```
1 "C:\Program Files\Java\jdk-19\bin\java.exe" "-
   javaagent:C:\Program Files\JetBrains\IntelliJ IDEA
   Community Edition 2024.1.2\lib\idea_rt.jar=44509:C:\
   Program Files\JetBrains\IntelliJ IDEA Community
   Edition 2024.1.2\bin" -Dfile.encoding=UTF-8 -Dsun.
   stdout.encoding=UTF-8 -Dsun.stderr.encoding=UTF-8 -
   classpath "F:\Masters in Computer and Information
   Science\CSMC\Projects\RicartAgarwalaUsingThread\out\
   production\RicartAgarwalaUsingThread" Main
2 Received Message [ None ] :: Name: C Received Message
   : No message to receive
 3 Received Message [ None ] :: Name: D Received Message
   : No message to receive
4 Received Message [ None ] :: Name: E Received Message
   : No message to receive
 5 Request Message :: Name: A id: 1 status: Requesting
   message sent: A:1:REQUEST:0 to: B at: 0
 6 Request Message :: Name: B id: 2 status: Requesting
   message sent: B:2:REQUEST:0 to: A at: 0
 7 Request Message :: Name: B id: 2 status: Requesting
   message sent: B:2:REQUEST:0 to: C at: 0
 8 Request Message :: Name: A id: 1 status: Requesting
   message sent: A:1:REQUEST:0 to: C at: 0
 9 Request Message :: Name: B id: 2 status: Requesting
   message sent: B:2:REQUEST:0 to: D at: 0
10 Request Message :: Name: A id: 1 status: Requesting
   message sent: A:1:REQUEST:0 to: D at: 0
11 Request Message :: Name: B id: 2 status: Requesting
   message sent: B:2:REQUEST:0 to: E at: 0
12 Request Message :: Name: A id: 1 status: Requesting
   message sent: A:1:REQUEST:0 to: E at: 0
13 Received Message[ Requesting ]:: Name: B Received
   Message: A:1:REQUEST:0 Received from : A
14
15 Received Message[ Requesting ]:: Name: A Received
   Message: B:2:REQUEST:0 Received from : B
16
17 Send Message :: Name: B id: 2 status: Requesting
   message sent: B:2:GO_AHEAD:1 to: A at: 1
18 Received Message[ None ]:: Name: D Received Message:
   B:2:REQUEST:0 Received from : B
```

```
19
20 Received Message[ None ]:: Name: C Received Message:
   A:1:REQUEST:0 Received from : A
21
22 Send Message :: Name: C id: 3 status: None message
   sent: C:3:GO_AHEAD:1 to: A at: 1
23 Received Message[ None ]:: Name: E Received Message:
   B:2:REQUEST:0 Received from : B
24
25 Send Message :: Name: D id: 4 status: None message
   sent: D:4:GO_AHEAD:1 to: B at: 1
26 Send Message :: Name: E id: 5 status: None message
   sent: E:5:GO_AHEAD:1 to: B at: 1
27 Received Message[ Requesting ]:: Name: B Received
   Message: D:4:GO_AHEAD:1 Received from : D
28
29 Received Message[ Requesting ]:: Name: A Received
   Message: B:2:GO_AHEAD:1 Received from : B
30
31 Received Message[ None ]:: Name: C Received Message:
   B:2:REQUEST:0 Received from : B
32
33 Request Message :: Name: E id: 5 status: Requesting
   message sent: E:5:REQUEST:2 to: A at: 2
34 Request Message :: Name: E id: 5 status: Requesting
   message sent: E:5:REQUEST:2 to: B at: 2
35 Received Message[ None ]:: Name: D Received Message:
   A:1:REQUEST:0 Received from : A
36
37 Send Message :: Name: C id: 3 status: None message
   sent: C:3:GO_AHEAD:3 to: B at: 3
38 Request Message :: Name: E id: 5 status: Requesting
   message sent: E:5:REQUEST:2 to: C at: 2
39 Request Message :: Name: E id: 5 status: Requesting
   message sent: E:5:REQUEST:2 to: D at: 2
40 Send Message :: Name: D id: 4 status: None message
   sent: D:4:GO_AHEAD:3 to: A at: 3
41 Received Message[ Requesting ]:: Name: E Received
   Message: A:1:REQUEST:0 Received from : A
42
43 Send Message :: Name: E id: 5 status: Requesting
```

```
43 message sent: E:5:GO_AHEAD:3 to: A at: 3
44 Received Message[ Requesting ]:: Name: B Received
   Message: E:5:GO_AHEAD:1 Received from : E
45
46 Received Message[ Requesting ]:: Name: A Received
   Message: C:3:GO_AHEAD:1 Received from : C
47
48 Received Message [ Requesting ] :: Name: E Received
   Message: No message to receive
49 Request Message :: Name: C id: 3 status: Requesting
   message sent: C:3:REQUEST:4 to: A at: 4
50 Request Message :: Name: C id: 3 status: Requesting
   message sent: C:3:REQUEST:4 to: B at: 4
51 Request Message :: Name: C id: 3 status: Requesting
   message sent: C:3:REQUEST:4 to: D at: 4
52 Request Message :: Name: C id: 3 status: Requesting
   message sent: C:3:REQUEST:4 to: E at: 4
