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"C:\Program Files\Java\jdk-22\bin\java.exe" "-javaagent:C:\Users\
USER\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024
.1.3\lib\idea_rt.jar=50711:C:\Users\USER\AppData\Local\JetBrains\
IntelliJ IDEA Community Edition 2024.1.3\bin" -Dfile.encoding=UTF
-8 -Dsun.stdout.encoding=UTF-8 -Dsun.stderr.encoding=UTF-8 -
classpath D:\M.Sc_2nd_Sem\AOS\Assignment4\out\production\
Assignment4 Main

Print Stack Updates
New Node(leaf) pushed : name : F id: 1
New Node(leaf) pushed : name : G id: 2
New Node(leaf) pushed : name : H id: 3
New Node(leaf) pushed : name : I id: 4
New Node(leaf) pushed : name : J id: 5
child Popped: name : J id: 5 parentid: 6
child Popped: name : I id: 4 parentid: 6
child Popped: name : H id: 3 parentid: 6
child Popped: name : G id: 2 parentid: 6
child Popped: name : F id: 1 parentid: 6
New Node(internal) pushed : name : C id: 6
New Node(leaf) pushed : name : D id: 7
New Node(leaf) pushed : name : E id: 8
child Popped: name : E id: 8 parentid: 9
child Popped: name : D id: 7 parentid: 9
New Node(internal) pushed : name : B id: 9
child Popped: name : B id: 9 parentid: 10
child Popped: name : C id: 6 parentid: 10
New Node(internal) pushed : name : A id: 10
root Popped: name :A id: 10 parent Id: 0


