[0;33mP [1667505933.741972] Printer StepESC[0m
4  ESC[0;33mP [1667505935.242049] Printer StepESC[0m
5  ESC[0;33mP [1667505936.742132] Printer StepESC[0m
6  ESC[0;33mP [1667505938.242201] Printer StepESC[0m
7  ESC[0;33mP [1667505939.742269] Printer StepESC[0m
8  ESC[0;33mP [1667505941.242334] Printer StepESC[0m
9  ESC[0;33mP [1667505942.742400] Printer StepESC[0m
10 ESC[0;33mP [1667505944.242466] Printer StepESC[0m
11 ESC[0;33mP [1667505945.742535] Printer StepESC[0m
12 ESC[0;33mP [1667505947.242609] Printer StepESC[0m
13 ESC[0;33mP [1667505948.742678] Printer StepESC[0m
14 ESC[0;33mP [1667505950.242744] Printer StepESC[0m
15 ESC[0;33mP [1667505951.742848] Printer StepESC[0m
16 ESC[0;33mP [1667505953.243029] Printer StepESC[0m
17   Time Span: 22.50
18
```

## Test2.txt.Reader

```
Test2.txt.Reader X
Test2.txt.Reader
1  ESC[0;33mR [1667505930.741821] Reader Thread: 3 machinesESC[0m
2  ESC[0;33mR [1667505931.741977] Reader Thread loop startESC[0m
3  ESC[0;33mR [1667505931.741985] Reader Thread loop accessing_stats lock acquiredESC[0m
4  ESC[0;35mR [1667505931.741988] Total procs: 12, Load Factor: 1.100000, Packets per second: 16, Discards per second: 38ESC[0m
5  ESC[0;33mR [1667505931.741995] Reader Thread loop accessing_stats lock releasedESC[0m
6  ESC[0;33mR [1667505932.963759] Reader Thread loop endESC[0m
7  ESC[0;33mR [1667505932.963767] Reader Thread loop startESC[0m
8  ESC[0;33mR [1667505932.963773] Reader Thread loop accessing_stats lock acquiredESC[0m
9  ESC[0;35mR [1667505932.963773] Total procs: 23, Load Factor: 1.400000, Packets per second: 97, Discards per second: 69ESC[0m
10 ESC[0;33mR [1667505932.963777] Reader Thread loop accessing_stats lock releasedESC[0m
11 ESC[0;33mR [1667505934.110379] Reader Thread loop endESC[0m
```



```

Test2.txt.Reader X
Test2.txt.Reader
100 ESC[0;33mR [1667505947.620615] Reader Thread loop startESC[0m
97 ESC[0;33mR [1667505947.620615] Reader Thread loop startESC[0m
98 ESC[0;33mR [1667505947.620616] Reader Thread loop accessing_stats lock acquiredESC[0m
99 ESC[0;33mR [1667505947.620616] Total procs: 38, Load Factor: 3.700001, Packets per second: 263, Discards per second: 119ESC[0m
100 ESC[0;33mR [1667505947.620619] Reader Thread loop accessing_stats lock releasedESC[0m
101 ESC[0;33mR [1667505948.376976] Reader Thread loop endESC[0m
102 ESC[0;33mR [1667505948.376979] Reader Thread loop startESC[0m
103 ESC[0;33mR [1667505948.376980] Reader Thread loop accessing_stats lock acquiredESC[0m
104 ESC[0;33mR [1667505948.376981] Total procs: 38, Load Factor: 3.700001, Packets per second: 263, Discards per second: 119ESC[0m
105 ESC[0;33mR [1667505948.376984] Reader Thread loop accessing_stats lock releasedESC[0m
106 ESC[0;33mR [1667505949.144366] Reader Thread loop endESC[0m
107 ESC[0;33mR [1667505949.144370] Reader Thread loop startESC[0m
108 ESC[0;33mR [1667505949.144371] Reader Thread loop accessing_stats lock acquiredESC[0m
109 ESC[0;33mR [1667505949.144371] Total procs: 38, Load Factor: 3.700001, Packets per second: 263, Discards per second: 119ESC[0m
110 ESC[0;33mR [1667505949.144375] Reader Thread loop accessing_stats lock releasedESC[0m
111 ESC[0;33mR [1667505949.911562] Reader Thread loop endESC[0m
112 ESC[0;33mR [1667505949.911564] Reader Thread loop startESC[0m
113 ESC[0;33mR [1667505949.911565] Reader Thread loop accessing_stats lock acquiredESC[0m
114 ESC[0;33mR [1667505949.911565] Total procs: 43, Load Factor: 4.100000, Packets per second: 269, Discards per second: 128ESC[0m
115 ESC[0;33mR [1667505949.911567] Reader Thread loop accessing_stats lock releasedESC[0m
116 ESC[0;33mR [1667505950.693354] Reader Thread loop endESC[0m
117 ESC[0;33mR [1667505950.693357] Reader Thread loop startESC[0m
118 ESC[0;33mR [1667505950.693358] Reader Thread loop accessing_stats lock acquiredESC[0m
119 ESC[0;33mR [1667505950.693359] Total procs: 43, Load Factor: 4.100000, Packets per second: 269, Discards per second: 128ESC[0m
120 ESC[0;33mR [1667505950.693362] Reader Thread loop accessing_stats lock releasedESC[0m
121 ESC[0;33mR [1667505951.471626] Reader Thread loop endESC[0m
122 ESC[0;33mR [1667505951.471628] Reader Thread loop startESC[0m
123 ESC[0;33mR [1667505951.471629] Reader Thread loop accessing_stats lock acquiredESC[0m
124 ESC[0;33mR [1667505951.471629] Total procs: 44, Load Factor: 4.800000, Packets per second: 271, Discards per second: 147ESC[0m
125 ESC[0;33mR [1667505951.471632] Reader Thread loop accessing_stats lock releasedESC[0m
126 ESC[0;33mR [1667505952.276195] Reader Thread loop endESC[0m
127 ESC[0;33mR [1667505952.276198] Reader Thread loop startESC[0m
128 ESC[0;33mR [1667505952.276199] Reader Thread loop accessing_stats lock acquiredESC[0m
129 ESC[0;33mR [1667505952.276200] Total procs: 44, Load Factor: 4.800000, Packets per second: 271, Discards per second: 147ESC[0m
130 ESC[0;33mR [1667505952.276202] Reader Thread loop accessing_stats lock releasedESC[0m
131 ESC[0;33mR [1667505953.046113] Reader Thread loop endESC[0m
132 Time Span: 22.30
133

```

## Test3.txt.Printer

