Inserted A

A

A

A

Inserted A
Looking for place to insert L
ALG
AL
Looking for place to insert G
ALG
AL
Looking for place to insert G
ALG
AGL
Inserted G
Fixing tree - Case 2: Black Uncle: Rotating tree
Performing right rotation
Performed right rotation
Performing left rotation
ALG
AGL
Performed left rotation
Fixing tree - Case 2: Black Uncle: Rotated tree
Looking for place to insert O
ALGO
AGL
Looking for place to insert O
ALGO
AGLO
Inserted O
Fixing tree - Case 1: Red Uncle: Recoloring nodes
Fixing tree - Case 1: Red Uncle: Recolored nodes
Looking for place to insert R
Looking for place to insert R
ALGOR
AGLO
Looking for place to insert R
ALGOR
AGLOR
Inserted R
Fixing tree - Case 2: Black Uncle: Rotating tree
Performing left rotation
ALGOR
AGLOR
Performed left rotation
Fixing tree - Case 2: Black Uncle: Rotated tre
Looking for place to insert I
Looking for place to insert I
Looking for place to insert I
Fixing tree - Case 1: Red Uncle: Recoloring nodes
Fixing tree - Case 1: Red Uncle: Recolored nodes
Looking for place to insert T
Looking for place to insert T
Looking for place to insert T
ALGORIT
AGILORT
Inserted T
ALGORITHM
AGILORT
Looking for place to insert H
ALGORITHM
AGILORT
Looking for place to insert H
ALGORITHM
AGILORT
Looking for place to insert H
ALGORITHM AGILORT
Looking for place to insert H
ALGORITHM
AGHILORT
Inserted H
ALGORITHM
AGHILORT
Fixing tree - Case 2: Black Uncle: Rotating tree
ALGORITHM
AGHILORT
Performing right rotation
ALGORITHM
AGHILORT
Performed right rotation
Fixing tree - Case 2: Black Uncle: Rotated tree
Algorithm AGHILORT
Looking for place to insert M
ALGORITHM
AGHILORT
Looking for place to insert M
ALGORITHM
AGHILORT
Looking for place to insert M
ALGORITHM
AGHILORT
Looking for place to insert M
ALGORITHM
AGHILMORT
Fixing tree - Case 1: Red Uncle: Recoloring nodes
ALGORITHM
AGHILMORT
Fixing tree - Case 1: Red Uncle: Recolored nodes
ALGORITHM
AGHILMORT
Fixing tree - Case 2: Black Uncle: Rotating tree
ALGORITHM
AGHILMORT
Performing right rotation
ALGORITHM AGHILMORT
Performed right rotation
ALGORITHM
AGHILMORT
Performing left rotation
ALGORITHM AGHILMORT
Performed left rotation
Fixing tree - Case 2: Black Uncle: Rotated tree
Looking for place to insert S
ALGORITHMS AGHILMORT
Looking for place to insert S
ALGORITHMS
AGHILMORT
Looking for place to insert S
Looking for place to insert S
ALGORITHMS
AGHILMORST
Inserted S
Fixing tree - Case 2: Black Uncle: Rotating tree
Performing right rotation
ALGORITHMS
AGHILMORST
Performed right rotation
ALGORITHMS
AGHILMORST
Performing left rotation
ALGORITHMS
AGHILMORST
Performed left rotation
Fixing tree - Case 2: Black Uncle: Rotated tree
ALGORITHMS C
AGHILMORST
Looking for place to insert C
ALGORITHMS C
AGHILMORST
Looking for place to insert C
ALGORITHMS C
AGHILMORST
Looking for place to insert C
ALGORITHMS CA
ACGHILMORST
Looking for place to insert A
Looking for place to insert A
Looking for place to insert A
ALGORITHMS CAM
ACGHILMORST
Looking for place to insert M
Looking for place to insert M
Looking for place to insert M
ALGORITHMS CAM
ACGHILMORST
Looking for place to insert M
Looking for place to insert B
Looking for place to insert B
ALGORITHMS CAMB
ACGHILMORST
Looking for place to insert B
ALGORITHMS CAMB
ABCGHILMORST
Inserted B
Fixing tree - Case 2: Black Uncle: Rotating tree
ALGORITHMS CAMB
ABCGHILMORST
Performing right rotation
Performed right rotation
Performing left rotation
Performed left rotation
Fixing tree - Case 2: Black Uncle: Rotated tree

ALGORITHMS CAMB
ABCGHILMORST

Fixing tree - Case 2: Black Uncle: Rotated tree
Looking for place to insert R
Looking for place to insert R
ALGORITHMS CAMBR
ABCGHILMORST
Looking for place to insert R
ALGORITHMS CAMBR
ABC GHILMORST
Looking for place to insert R
ALGORITHMS CAMBRI
ABCGHILMORST
Looking for place to insert I
ALGORITHMS CAMBRID
ABCGHILMORST
Looking for place to insert D
ALGORITHMS CAMBRID
ABCGHILMORST
Looking for place to insert D
Looking for place to insert D
ALGORITHMS CAMBRID
ABCGHILMORST
Looking for place to insert D
ALGORITHMS CAMBRIDGE
ABCDGHIJMORST
Inserted D
Fixing tree - Case 1: Red Uncle: Recoloring nodes
Fixing tree - Case 1: Red Uncle: Recolored nodes
Fixing tree - Case 1: Red Uncle: Recoloring nodes
Fixing tree - Case 1: Red Uncle: Recolored nodes
ALGORITHMS CAMBRIDG
ABCDGHILMORST
Looking for place to insert G
Looking for place to insert G

ALGORITHMS CAMBRIDG
ABCDGHLIMORST
Looking for place to insert G
ALGORITHMS CAMBRIDGE
ABCDGHILMORST
Looking for place to insert E
ALGORITHMS CAMBRIDGE
ABCDGHIJKLMORST
Looking for place to insert E
ALGORITHMS CAMBRIDGE
ABCDGHILMORST
Looking for place to insert E
Looking for place to insert E
Looking for place to insert E
ALGORITHMS CAMBRIDGE
ABCDEGHILMORST
Inserted E
Fixing tree - Case 2: Black Uncle: Rotating tree
Performing left rotation
ALGORITHMS CAMBRIDGE
ABCDEGHILMORST
Performed left rotation
Fixing tree - Case 2: Black Uncle: Rotated tre
ALGORITHMS CAMBRIDGE S
ABCDEGHILMORST
Looking for place to insert S
ALGORITHMS CAMBRIDGE S
ABCEDEGHILMORST
Looking for place to insert S
ALGORITHMS CAMBRIDGE S
ABCDEGHLMRST
Looking for place to insert S
ALGORITHMS CAMBRIDGE SL
ABCEDEGHILMORST
Looking for place to insert L
ALGORITHMS CAMBRIDGE SL
ABCDEGHILMORST
Looking for place to insert L
Looking for place to insert L
Looking for place to insert 7
Looking for place to insert 7
Looking for place to insert 7
ALGORITHMS CAMBRIDGE SL7
ABCEDEGHILMORST
Looking for place to insert 7
Inserted 7

ALGORITHMS CAMBRIDGE SL7
7ABCDEDEHILMORST
Inserted 7
Looking for place to insert 1
Looking for place to insert 1
Looking for place to insert 1
Looking for place to insert 1
Looking for place to insert 1
ALGORITHMS CAMBRIDGE SL71
17ABCDEGHIJMORST
Inserted 1
Fixing tree - Case 2: Black Uncle: Rotating tree
Performing right rotation
Performed right rotation
Fixing tree - Case 2: Black Uncle: Rotated tree
ALGORITHMS CAMBRIDGE SL715
17ABCDEGHIJKLMORST
Looking for place to insert 5
Looking for place to insert 5
Looking for place to insert 5
Looking for place to insert 5
Looking for place to insert 5
ALGORITHMS CAMBRIDGE SL715
157ABCDEGHILMORST
Inserted 5
Fixing tree - Case 1: Red Uncle: Recoloring nodes
Fixing tree - Case 1: Red Uncle: Recolored nodes
Fixing tree - Case 2: Black Uncle: Rotating tree
Performing right rotation
Performed right rotation
Fixing tree - Case 2: Black Uncle: Rotated tree
Searching for A

ALGORITHMS CAMBRIDGE SL715 ?A
157ABCDEGHIJMORST
Searching for A
Searching for A
Searching for A
ALGORITHMS CAMBRIDGE SL715 ?A
157ABCDEGHIJKLMORST
A found
ALGORITHMS CAMBRIDGE SL715 ?A
157ABCDEGHILMORST
Found A
Searching for Z
Searching for Z
Searching for Z
Searching for Z
ALGORITHMS CAMBRIDGE SL715 ?A ?Z
157ABCDEGHLIMORST
Z not found
Searching for M
Searching for M
Searching for M
ALGORITHMS CAMBRIDGE SL715 ?A ?Z <M
157ABCDEGHILMORST
M found
Getting predecessor of M
Predecessor of M is L