

```

1 "C:\Program Files\Java\jdk1.8.0_201\bin\java.exe" "-
  javaagent:C:\Program Files\JetBrains\IntelliJ IDEA 2018.3.
  1\lib\idea_rt.jar=52477:C:\Program Files\JetBrains\
  IntelliJ IDEA 2018.3.1\bin" -Dfile.encoding=UTF-8 -
  classpath "C:\Program Files\Java\jdk1.8.0_201\jre\lib\
  charsets.jar;C:\Program Files\Java\jdk1.8.0_201\jre\lib\
  deploy.jar;C:\Program Files\Java\jdk1.8.0_201\jre\lib\ext\
  access-bridge-64.jar;C:\Program Files\Java\jdk1.8.0_201\
  jre\lib\ext\cldrdata.jar;C:\Program Files\Java\jdk1.8.
  0_201\jre\lib\ext\dnsns.jar;C:\Program Files\Java\jdk1.8.
  0_201\jre\lib\ext\jaccess.jar;C:\Program Files\Java\jdk1.8
  .0_201\jre\lib\ext\jfxrt.jar;C:\Program Files\Java\jdk1.8.
  0_201\jre\lib\ext\localedata.jar;C:\Program Files\Java\
  jdk1.8.0_201\jre\lib\ext\nashorn.jar;C:\Program Files\Java
  \jdk1.8.0_201\jre\lib\ext\sunec.jar;C:\Program Files\Java\
  jdk1.8.0_201\jre\lib\ext\sunjce_provider.jar;C:\Program
  Files\Java\jdk1.8.0_201\jre\lib\ext\sunmscapi.jar;C:\
  Program Files\Java\jdk1.8.0_201\jre\lib\ext\sunpkcs11.jar;
  C:\Program Files\Java\jdk1.8.0_201\jre\lib\ext\zipfs.jar;C
  : \Program Files\Java\jdk1.8.0_201\jre\lib\javaws.jar;C:\
  Program Files\Java\jdk1.8.0_201\jre\lib\jce.jar;C:\Program
  Files\Java\jdk1.8.0_201\jre\lib\jfr.jar;C:\Program Files\
  Java\jdk1.8.0_201\jre\lib\jfxswt.jar;C:\Program Files\Java
  \jdk1.8.0_201\jre\lib\jsse.jar;C:\Program Files\Java\jdk1.
  8.0_201\jre\lib\management-agent.jar;C:\Program Files\Java
  \jdk1.8.0_201\jre\lib\plugin.jar;C:\Program Files\Java\
  jdk1.8.0_201\jre\lib\resources.jar;C:\Program Files\Java\
  jdk1.8.0_201\jre\lib\rt.jar;C:\Users\osaht\workspace\
  School-Projects\Java Projects\Mutual Exclusion task 1\
  target\classes" threads.BlockManager
2 Main thread starts executing.
3 Initial value of top = 3.
4 Initial value of stack top = d.
5 Main thread will now fork several threads.
6 main(): Three AcquireBlock threads have been created.
7 main(): Three ReleaseBlock threads have been created.
8 main(): CharStackProber threads have been created: 4
9 main(): All the threads are ready.
10 AcquireBlock thread [TID=1] starts executing.
11 threads.BlockManager$AcquireBlock thread [TID=1] starts
   PHASE I.
12 Some stats info in the PHASE I:
13     iTID = 1, siNextTID = 11, siTurn = 1.
14     Their "checksum": 1111
15 threads.BlockManager$AcquireBlock thread [TID=1] finishes
   PHASE I.
16 AcquireBlock thread [TID=1] requests Ms block.
17 AcquireBlock thread [TID=1] has obtained Ms block d from
   position 3.