```

Test3.txt.Printer X
Test3.txt.Printer
1 ESC[0;33mP [1667505958.738666] Printer Thread: delay 1500ESC[0m
2 ESC[0;33mP [1667505960.238736] Printer StepESC[0m
3 ESC[0;33mP [1667505961.738821] Printer StepESC[0m
4 ESC[0;33mP [1667505963.238890] Printer StepESC[0m
5 ESC[0;33mP [1667505964.738956] Printer StepESC[0m
6 ESC[0;33mP [1667505966.239019] Printer StepESC[0m
7 ESC[0;33mP [1667505967.739082] Printer StepESC[0m
8 ESC[0;33mP [1667505969.239146] Printer StepESC[0m
9 ESC[0;33mP [1667505970.739211] Printer StepESC[0m
10 ESC[0;33mP [1667505972.239277] Printer StepESC[0m
11 ESC[0;33mP [1667505973.739344] Printer StepESC[0m
12 ESC[0;33mP [1667505975.239413] Printer StepESC[0m
13 ESC[0;33mP [1667505976.739488] Printer StepESC[0m
14 ESC[0;33mP [1667505978.239555] Printer StepESC[0m
15 ESC[0;33mP [1667505979.739654] Printer StepESC[0m
16 ESC[0;33mP [1667505981.239941] Printer StepESC[0m
17 Time Span: 22.50
18

```

## Test3.txt.Reader

```
Test3.txt.Reader X
Test3.txt.Reader
1  esc[0;33mR [1667505958.738675] Reader Thread: 3 machinesesc[0m
2  esc[0;33mR [1667505959.738745] Reader Thread loop startesc[0m
3  esc[0;33mR [1667505959.738749] Reader Thread loop accessing_stats lock acquiredesc[0m
4  esc[0;35mR [1667505959.738751] Total procs: 12, Load Factor: 1.100000, Packets per second: 16, Discards per second: 38esc[0m
5  esc[0;33mR [1667505959.738754] Reader Thread loop accessing_stats lock releasedesc[0m
6  esc[0;33mR [1667505960.889054] Reader Thread loop endesc[0m
7  esc[0;33mR [1667505960.889066] Reader Thread loop startesc[0m
8  esc[0;33mR [1667505960.889067] Reader Thread loop accessing_stats lock acquiredesc[0m
9  esc[0;35mR [1667505960.889068] Total procs: 23, Load Factor: 1.400000, Packets per second: 97, Discards per second: 69esc[0m
10 esc[0;33mR [1667505960.889071] Reader Thread loop accessing_stats lock releasedesc[0m
11 esc[0;33mR [1667505962.000250] Reader Thread loop endesc[0m
12 esc[0;33mR [1667505962.000253] Reader Thread loop startesc[0m
13 esc[0;33mR [1667505962.000254] Reader Thread loop accessing_stats lock acquiredesc[0m
14 esc[0;35mR [1667505962.000255] Total procs: 23, Load Factor: 1.400000, Packets per second: 97, Discards per second: 69esc[0m
15 esc[0;33mR [1667505962.000259] Reader Thread loop accessing_stats lock releasedesc[0m
16 esc[0;33mR [1667505963.101782] Reader Thread loop endesc[0m
```

