

Data Structures

Tree – Binary Search Tree

Team Emertxe



Binary Search Tree - Traversal



Traversal



Tree Traversal:

Traversal is a process to visit all the nodes of a tree and print their values too

Types

- In-Order
- Pre-Order
- Post-Order
- Level-Order

Data Structure – Binary Search Tree

Traversal



In Order:

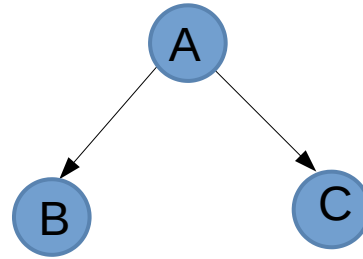
- Visit Left child
- Visit Parent
- Visit Right child

Traversal



In Order:

- Visit Left child
- Visit Parent
- Visit Right child



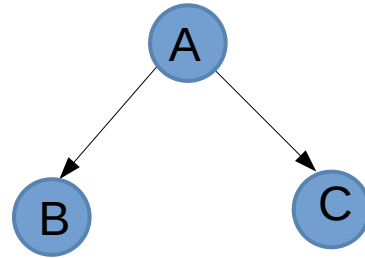
Output = B A C

Traversal

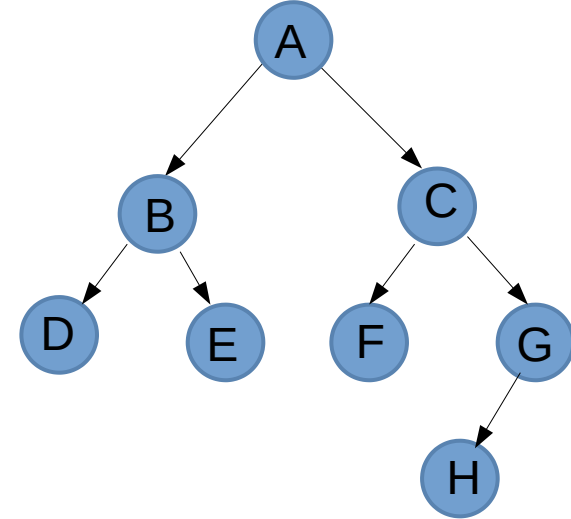


In Order:

- Visit Left child
- Visit Parent
- Visit Right child



Output = B A C



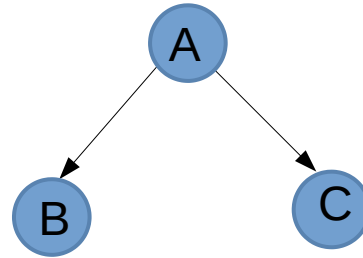
Data Structure – Binary Search Tree

Traversal

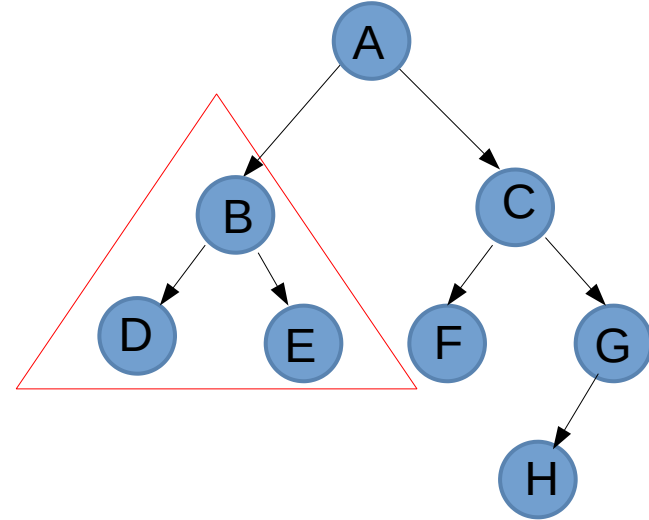


In Order:

- Visit Left child
- Visit Parent
- Visit Right child



Output = B A C



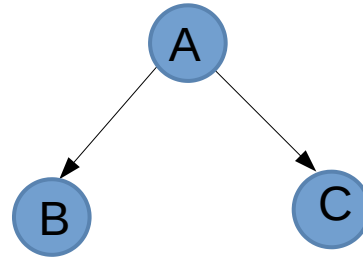
Output = D B E

Traversal

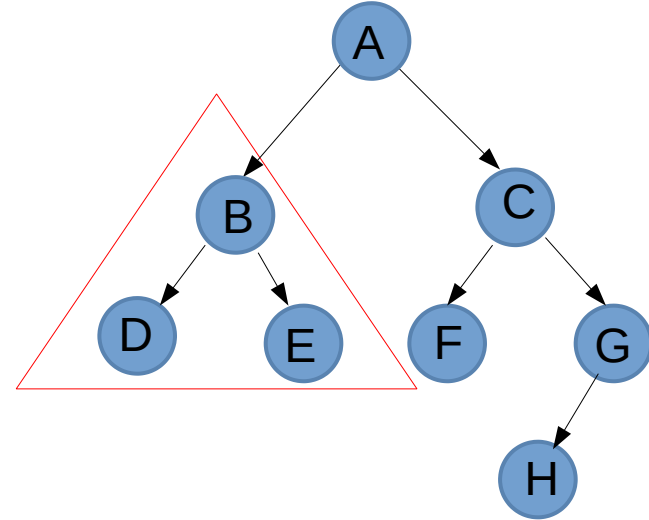


In Order:

- Visit Left child
- Visit Parent
- Visit Right child



Output = B A C



Output = D B E A

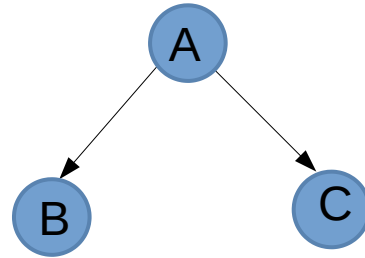
Data Structure – Binary Search Tree

Traversal

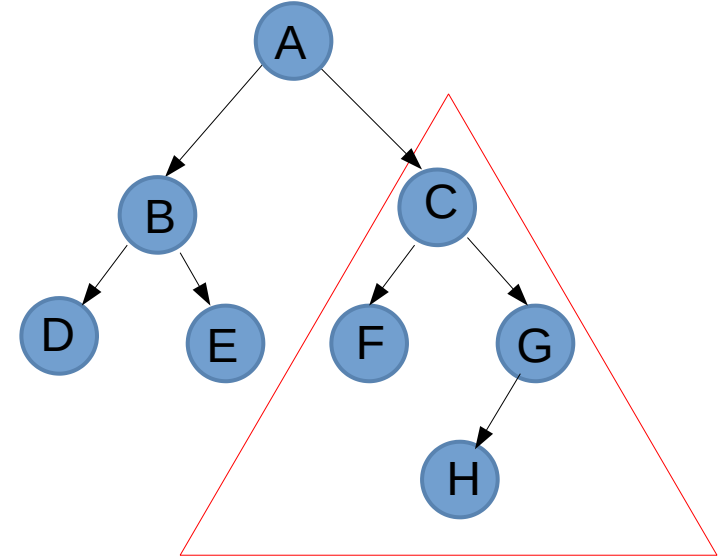


In Order:

- Visit Left child
- Visit Parent
- Visit Right child



Output = B A C



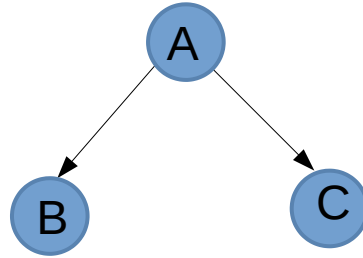
Output = D B E A F C H G

Traversal



Post Order:

- Visit Left child
- Visit Right child
- Visit Parent



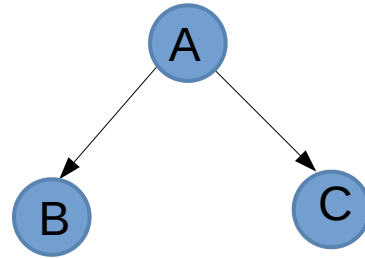
Output = B C A

Traversal

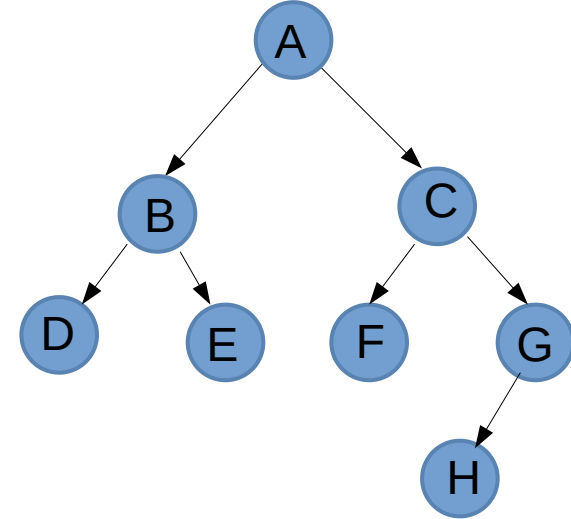


Post Order:

- Visit Left child
- Visit Right child
- Visit Parent



Output = B C A



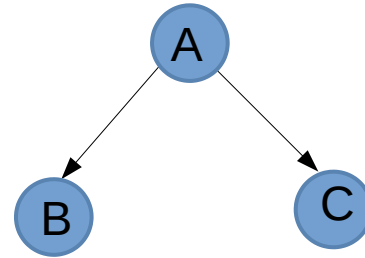
Data Structure – Binary Search Tree

Traversal

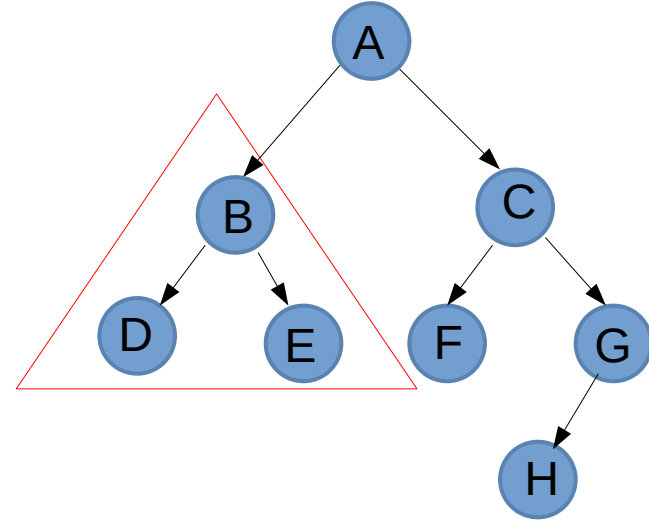


Post Order:

- Visit Left child
- Visit Right child
- Visit Parent



Output = B C A



Output = D E B

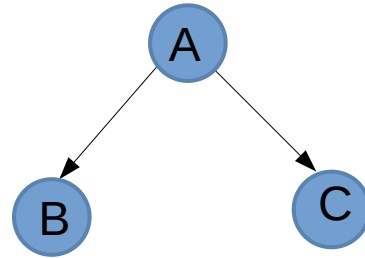
Data Structure – Binary Search Tree

Traversal

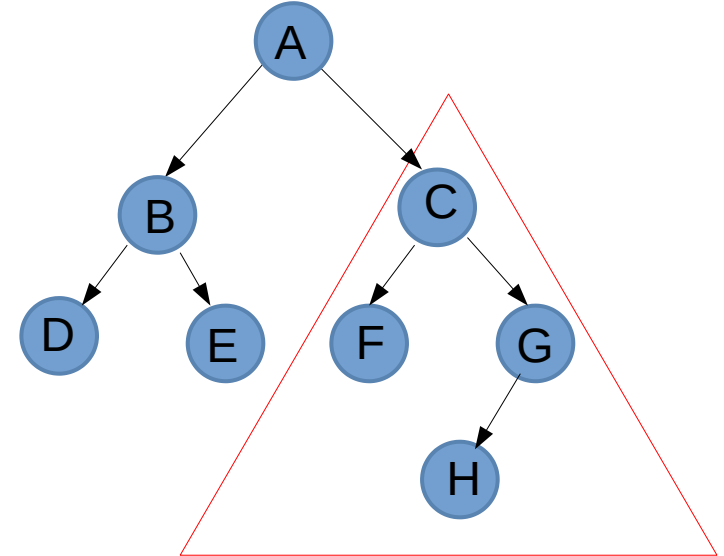


Post Order:

- Visit Left child
- Visit Right child
- Visit Parent



Output = B C A



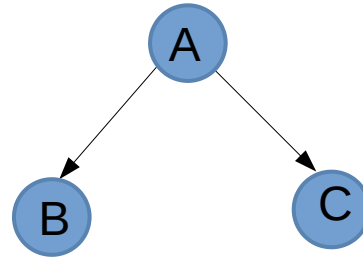
Output = D E B F H G C A

Traversal



Pre Order:

- Visit Parent
- Visit Left child
- Visit Right child



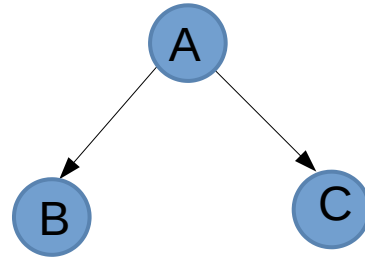
Output = A B C

Traversal

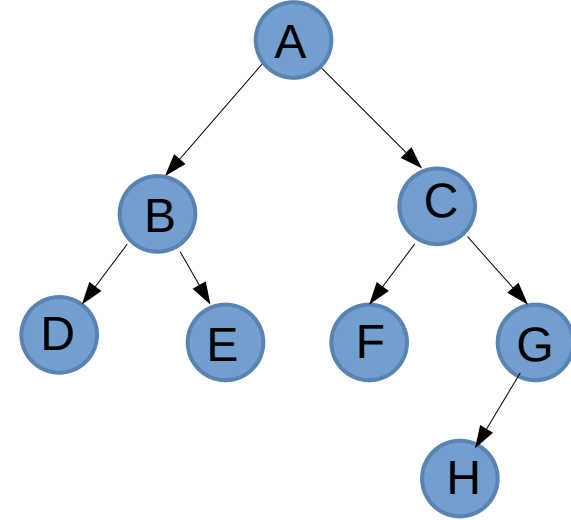


Pre Order:

- Visit Parent
- Visit Left child
- Visit Right child



Output = A B C



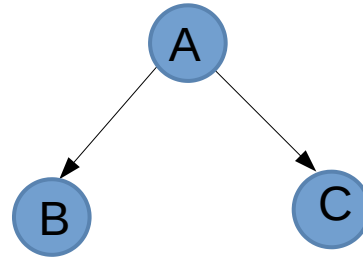
Output = A

Traversal

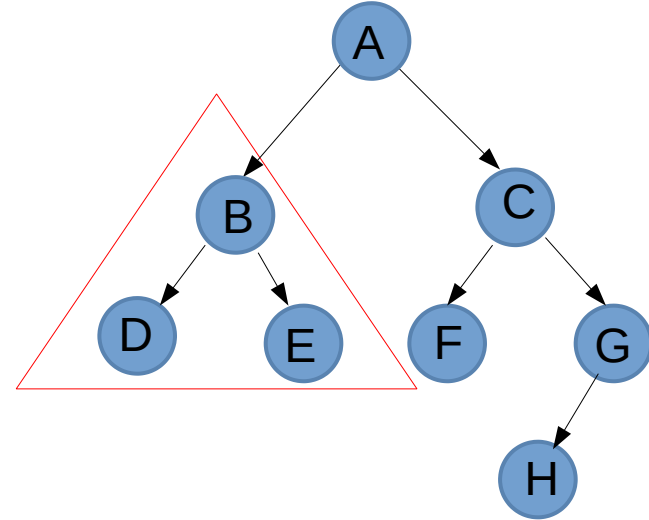


Pre Order:

- Visit Parent
- Visit Left child
- Visit Right child



Output = A B C



Output = A B D E

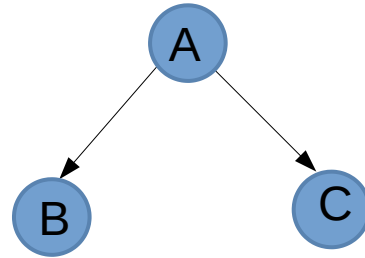
Data Structure – Binary Search Tree

Traversal

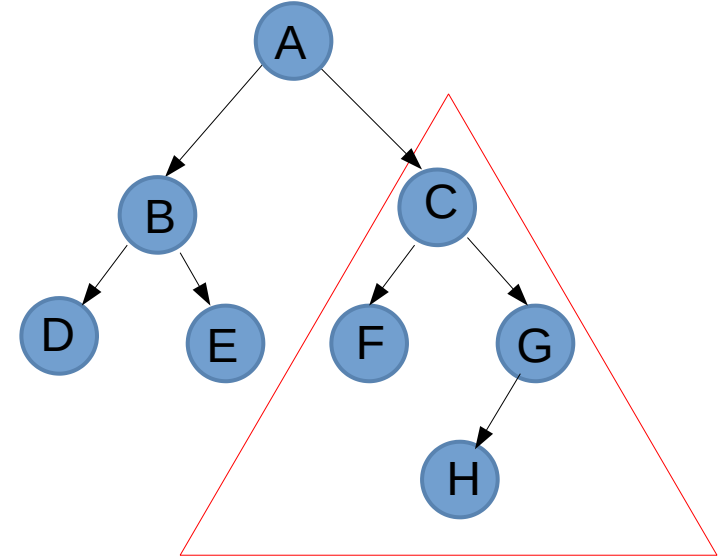


Pre Order:

- Visit Parent
- Visit Left child
- Visit Right child



Output = A B C



Output = A B D E

Output = A B D E C F G H

Traversal



Level Order:

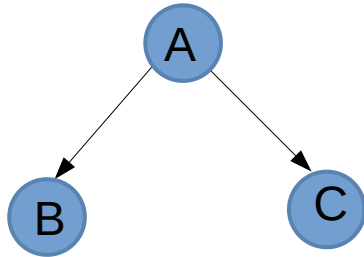
- In Level Order we visit every node on a level before going to a lower level,
- (Left to Right).

Traversal



Level Order:

- In Level Order we visit every node on a level before going to a lower level,
- (Left to Right).



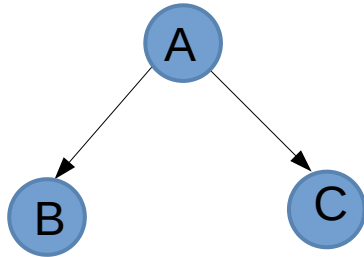
Output = A B C

Traversal

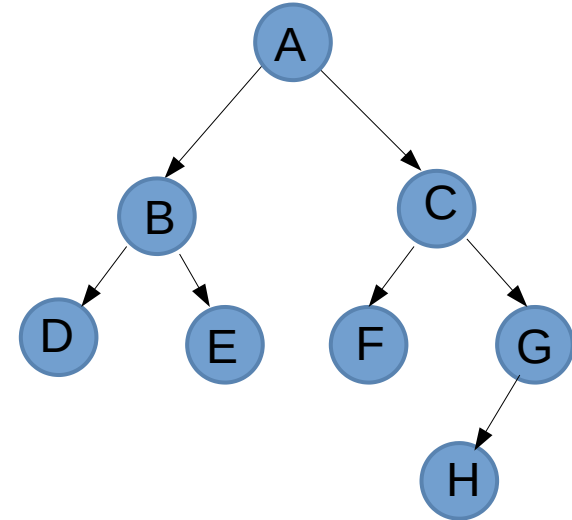


Level Order:

- In Level Order we visit every node on a level before going to a lower level,
- (Left to Right).



Output = A B C



Output = A B C D E F G H



Inorder -Algorithm