```

```

18 Acq[TID=1]: Current value of top = 2.
19 Acq[TID=1]: Current value of stack top = c.
20 threads.BlockManager$AcquireBlock thread [TID=1] starts
  PHASE II.
21 Some stats info in the PHASE II:
22     iTID = 1, siNextTID = 11, siTurn = 1.
23     Their "checksum": 1111
24 threads.BlockManager$AcquireBlock thread [TID=1] finishes
  PHASE II.
25 threads.BlockManager$CharStackProber thread [TID=7] starts
  PHASE I.
26 Some stats info in the PHASE I:
27     iTID = 7, siNextTID = 11, siTurn = 1.
28     Their "checksum": 1171
29 AcquireBlock thread [TID=1] terminates.
30 threads.BlockManager$CharStackProber thread [TID=7]
  finishes PHASE I.
31 ReleaseBlock thread [TID=4] starts executing.
32 Stack Prober [TID=7]: Stack state: threads.
  BlockManager$ReleaseBlock thread [TID=4] starts PHASE I.
33 [a][b](c)[*][*][*].
34 Stack Prober [TID=7]: Stack state: [a][b](c)[*][*][*].
35 Stack Prober [TID=7]: Stack state: [a][b](c)Some stats
  info in the PHASE I:
36     iTID = 4, siNextTID = 11, siTurn = 1.
37     Their "checksum": 1141
38 [*]threads.BlockManager$ReleaseBlock thread [TID=4]
  finishes PHASE I.
39 [*][*].
40 Stack Prober [TID=7]: Stack state: [a][b](c)threads.
  BlockManager$CharStackProber thread [TID=8] starts PHASE I
  .
41 Some stats info in the PHASE I:
42     iTID = 8, siNextTID = 11, siTurn = 1.
43     Their "checksum": 1181
44 threads.BlockManager$CharStackProber thread [TID=8]
  finishes PHASE I.
45 Stack Prober [TID=8]: Stack state: [a][b](c)[*][*][*].
46 Stack Prober [TID=8]: Stack state: [a][b](c)[*][*][*].
47 Stack Prober [TID=8]: Stack state: [a][b](c)[*][*][*].
48 Stack Prober [TID=8]: Stack state: [a][b](c)[*][*][*].
49 Stack Prober [TID=8]: Stack state: [a][b](c)[*][*][*].
50 threads.BlockManager$CharStackProber thread [TID=8] starts
  PHASE II.
51 Some stats info in the PHASE II:
52     iTID = 8, siNextTID = 11, siTurn = 1.
53     Their "checksum": 1181
54 threads.BlockManager$CharStackProber thread [TID=8]
  finishes PHASE II.

```

```

55 ReleaseBlock thread [TID=4] returns Ms block d to
    position 3.
56 Rel[TID=4]: Current value of top = 3.
57 Rel[TID=4]: Current value of stack top = d.
58 threads.BlockManager$ReleaseBlock thread [TID=4] starts
    PHASE II.
59 Some stats info in the PHASE II:
60     iTID = 4, siNextTID = 11, siTurn = 1.
61     Their "checksum": 1141
62 threads.BlockManager$ReleaseBlock thread [TID=4] finishes
    PHASE II.
63 ReleaseBlock thread [TID=4] terminates.
64 AcquireBlock thread [TID=2] starts executing.
65 threads.BlockManager$AcquireBlock thread [TID=2] starts
    PHASE I.
66 Some stats info in the PHASE I:
67     iTID = 2, siNextTID = 11, siTurn = 1.
68     Their "checksum": 1121
69 threads.BlockManager$AcquireBlock thread [TID=2] finishes
    PHASE I.
70 AcquireBlock thread [TID=2] requests Ms block.
71 AcquireBlock thread [TID=2] has obtained Ms block d from
    position 3.
72 Acq[TID=2]: Current value of top = 2.
73 Acq[TID=2]: Current value of stack top = c.
74 threads.BlockManager$AcquireBlock thread [TID=2] starts
    PHASE II.
75 Some stats info in the PHASE II:
76     iTID = 2, siNextTID = 11, siTurn = 1.
77     Their "checksum": 1121
78 threads.BlockManager$AcquireBlock thread [TID=2] finishes
    PHASE II.
79 AcquireBlock thread [TID=2] terminates.
80 [*][*][*].
81 Stack Prober [TID=7]: Stack state: [a][b](c)[*][*][*].
82 threads.BlockManager$CharStackProber thread [TID=7]
    starts PHASE II.
83 Some stats info in the PHASE II:
84     iTID = 7, siNextTID = 11, siTurn = 1.
85     Their "checksum": 1171
86 threads.BlockManager$CharStackProber thread [TID=7]
    finishes PHASE II.
87 ReleaseBlock thread [TID=5] starts executing.
88 threads.BlockManager$ReleaseBlock thread [TID=5] starts
    PHASE I.
89 Some stats info in the PHASE I:
90     iTID = 5, siNextTID = 11, siTurn = 1.
91     Their "checksum": 1151
92 threads.BlockManager$ReleaseBlock thread [TID=5] finishes

