LAB-2

Question : Leetcode exercises on Kth smallest element in BST

SOURCE CODE:

```
int kthSmallest(struct TreeNode* root, int k) {
  // Stack for iterative traversal
  struct TreeNode* stack[100];
  int top = -1;

  // Current node
  struct TreeNode* curr = root;

  // Variable to keep track of visited nodes
  int count = 0;

  // Traverse the tree until the current node is NULL
  while (curr != NULL || top != -1) {
    // Move to the leftmost node
    while (curr != NULL) {
      stack[++top] = curr;
      curr = curr->left;
    }

    // Pop the top node from the stack
    curr = stack[top--];

    // Increment the count
    count++;

    // If count equals k, return the value of the current node
    if (count == k) {
      return curr->val;
    }

    // Move to the right of the current node
    curr = curr->right;
  }
```

```
    // If k is greater than the number of nodes in the tree
    return -1; // or any other appropriate error code
}
```

RESULT: