

```
1 /Library/Java/JavaVirtualMachines/jdk1.8.0_231.jdk/Contents/  
Home/bin/java "-javaagent:/Applications/IntelliJ IDEA CE.app/  
Contents/lib/idea_rt.jar=54754:/Applications/IntelliJ IDEA CE.  
app/Contents/bin" -Dfile.encoding=UTF-8 -classpath /Library/  
Java/JavaVirtualMachines/jdk1.8.0_231.jdk/Contents/Home/jre/  
lib/charsets.jar:/Library/Java/JavaVirtualMachines/jdk1.8.  
0_231.jdk/Contents/Home/jre/lib/deploy.jar:/Library/Java/  
JavaVirtualMachines/jdk1.8.0_231.jdk/Contents/Home/jre/lib/ext  
/cldrdata.jar:/Library/Java/JavaVirtualMachines/jdk1.8.0_231.  
jdk/Contents/Home/jre/lib/ext/dnsns.jar:/Library/Java/  
JavaVirtualMachines/jdk1.8.0_231.jdk/Contents/Home/jre/lib/ext  
/jaccess.jar:/Library/Java/JavaVirtualMachines/jdk1.8.0_231.  
jdk/Contents/Home/jre/lib/ext/jfxrt.jar:/Library/Java/  
JavaVirtualMachines/jdk1.8.0_231.jdk/Contents/Home/jre/lib/ext  
/localedata.jar:/Library/Java/JavaVirtualMachines/jdk1.8.0_231.  
.jdk/Contents/Home/jre/lib/ext/nashorn.jar:/Library/Java/  
JavaVirtualMachines/jdk1.8.0_231.jdk/Contents/Home/jre/lib/ext  
/sunec.jar:/Library/Java/JavaVirtualMachines/jdk1.8.0_231.jdk/  
Contents/Home/jre/lib/ext/sunjce_provider.jar:/Library/Java/  
JavaVirtualMachines/jdk1.8.0_231.jdk/Contents/Home/jre/lib/ext  
/sunpkcs11.jar:/Library/Java/JavaVirtualMachines/jdk1.8.0_231.  
jdk/Contents/Home/jre/lib/ext/zipfs.jar:/Library/Java/  
JavaVirtualMachines/jdk1.8.0_231.jdk/Contents/Home/jre/lib/  
javaws.jar:/Library/Java/JavaVirtualMachines/jdk1.8.0_231.jdk/  
Contents/Home/jre/lib/jce.jar:/Library/Java/  
JavaVirtualMachines/jdk1.8.0_231.jdk/Contents/Home/jre/lib/jfr  
.jar:/Library/Java/JavaVirtualMachines/jdk1.8.0_231.jdk/  
Contents/Home/jre/lib/jfxswt.jar:/Library/Java/  
JavaVirtualMachines/jdk1.8.0_231.jdk/Contents/Home/jre/lib/  
jsse.jar:/Library/Java/JavaVirtualMachines/jdk1.8.0_231.jdk/  
Contents/Home/jre/lib/management-agent.jar:/Library/Java/  
JavaVirtualMachines/jdk1.8.0_231.jdk/Contents/Home/jre/lib/  
plugin.jar:/Library/Java/JavaVirtualMachines/jdk1.8.0_231.jdk/  
Contents/Home/jre/lib/resources.jar:/Library/Java/  
JavaVirtualMachines/jdk1.8.0_231.jdk/Contents/Home/jre/lib/rt.  
jar:/Library/Java/JavaVirtualMachines/jdk1.8.0_231.jdk/  
Contents/Home/lib/ant-javafx.jar:/Library/Java/  
JavaVirtualMachines/jdk1.8.0_231.jdk/Contents/Home/lib/dt.jar  
:/Library/Java/JavaVirtualMachines/jdk1.8.0_231.jdk/Contents/  
Home/lib/javafx-mx.jar:/Library/Java/JavaVirtualMachines/jdk1.  
8.0_231.jdk/Contents/Home/lib/jconsole.jar:/Library/Java/  
JavaVirtualMachines/jdk1.8.0_231.jdk/Contents/Home/lib/  
packager.jar:/Library/Java/JavaVirtualMachines/jdk1.8.0_231.  
jdk/Contents/Home/lib/sa-jdi.jar:/Library/Java/  
JavaVirtualMachines/jdk1.8.0_231.jdk/Contents/Home/lib/tools.  
jar:/Users/abdeeaamir/IdeaProjects/OS_CS3502/out/production/  
OS_CS3502 OSDriver
```

```
2 Enter 1 for single processor,  
3 Enter 4 for quad processor,  
4 Enter -1 to exit  
5 4  
6 Job ID:4  
7 Job Length:19  
8 CPU ID:4  
9 IO Count:12  
10 Wait:7ms  
11 Complete:6ms  
12 Accumulator:89  
13 Cache % used: 100  
14  
15 Job ID:1  
16 Job Length:23  
17 CPU ID:1  
18 IO Count:12  
19 Wait:10ms  
20 Complete:9ms  
21 Accumulator:228  
22 Cache % used: 100  
23  
24 Job ID:3  
25 Job Length:24  
26 CPU ID:3  
27 IO Count:12  
28 Wait:8ms  
29 Complete:9ms  
30 Accumulator:56  
31 Cache % used: 100  
32  
33 Job ID:2  
34 Job Length:28  
35 CPU ID:2  
36 IO Count:12  
37 Wait:9ms  
38 Complete:10ms  
39 Accumulator:85  
40 Cache % used: 100  
41  
42 Job ID:7  
43 Job Length:19  
44 CPU ID:3  
45 IO Count:12  
46 Wait:14ms  
47 Complete:5ms  
48 Accumulator:0
```

```
49 Cache % used: 100
50
51 Job ID:8
52 Job Length:19
53 CPU ID:2
54 IO Count:12
55 Wait:14ms
56 Complete:5ms
57 Accumulator:89
58 Cache % used: 100
59
60 Job ID:5
61 Job Length:28
62 CPU ID:4
63 IO Count:12
64 Wait:13ms
65 Complete:9ms
66 Accumulator:170
67 Cache % used: 100
68
69 Job ID:6
70 Job Length:24
71 CPU ID:1
72 IO Count:12
73 Wait:15ms
74 Complete:9ms
75 Accumulator:79
76 Cache % used: 100
77
78 Job ID:9
79 Job Length:24
80 CPU ID:3
81 IO Count:12
82 Wait:18ms
83 Complete:8ms
84 Accumulator:56
85 Cache % used: 100
86
87 Job ID:10
88 Job Length:28
89 CPU ID:2
90 IO Count:12
91 Wait:18ms
92 Complete:8ms
93 Accumulator:85
94 Cache % used: 100
95
```

```
96 Job ID:11
97 Job Length:23
98 CPU ID:4
99 IO Count:12
100 Wait:18ms
101 Complete:8ms
102 Accumulator:868
103 Cache % used: 100
104
105 Job ID:14
106 Job Length:19
107 CPU ID:3
108 IO Count:10
109 Wait:27ms
110 Complete:1ms
111 Accumulator:34
112 Cache % used: 100
113
114 Job ID:16
115 Job Length:19
116 CPU ID:3
117 IO Count:5
118 Wait:10ms
119 Complete:1ms
120 Accumulator:3
121 Cache % used: 100
122
123 Job ID:15
124 Job Length:24
125 CPU ID:4
126 IO Count:11
127 Wait:26ms
128 Complete:2ms
129 Accumulator:53
130 Cache % used: 100
131
132 Job ID:13
133 Job Length:24
134 CPU ID:2
135 IO Count:12
136 Wait:27ms
137 Complete:2ms
138 Accumulator:56
139 Cache % used: 100
140
141 Job ID:12
142 Job Length:28
```

143 CPU ID:1
144 IO Count:12
145 Wait:28ms
146 Complete:2ms
147 Accumulator:225
148 Cache % used: 100
149
150 Job ID:17
151 Job Length:28
152 CPU ID:3
153 IO Count:12
154 Wait:9ms
155 Complete:2ms
156 Accumulator:177
157 Cache % used: 100
158
159 Job ID:19
160 Job Length:28
161 CPU ID:2
162 IO Count:10
163 Wait:6ms
164 Complete:3ms
165 Accumulator:69
166 Cache % used: 100
167
168 Job ID:18
169 Job Length:24
170 CPU ID:4
171 IO Count:12
172 Wait:7ms
173 Complete:3ms
174 Accumulator:56
175 Cache % used: 100
176
177 Job ID:20
178 Job Length:24
179 CPU ID:1
180 IO Count:12
181 Wait:6ms
182 Complete:2ms
183 Accumulator:56
184 Cache % used: 100
185
186 Job ID:21
187 Job Length:19
188 CPU ID:3