```

```

92  PHASE I.
93  ReleaseBlock thread [TID=5] returns Ms block d to
    position 3.
94  Rel[TID=5]: Current value of top = 3.
95  Rel[TID=5]: Current value of stack top = d.
96  threads.BlockManager$ReleaseBlock thread [TID=5] starts
    PHASE II.
97  Some stats info in the PHASE II:
98      iTID = 5, siNextTID = 11, siTurn = 1.
99      Their "checksum": 1151
100 threads.BlockManager$ReleaseBlock thread [TID=5] finishes
    PHASE II.
101 ReleaseBlock thread [TID=5] terminates.
102 threads.BlockManager$CharStackProber thread [TID=10]
    starts PHASE I.
103 Some stats info in the PHASE I:
104     iTID = 10, siNextTID = 11, siTurn = 1.
105     Their "checksum": 1201
106 threads.BlockManager$CharStackProber thread [TID=10]
    finishes PHASE I.
107 Stack Prober [TID=10]: Stack state: [a][b][c](d)[*][*].
108 Stack Prober [TID=10]: Stack state: [a][b][c](d)[*][*].
109 Stack Prober [TID=10]: Stack state: [a][b][c](d)[*][*].
110 Stack Prober [TID=10]: Stack state: [a][b][c](d)[*]
    ReleaseBlock thread [TID=6] starts executing.
111 threads.BlockManager$ReleaseBlock thread [TID=6] starts
    PHASE I.
112 Some stats info in the PHASE I:
113     iTID = 6, siNextTID = 11, siTurn = 1.
114     Their "checksum": 1161
115 threads.BlockManager$ReleaseBlock thread [TID=6] finishes
    PHASE I.
116 ReleaseBlock thread [TID=6] returns Ms block e to
    position 4.
117 Rel[TID=6]: Current value of top = 4.
118 Rel[TID=6]: Current value of stack top = e.
119 threads.BlockManager$ReleaseBlock thread [TID=6] starts
    PHASE II.
120 Some stats info in the PHASE II:
121     iTID = 6, siNextTID = 11, siTurn = 1.
122     Their "checksum": 1161
123 threads.BlockManager$ReleaseBlock thread [TID=6] finishes
    PHASE II.
124 ReleaseBlock thread [TID=6] terminates.
125 [*].
126 Stack Prober [TID=10]: Stack state: [a][b][c][d](e)[*].
127 threads.BlockManager$CharStackProber thread [TID=10]
    starts PHASE II.
128 Some stats info in the PHASE II:

```

```

129      iTID = 10, siNextTID = 11, siTurn = 1.
130      Their "checksum": 1201
131 threads.BlockManager$CharStackProber thread [TID=10]
    finishes PHASE II.
132 threads.BlockManager$CharStackProber thread [TID=9]
    starts PHASE I.
133 Some stats info in the PHASE I:
134      iTID = 9, siNextTID = 11, siTurn = 1.
135      Their "checksum": 1191
136 threads.BlockManager$CharStackProber thread [TID=9]
    finishes PHASE I.
137 Stack Prober [TID=9]: Stack state: [a][b][c][d](e)[*].
138 Stack Prober [TID=9]: Stack state: [a][b][c][d](e)[*].
139 Stack Prober [TID=9]: Stack state: [a][b][c][d](e)[*].
140 Stack Prober [TID=9]: Stack state: [a][b][c][d](e)[*].
141 Stack Prober [TID=9]: Stack state: [a][b][c][d](e)[*].
142 threads.BlockManager$CharStackProber thread [TID=9]
    starts PHASE II.
143 AcquireBlock thread [TID=3] starts executing.
144 Some stats info in the PHASE II:
145      iTID = 9, siNextTID = 11, siTurn = 1.
146      Their "checksum": 1191
147 threads.BlockManager$AcquireBlock thread [TID=3] starts
    PHASE I.
148 threads.BlockManager$CharStackProber thread [TID=9]
    finishes PHASE II.
149 Some stats info in the PHASE I:
150      iTID = 3, siNextTID = 11, siTurn = 1.
151      Their "checksum": 1131
152 threads.BlockManager$AcquireBlock thread [TID=3] finishes
    PHASE I.
153 AcquireBlock thread [TID=3] requests Ms block.
154 AcquireBlock thread [TID=3] has obtained Ms block e from
    position 4.
155 Acq[TID=3]: Current value of top = 3.
156 Acq[TID=3]: Current value of stack top = d.
157 threads.BlockManager$AcquireBlock thread [TID=3] starts
    PHASE II.
158 Some stats info in the PHASE II:
159      iTID = 3, siNextTID = 11, siTurn = 1.
160      Their "checksum": 1131
161 threads.BlockManager$AcquireBlock thread [TID=3] finishes
    PHASE II.
162 AcquireBlock thread [TID=3] terminates.
163 System terminates normally.
164 Final value of top = 3.
165 Final value of stack top = d.
166 Final value of stack top-1 = c.
167 Stack access count = 138

```

```
168  
169 Process finished with exit code 0  
170
```