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Class: SE-A

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Practical No: 5

```
#include <iostream>
using namespace std;

struct Node
{
    int key;
    Node *left,*right; bool isThreaded;
};

Node *createThreaded(Node *root)
{
    if(root==NULL)
        return NULL;
    if (root->left==NULL && root->right==NULL)
        return root;
    if (root->left != NULL)
    {
        Node* l= createThreaded(root->left);
        l->right=root;
        l->isThreaded=true;
    }
    if (root->right==NULL)
        return root;
    return createThreaded(root->right);
}

Node *leftMost(Node *root)
{
    while (root != NULL && root->left != NULL)
        root = root->left;
    return root;
}

void inOrder(Node *root)
{
    if(root == NULL) return;
    Node *cur = leftMost(root);

    while(cur != NULL)
    {
```

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        cout << cur->key<<" ";

        if(cur->isThreaded)
            cur=cur->right;

        else
            cur=leftMost(cur->right);

    }
}

Node *newNode(int key)
{
    Node *temp=new Node;
    temp->left=temp->right=NULL;
    temp->key=key; return temp;
}

int main()
{
    Node *root = newNode(4);
    root->left = newNode(1);
    root->right = newNode(3);
    root->left->left= newNode(2);
    root->left->right= newNode(6);
    root->right->left = newNode(5);
    root->right->right = newNode(7);

    createThreaded(root);
    cout<<"Inorder traversal of created Threaded tree is:\n ";

    inOrder(root);
    return 0;
}

```

Output:

Inorder traversal of created Threaded tree is:

2 1 6 4 5 3 7