```
Test3.txt.Reader X
Test3.txt.Reader
90 esc[0;33mR [1667505973.885625] Reader Thread loop accessing_stats lock releasedesc[0m
91 esc[0;33mR [1667505974.677557] Reader Thread loop endesc[0m
92 esc[0;33mR [1667505974.677560] Reader Thread loop startesc[0m
93 esc[0;33mR [1667505974.677561] Reader Thread loop accessing_stats lock acquiredesc[0m
94 esc[0;35mR [1667505974.677562] Total procs: 38, Load Factor: 3.700001, Packets per second: 263, Discards per second: 119esc[0m
95 esc[0;33mR [1667505974.677566] Reader Thread loop accessing_stats lock releasedesc[0m
96 esc[0;33mR [1667505975.440834] Reader Thread loop endesc[0m
97 esc[0;33mR [1667505975.440836] Reader Thread loop startesc[0m
98 esc[0;33mR [1667505975.440837] Reader Thread loop accessing_stats lock acquiredesc[0m
99 esc[0;35mR [1667505975.440837] Total procs: 38, Load Factor: 3.700001, Packets per second: 263, Discards per second: 119esc[0m
100 esc[0;33mR [1667505975.440840] Reader Thread loop accessing_stats lock releasedesc[0m
101 esc[0;33mR [1667505976.215548] Reader Thread loop endesc[0m
102 esc[0;33mR [1667505976.215551] Reader Thread loop startesc[0m
103 esc[0;33mR [1667505976.215552] Reader Thread loop accessing_stats lock acquiredesc[0m
104 esc[0;35mR [1667505976.215552] Total procs: 38, Load Factor: 3.700001, Packets per second: 263, Discards per second: 119esc[0m
105 esc[0;33mR [1667505976.215555] Reader Thread loop accessing_stats lock releasedesc[0m
106 esc[0;33mR [1667505977.022589] Reader Thread loop endesc[0m
107 esc[0;33mR [1667505977.022592] Reader Thread loop startesc[0m
108 esc[0;33mR [1667505977.022593] Reader Thread loop accessing_stats lock acquiredesc[0m
109 esc[0;35mR [1667505977.022593] Total procs: 38, Load Factor: 3.700001, Packets per second: 263, Discards per second: 119esc[0m
110 esc[0;33mR [1667505977.022596] Reader Thread loop accessing_stats lock releasedesc[0m
111 esc[0;33mR [1667505977.863229] Reader Thread loop endesc[0m
112 esc[0;33mR [1667505977.863231] Reader Thread loop startesc[0m
113 esc[0;33mR [1667505977.863232] Reader Thread loop accessing_stats lock acquiredesc[0m
114 esc[0;35mR [1667505977.863232] Total procs: 43, Load Factor: 4.100000, Packets per second: 269, Discards per second: 128esc[0m
115 esc[0;33mR [1667505977.863234] Reader Thread loop accessing_stats lock releasedesc[0m
116 esc[0;33mR [1667505978.670854] Reader Thread loop endesc[0m
117 esc[0;33mR [1667505978.670858] Reader Thread loop startesc[0m
118 esc[0;33mR [1667505978.670859] Reader Thread loop accessing_stats lock acquiredesc[0m
119 esc[0;35mR [1667505978.670860] Total procs: 43, Load Factor: 4.100000, Packets per second: 269, Discards per second: 128esc[0m
120 esc[0;33mR [1667505978.670862] Reader Thread loop accessing_stats lock releasedesc[0m
121 esc[0;33mR [1667505979.449040] Reader Thread loop endesc[0m
122 esc[0;33mR [1667505979.449043] Reader Thread loop startesc[0m
123 esc[0;33mR [1667505979.449044] Reader Thread loop accessing_stats lock acquiredesc[0m
124 esc[0;35mR [1667505979.449044] Total procs: 44, Load Factor: 4.800000, Packets per second: 271, Discards per second: 147esc[0m
125 esc[0;33mR [1667505979.449047] Reader Thread loop accessing_stats lock releasedesc[0m
126 esc[0;33mR [1667505980.208007] Reader Thread loop endesc[0m
127 esc[0;33mR [1667505980.208009] Reader Thread loop startesc[0m
128 esc[0;33mR [1667505980.208010] Reader Thread loop accessing_stats lock acquiredesc[0m
129 esc[0;35mR [1667505980.208010] Total procs: 44, Load Factor: 4.800000, Packets per second: 271, Discards per second: 147esc[0m
130 esc[0;33mR [1667505980.208012] Reader Thread loop accessing_stats lock releasedesc[0m
131 esc[0;33mR [1667505980.966353] Reader Thread loop endesc[0m
132 Time Span: 22.23
133
```