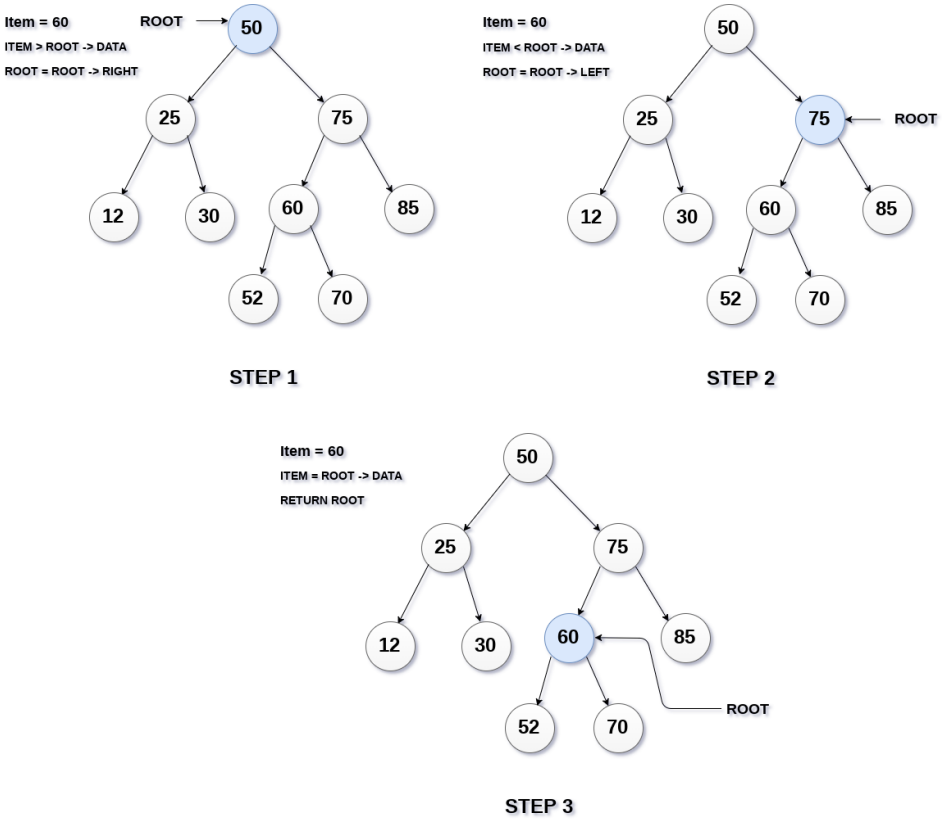
Searching

Searching means finding or locating some specific element or node within a data structure. However, searching for some specific node in binary search tree is pretty easy due to the fact that, element in BST are stored in a particular order.

1. Compare the element with the root of the tree.
2. If the item is matched then return the location of the node.
3. Otherwise check if item is less than the element present on root, if so then move to the left sub-tree.
4. If not, then move to the right sub-tree.
5. Repeat this procedure recursively until match found.
6. If element is not found then return NULL.



Algorithm:

Search (ROOT, ITEM)

- **Step 1:** IF ROOT -> DATA = ITEM OR ROOT = NULL
  Return ROOT
  ELSE

```
 IF ROOT < ROOT -> DATA
 Return search(ROOT -> LEFT, ITEM)
ELSE
 Return search(ROOT -> RIGHT,ITEM)
[END OF IF]
[END OF IF]
```

- **Step 2:** END

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