Search in C++ #include <iostream> using namespace std; // Define Node structure for BST struct Node { int key; Node *left, *right; Node(int item) { key = item;left = nullptr; right = nullptr; **}**; // Function to search for a node in BST bool searchInBST(Node* root, int k) { if (root == nullptr) { return false; if (root->key == k) { return true; if (k < root->key) { return searchInBST(root->left, k); if (k > root->key) { return searchInBST(root->right, k); return false; int main() { // Create the BST Node* root = new Node(6); root->left = new Node(3);root->right = new Node(8); root->right->left = new Node(7); root->right->right = new Node(9); // Search for nodes from 0 to 9 for (int i = 0; i < 10; i++) { cout << i << " is Present? " << (searchInBST(root,</pre> i) ? "Yes" : "No") << endl; } return 0; } 0 is Present? No

1 is Present? No 2 is Present? No 3 is Present? Yes 4 is Present? No 5 is Present? No 6 is Present? Yes 7 is Present? Yes 8 is Present? Yes 9 is Present? Yes

BST Structure:

```
6
/\
3 8
/\
7 9
```

Q Dry Run Table (Step-by-step trace of function calls):

Value k	Function Calls	Found?
0	$6 \rightarrow 3 \rightarrow \text{nullptr}$	No
1	$6 \rightarrow 3 \rightarrow \text{nullptr}$	No
2	$6 \rightarrow 3 \rightarrow \text{nullptr}$	No
3	$6 \rightarrow 3$	∜ Yes
4	$6 \rightarrow 3 \rightarrow \text{nullptr}$	No
5	$6 \rightarrow 3 \rightarrow \text{nullptr}$	No
6	6	⊗ Yes
7	$6 \rightarrow 8 \rightarrow 7$	∜ Yes
8	$6 \rightarrow 8$	≪ Yes
9	$6 \rightarrow 8 \rightarrow 9$	∜ Yes

■ Output:

```
0 is Present? No
1 is Present? No
2 is Present? No
3 is Present? Yes
4 is Present? No
5 is Present? No
6 is Present? Yes
7 is Present? Yes
8 is Present? Yes
9 is Present? Yes
```