System Log::
Information Message :: Node A with ID 10 have been set to PHOLD
Initially.
Request Message :: Node H [ REQUESTING ] with ID 3 is requesting
token from C
Request Message :: Node C [ NONE ] with ID 6 is requesting token
from A
Send Message :: Node A [ PHOLD ] with ID 10 is sending token to C
Information Message :: Node C with ID 6 is now parent of  A
Send Message :: Node C [ PHOLD ] with ID 6 is sending token to H
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Request Message :: Node I [ REQUESTING ] with ID 4 is requesting
token from C
Information Message :: Node H with ID 3 is now parent of  C
Request Message :: Node C [ REQUESTING ] with ID 6 is requesting
token back from H to send I
Information Message :: Node H with ID 3 is in critical state
Request Message :: Node D [ REQUESTING ] with ID 7 is requesting
token from B
Request Message :: Node B [ NONE ] with ID 9 is requesting token
from A
Request Message :: Node A [ NONE ] with ID 10 is requesting token
 from C
Request Message :: Node F [ REQUESTING ] with ID 1 is requesting
token from C
Send Message :: Node H [ PHOLD ] with ID 3 is sending token to C
Information Message :: Node C with ID 6 is now parent of  H
Send Message :: Node C [ PHOLD ] with ID 6 is sending token to I
Information Message :: Node I with ID 4 is now parent of  C
Request Message :: Node C [ REQUESTING ] with ID 6 is requesting
token back from I to send A
Information Message :: Node I with ID 4 is in critical state
Request Message :: Node E [ REQUESTING ] with ID 8 is requesting
token from B
Send Message :: Node I [ PHOLD ] with ID 4 is sending token to C
Information Message :: Node C with ID 6 is now parent of  I
Send Message :: Node C [ PHOLD ] with ID 6 is sending token to A
Information Message :: Node A with ID 10 is now parent of  C
Request Message :: Node C [ REQUESTING ] with ID 6 is requesting
token back from A to send F
Send Message :: Node A [ PHOLD ] with ID 10 is sending token to B
Request Message :: Node G [ REQUESTING ] with ID 2 is requesting
token from C
Request Message :: Node H [ REQUESTING ] with ID 3 is requesting
token from C
Information Message :: Node B with ID 9 is now parent of  A
Request Message :: Node A [ REQUESTING ] with ID 10 is requesting
 token back from B to send C
Send Message :: Node B [ PHOLD ] with ID 9 is sending token to D
Information Message :: Node D with ID 7 is now parent of  B
Request Message :: Node B [ REQUESTING ] with ID 9 is requesting
token back from D to send E
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Information Message :: Node D with ID 7 is in critical state
Termination Message :: Node J with ID: 5 has been terminated due
to an empty request queue.
Send Message :: Node D [ PHOLD ] with ID 7 is sending token to B
Information Message :: Node B with ID 9 is now parent of  D
Send Message :: Node B [ PHOLD ] with ID 9 is sending token to E
Information Message :: Node E with ID 8 is now parent of  B
Request Message :: Node B [ REQUESTING ] with ID 9 is requesting
token back from E to send A
Information Message :: Node E with ID 8 is in critical state
Send Message :: Node E [ PHOLD ] with ID 8 is sending token to B
Information Message :: Node B with ID 9 is now parent of  E
Send Message :: Node B [ PHOLD ] with ID 9 is sending token to A
Information Message :: Node A with ID 10 is now parent of  B
Send Message :: Node A [ PHOLD ] with ID 10 is sending token to C
Information Message :: Node C with ID 6 is now parent of  A
Send Message :: Node C [ PHOLD ] with ID 6 is sending token to F
Termination Message :: Node I with ID: 4 has been terminated due
to an empty request queue.
Information Message :: Node F with ID 1 is now parent of  C
Request Message :: Node C [ REQUESTING ] with ID 6 is requesting
token back from F to send G
Information Message :: Node F with ID 1 is in critical state
Termination Message :: Node D with ID: 7 has been terminated due
to an empty request queue.
Send Message :: Node F [ PHOLD ] with ID 1 is sending token to C
Information Message :: Node C with ID 6 is now parent of  F
Send Message :: Node C [ PHOLD ] with ID 6 is sending token to G
Information Message :: Node G with ID 2 is now parent of  C
Request Message :: Node C [ REQUESTING ] with ID 6 is requesting
token back from G to send H
Information Message :: Node G with ID 2 is in critical state
Termination Message :: Node E with ID: 8 has been terminated due
to an empty request queue.
Send Message :: Node G [ PHOLD ] with ID 2 is sending token to C
Information Message :: Node C with ID 6 is now parent of  G
Send Message :: Node C [ PHOLD ] with ID 6 is sending token to H
Request Message :: Node F [ REQUESTING ] with ID 1 is requesting
token from C
Information Message :: Node H with ID 3 is now parent of  C
Information Message :: Node H with ID 3 is in critical state
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Request Message :: Node C [ NONE ] with ID 6 is requesting token
from H
Termination Message :: Node G with ID: 2 has been terminated due
to an empty request queue.
Termination Message :: Node B with ID: 9 has been terminated due
to an empty request queue.
Termination Message :: Node A with ID: 10 has been terminated due
 to an empty request queue.
Send Message :: Node H [ PHOLD ] with ID 3 is sending token to C
Send Message :: Node C [ PHOLD ] with ID 6 is sending token to F
Information Message :: Node C with ID 6 is now parent of  H
Information Message :: Node F with ID 1 is now parent of  C
Information Message :: Node F with ID 1 is in critical state
Request Message :: Node C [ REQUESTING ] with ID 6 is requesting
token from F
Send Message :: Node F [ PHOLD ] with ID 1 is sending token to C
Information Message :: Node C with ID 6 is now parent of  F
Information Message :: Node C with ID 6 is in critical state
Termination Message :: Node H with ID: 3 has been terminated due
to an empty request queue.
Termination Message :: Node F with ID: 1 has been terminated due
to an empty request queue.
Termination Message :: Node C with ID: 6 has been terminated due
to an empty request queue.

All system processes have finished.

Final Inverted tree is :
C
  F
  G
  H
  I
  J
  A
    B
      D
      E

Process finished with exit code 0
```