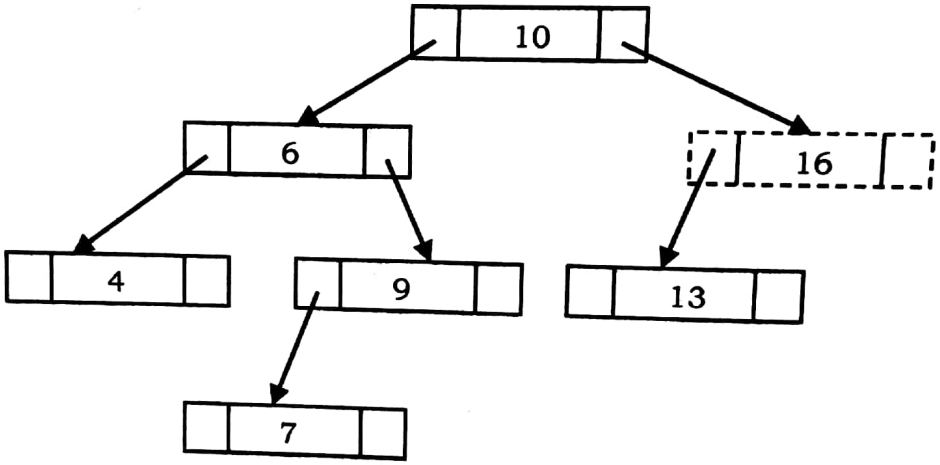
Finding Maximum Element in Binary Search Trees

In BSTs, the maximum element is the right-most node, which does not have right child. In the BST maximum element is **16**.

```
struct BinarySearchTreeNode *FindMax(struct BinarySearchTreeNode *root) {
    if(root == NULL)
        return NULL;
    else if( root→right == NULL )
        return root;
    else return FindMax( root→right );
}
```

Time Complexity: O(n), in worst case (when BST is a *right skew* tree).
Space Complexity: O(n), for recursive stack.



Non recursive version of the above algorithm can be given as:

```
struct BinarySearchTreeNode *FindMax(struct BinarySearchTreeNode * root ) {
    if( root == NULL )
        return NULL;
    while( root→right != NULL )
        root = root→right;
    return root;
}
```

Time Complexity: O(n). Space Complexity: O(1).