189 IO Count:13

```
190 Wait:8ms
191 Complete:1ms
192 Accumulator:144
193 Cache % used: 100
194
195 Job ID:22
196 Job Length:28
197 CPU ID:2
198 IO Count:12
199 Wait:7ms
200 Complete:2ms
201 Accumulator:85
202 Cache % used: 100
203
204 Job ID:26
205 Job Length:19
206 CPU ID:4
207 IO Count:8
208 Wait:9ms
209 Complete:1ms
210 Accumulator:13
211 Cache % used: 100
212
213 Job ID:25
214 Job Length:23
215 CPU ID:3
216 IO Count:7
217 Wait:9ms
218 Complete:2ms
219 Accumulator:127
220 Cache % used: 100
221
222 Job ID:24
223 Job Length:24
224 CPU ID:2
225 IO Count:12
226 Wait:9ms
227 Complete:3ms
228 Accumulator:56
229 Cache % used: 100
230
231 Job ID:23
232 Job Length:23
233 CPU ID:1
234 IO Count:11
235 Wait:9ms
236 Complete:4ms
```

```
237 Accumulator:143
238 Cache % used: 100
239
240 Job ID:30
241 Job Length:19
242 CPU ID:1
243 IO Count:11
244 Wait:4ms
245 Complete:1ms
246 Accumulator:55
247 Cache % used: 100
248
249 Job ID:27
250 Job Length:23
251 CPU ID:4
252 IO Count:12
253 Wait:4ms
254 Complete:2ms
255 Accumulator:228
256 Cache % used: 100
257
258 Job ID:28
259 Job Length:28
260 CPU ID:3
261 IO Count:12
262 Wait:4ms
263 Complete:3ms
264 Accumulator:225
265 Cache % used: 100
266
267 Job ID:29
268 Job Length:24
269 CPU ID:2
270 IO Count:12
271 Wait:4ms
272 Complete:2ms
273 Accumulator:80
274 Cache % used: 100
275
276 Averages for CPU 1:
277 IO Count:11.8
278 Wait:13.6ms
279 Complete:5.2ms
280 Cache % used: 100
281
282 Averages for CPU 2:
283 IO Count:11.75
```

```
284 Wait:11.75ms
285 Complete:4.375ms
286 Cache % used: 100
287
288 Averages for CPU 3:
289 IO Count:10.555555555555555
290 Wait:11.888888888888889ms
291 Complete:3.5555555555555554ms
292 Cache % used: 100
293
294 Averages for CPU 4:
295 IO Count:11.285714285714286
296 Wait:12.0ms
297 Complete:4.428571428571429ms
298 Cache % used: 100
299
300 Overall CPU Averages:
301 IO Count:11.34781746031746
302 Wait:12.309722222222224ms
303 Complete:4.389781746031746ms
304 Cache % used: 100
305 RAM % used: 0.0
306
307
308 Enter 1 for single processor,
309 Enter 4 for quad processor,
310 Enter -1 to exit
311 1
312 Job ID:1
313 Job Length:23
314 CPU ID:0
315 IO Count:12
316 Wait:2ms
317 Complete:1ms
318 Accumulator:228
319 Cache % used: 100
320
321 Job ID:2
322 Job Length:28
323 CPU ID:0
324 IO Count:12
325 Wait:2ms
326 Complete:0ms
327 Accumulator:85
328 Cache % used: 100
329
330 Job ID:3
```



```
331 Job Length:24
332 CPU ID:0
333 IO Count:12
334 Wait:2ms
335 Complete:1ms
336 Accumulator:56
337 Cache % used: 100
338
339 Job ID:4
340 Job Length:19
341 CPU ID:0
342 IO Count:12
343 Wait:3ms
344 Complete:0ms
345 Accumulator:89
346 Cache % used: 100
347
348 Job ID:5
349 Job Length:28
350 CPU ID:0
351 IO Count:12
352 Wait:3ms
353 Complete:0ms
354 Accumulator:170
355 Cache % used: 100
356
357 Job ID:6
358 Job Length:24
359 CPU ID:0
360 IO Count:12
361 Wait:3ms
362 Complete:1ms
363 Accumulator:79
364 Cache % used: 100
365
366 Job ID:7
367 Job Length:19
368 CPU ID:0
369 IO Count:12
370 Wait:4ms
371 Complete:0ms
372 Accumulator:0
373 Cache % used: 100
374
375 Job ID:8
376 Job Length:19
377 CPU ID:0
```

```
378 IO Count:12
379 Wait:4ms
380 Complete:0ms
381 Accumulator:89
382 Cache % used: 100
383
384 Job ID:9
385 Job Length:24
386 CPU ID:0
387 IO Count:12
388 Wait:4ms
389 Complete:0ms
390 Accumulator:56
391 Cache % used: 100
392
393 Job ID:10
394 Job Length:28
395 CPU ID:0
396 IO Count:12
397 Wait:3ms
398 Complete:1ms
399 Accumulator:85
400 Cache % used: 100
401
402 Job ID:11
403 Job Length:23
404 CPU ID:0
405 IO Count:12
406 Wait:4ms
407 Complete:0ms
408 Accumulator:868
409 Cache % used: 100
410
411 Job ID:12
412 Job Length:28
413 CPU ID:0
414 IO Count:12
415 Wait:5ms
416 Complete:1ms
417 Accumulator:225
418 Cache % used: 100
419
420 Job ID:13
421 Job Length:24
422 CPU ID:0
423 IO Count:12
424 Wait:6ms
```

```
425 Complete:0ms
426 Accumulator:56
427 Cache % used: 100
428
429 Job ID:14
430 Job Length:19
431 CPU ID:0
432 IO Count:10
433 Wait:6ms
434 Complete:0ms
435 Accumulator:34
436 Cache % used: 100
437
438 Job ID:15
439 Job Length:24
440 CPU ID:0
441 IO Count:11
442 Wait:6ms
443 Complete:1ms
444 Accumulator:53
445 Cache % used: 100
446
447 Job ID:16
448 Job Length:19
449 CPU ID:0
450 IO Count:5
451 Wait:3ms
452 Complete:0ms
453 Accumulator:3
454 Cache % used: 100
455
456 Job ID:17
457 Job Length:28
458 CPU ID:0
459 IO Count:12
460 Wait:3ms
461 Complete:1ms
462 Accumulator:177
463 Cache % used: 100
464
465 Job ID:18
466 Job Length:24
467 CPU ID:0
468 IO Count:12
469 Wait:3ms
470 Complete:0ms
471 Accumulator:56
```

```
472 Cache % used: 100
473
474 Job ID:19
475 Job Length:28
476 CPU ID:0
477 IO Count:10
478 Wait:3ms
479 Complete:1ms
480 Accumulator:69
481 Cache % used: 100
482
483 Job ID:20
484 Job Length:24
485 CPU ID:0
486 IO Count:12
487 Wait:4ms
488 Complete:0ms
489 Accumulator:56
490 Cache % used: 100
491
492 Job ID:21
493 Job Length:19
494 CPU ID:0
495 IO Count:13
496 Wait:4ms
497 Complete:1ms
498 Accumulator:144
499 Cache % used: 100
500
501 Job ID:22
502 Job Length:28
503 CPU ID:0
504 IO Count:12
505 Wait:5ms
506 Complete:0ms
507 Accumulator:85
508 Cache % used: 100
509
510 Job ID:23
511 Job Length:23
512 CPU ID:0
513 IO Count:11
514 Wait:5ms
515 Complete:1ms
516 Accumulator:143
517 Cache % used: 100
518
```

```
519 Job ID:24
520 Job Length:24
521 CPU ID:0
522 IO Count:12
523 Wait:6ms
524 Complete:0ms
525 Accumulator:56
526 Cache % used: 100
527
528 Job ID:25
529 Job Length:23
530 CPU ID:0
531 IO Count:7
532 Wait:6ms
533 Complete:1ms
534 Accumulator:127
535 Cache % used: 100
536
537 Job ID:26
538 Job Length:19
539 CPU ID:0
540 IO Count:8
541 Wait:7ms
542 Complete:0ms
543 Accumulator:13
544 Cache % used: 100
545
546 Job ID:27
547 Job Length:23
548 CPU ID:0
549 IO Count:12
550 Wait:2ms
551 Complete:0ms
552 Accumulator:228
553 Cache % used: 100
554
555 Job ID:28
556 Job Length:28
557 CPU ID:0
558 IO Count:12
559 Wait:2ms
560 Complete:1ms
561 Accumulator:225
562 Cache % used: 100
563
564 Job ID:29
565 Job Length:24
```

```
566 CPU ID:0
567 IO Count:12
568 Wait:3ms
569 Complete:0ms
570 Accumulator:80
571 Cache % used: 100
572
573 Job ID:30
574 Job Length:19
575 CPU ID:0
576 IO Count:11
577 Wait:3ms
578 Complete:0ms
579 Accumulator:55
580 Cache % used: 100
581
582 Averages for CPU 0:
583 IO Count:11.266666666666667
584 Wait:3.8666666666666667ms
585 Complete:0.4ms
586 Cache % used: 100
587
588 RAM % used: 0.0
589
590 Enter 1 for single processor,
591 Enter 4 for quad processor,
592 Enter -1 to exit
593 -1
594 Goodbye!
595
596 Process finished with exit code 0
597
```