53 Request Message :: Name: D id: 4 status: Requesting
   message sent: D:4:REQUEST:4 to: A at: 4
54 Request Message :: Name: D id: 4 status: Requesting
   message sent: D:4:REQUEST:4 to: B at: 4
55 Request Message :: Name: D id: 4 status: Requesting
   message sent: D:4:REQUEST:4 to: C at: 4
56 Request Message :: Name: D id: 4 status: Requesting
   message sent: D:4:REQUEST:4 to: E at: 4
57 Received Message[ Requesting ]:: Name: D Received
   Message: E:5:REQUEST:2 Received from : E
58
59 Received Message[ Requesting ]:: Name: C Received
   Message: E:5:REQUEST:2 Received from : E
60
61 Send Message :: Name: C id: 3 status: Requesting
   message sent: C:3:GO_AHEAD:5 to: E at: 5
62 Send Message :: Name: D id: 4 status: Requesting
   message sent: D:4:GO_AHEAD:5 to: E at: 5
63 Received Message[ Requesting ]:: Name: A Received
   Message: E:5:REQUEST:2 Received from : E
64
65 Received Message[ Requesting ]:: Name: B Received
   Message: C:3:GO_AHEAD:3 Received from : C
66
```

```
67 Received Message[ Requesting ]:: Name: E Received
   Message: C:3:REQUEST:4 Received from : C
68
69 Received Message[ Requesting ]:: Name: D Received
   Message: C:3:REQUEST:4 Received from : C
70
71 Received Message[ Requesting ]:: Name: C Received
   Message: D:4:REQUEST:4 Received from : D
72
73 Send Message :: Name: D id: 4 status: Requesting
   message sent: D:4:GO_AHEAD:7 to: C at: 7
74 Received Message[ Requesting ]:: Name: A Received
   Message: D:4:GO_AHEAD:3 Received from : D
75
76 Received Message[ Requesting ]:: Name: B Received
   Message: E:5:REQUEST:2 Received from : E
77
78 Received Message [ Requesting ] :: Name: D Received
   Message: No message to receive
79 Received Message[ Requesting ]:: Name: E Received
   Message: D:4:REQUEST:4 Received from : D
80
81 Received Message[ Requesting ]:: Name: C Received
   Message: D:4:GO_AHEAD:7 Received from : D
82
83 Received Message[ Requesting ]:: Name: B Received
   Message: C:3:REQUEST:4 Received from : C
84
85 Received Message[ Requesting ]:: Name: A Received
   Message: E:5:GO_AHEAD:3 Received from : E
86
87 A is in Critical State
88 Received Message [ Requesting ] :: Name: C Received
   Message: No message to receive
89 Received Message [ Requesting ] :: Name: D Received
   Message: No message to receive
90 Received Message[ Requesting ]:: Name: E Received
   Message: D:4:GO_AHEAD:5 Received from : D
91
92 Received Message[ Requesting ]:: Name: B Received
   Message: D:4:REQUEST:4 Received from : D
```

```
93
 94 Received Message[ InCriticalState ]:: Name: A
   Received Message: C:3:REQUEST:4 Received from : C
 95
96 Received Message [ Requesting ] :: Name: D Received
    Message: No message to receive
97 Received Message [ Requesting ] :: Name: C Received
    Message: No message to receive
98 Received Message[ Requesting ]:: Name: E Received
    Message: C:3:GO_AHEAD:5 Received from : C
 99
100 Received Message [ Requesting ] :: Name: B Received
    Message: No message to receive
101 Received Message[ InCriticalState ]:: Name: A
   Received Message: D:4:REQUEST:4 Received from : D
102
103 Received Message [ Requesting ] :: Name: C Received
    Message: No message to receive
104 Received Message [ Requesting ] :: Name: D Received
    Message: No message to receive
105 Received Message [ Requesting ] :: Name: E Received
   Message: No message to receive
106 Received Message [ InCriticalState ] :: Name: A
   Received Message: No message to receive
107 Received Message [ Requesting ] :: Name: B Received
   Message: No message to receive
108 Received Message [ Requesting ] :: Name: C Received
    Message: No message to receive
109 Received Message [ Requesting ] :: Name: D Received
   Message: No message to receive
110 Received Message [ Requesting ] :: Name: E Received
    Message: No message to receive
111 Received Message [ InCriticalState ] :: Name: A
   Received Message: No message to receive
112 Received Message [ Requesting ] :: Name: B Received
    Message: No message to receive
113 Received Message [ Requesting ] :: Name: C Received
    Message: No message to receive
114 Received Message [ Requesting ] :: Name: E Received
    Message: No message to receive
115 Received Message [ Requesting ] :: Name: D Received
```

```
115 Message: No message to receive
116 Received Message [ Requesting ] :: Name: B Received
    Message: No message to receive
117 Received Message [ AfterCriticalState ] :: Name: A
    Received Message: No message to receive
118 A exiting critical state.
119 Send Message :: Name: A id: 1 status:
    AfterCriticalState message sent: A:1:GO_AHEAD:12 to
    : B at: 12
120 Send Message :: Name: A id: 1 status:
    AfterCriticalState message sent: A:1:GO_AHEAD:13 to
    : C at: 13
121 Send Message :: Name: A id: 1 status:
    AfterCriticalState message sent: A:1:GO_AHEAD:14 to
    : E at: 14
122 Send Message :: Name: A id: 1 status:
    AfterCriticalState message sent: A:1:GO_AHEAD:15 to
    : D at: 15
123 Received Message[ Requesting ]:: Name: C Received
    Message: A:1:GO_AHEAD:13 Received from : A
124
125 Received Message[ Requesting ]:: Name: E Received
    Message: A:1:GO_AHEAD:14 Received from : A
126
127 Received Message[ Requesting ]:: Name: D Received
    Message: A:1:GO_AHEAD:15 Received from : A
128
129 Received Message [ AfterCriticalState ] :: Name: A
    Received Message: No message to receive
130 Received Message[ Requesting ]:: Name: B Received
    Message: A:1:GO_AHEAD:12 Received from : A
131
132 B is in Critical State
133 Received Message [ Requesting ] :: Name: E Received
    Message: No message to receive
134 Received Message [ Requesting ] :: Name: D Received
    Message: No message to receive
135 Received Message [ Requesting ] :: Name: C Received
    Message: No message to receive
136 Received Message [ AfterCriticalState ] :: Name: A
    Received Message: No message to receive
```

```
137 Received Message [ InCriticalState ] :: Name: B
    Received Message: No message to receive
138 Received Message [ Requesting ] :: Name: E Received
    Message: No message to receive
139 Received Message [ Requesting ] :: Name: C Received
    Message: No message to receive
140 Received Message [ Requesting ] :: Name: D Received
    Message: No message to receive
141 Received Message [ InCriticalState ] :: Name: B
    Received Message: No message to receive
142 Received Message [ AfterCriticalState ] :: Name: A
    Received Message: No message to receive
143 Received Message [ Requesting ] :: Name: C Received
    Message: No message to receive
144 Received Message [ Requesting ] :: Name: D Received
    Message: No message to receive
145 Received Message [ Requesting ] :: Name: E Received
    Message: No message to receive
146 Received Message [ AfterCriticalState ] :: Name: A
    Received Message: No message to receive
147 Received Message [ InCriticalState ] :: Name: B
    Received Message: No message to receive
148 Received Message [ Requesting ] :: Name: D Received
    Message: No message to receive
149 Received Message [ Requesting ] :: Name: E Received
    Message: No message to receive
150 Received Message [ Requesting ] :: Name: C Received
    Message: No message to receive
151 Received Message [ InCriticalState ] :: Name: B
    Received Message: No message to receive
152 Request Message :: Name: A id: 1 status: Requesting
    message sent: A:1:REQUEST:16 to: B at: 16
153 Request Message :: Name: A id: 1 status: Requesting
    message sent: A:1:REQUEST:16 to: C at: 16
154 Request Message :: Name: A id: 1 status: Requesting
    message sent: A:1:REQUEST:16 to: D at: 16
155 Request Message :: Name: A id: 1 status: Requesting
    message sent: A:1:REQUEST:16 to: E at: 16
156 Received Message [ Requesting ] :: Name: A Received
    Message: No message to receive
157 Received Message[ Requesting ]:: Name: C Received
```

```
157 Message: A:1:REQUEST:16 Received from : A
158
159 Received Message[ Requesting ]:: Name: D Received
    Message: A:1:REQUEST:16 Received from : A
160
161 Received Message[ Requesting ]:: Name: E Received
    Message: A:1:REQUEST:16 Received from : A
162
163 Received Message [ Requesting ] :: Name: A Received
    Message: No message to receive
164 Received Message[ AfterCriticalState ]:: Name: B
    Received Message: A:1:REQUEST:16 Received from : A
165
166 B exiting critical state.
167 Send Message :: Name: B id: 2 status:
    AfterCriticalState message sent: B:2:GO_AHEAD:16 to
    : D at: 16
168 Send Message :: Name: B id: 2 status:
    AfterCriticalState message sent: B:2:GO_AHEAD:17 to
    : E at: 17
169 Send Message :: Name: B id: 2 status:
    AfterCriticalState message sent: B:2:GO_AHEAD:18 to
    : C at: 18
170 Send Message :: Name: B id: 2 status:
    AfterCriticalState message sent: B:2:GO_AHEAD:19 to
    : A at: 19
171 Received Message[ Requesting ]:: Name: C Received
    Message: B:2:GO_AHEAD:18 Received from : B
172 Received Message[ Requesting ]:: Name: E Received
    Message: B:2:GO_AHEAD:17 Received from : B
173
174 Process finished with exit code 130
175
```