

Code:

```
#include <stack>

#include <iostream>

#include <string>

using namespace std;

struct node

{

    char data;

    node *l, *r;

};

class TREE

{

public:

    node *nnode, *root, *curr;

    stack<node *> s, s1;

    string exp;

    int n;

    TREE()

    {

        root = NULL;

    }

    void create()

    {

        cout << "\nEnter the expression: ";

        cin >> exp;

        n = exp.length();

        for (int i = n - 1; i >= 0; i--)

        {

            char ch = exp[i];
```

```

nnode = new node;
nnode->l = nnode->r = NULL;
nnode->data = ch;
if (ch >= 'a' && ch <= 'z')
    {
        s.push(nnode);
    } else
    {
        if(s.size()<2)
        {
            cout<<"\n Invalid expression";
        }
        else

            nnode->l = s.top();
            s.pop();
            nnode->r = s.top();
            s.pop();
            s.push(nnode);
    }
}
if (!s.empty())
    {
        root = s.top();
        s.pop();
    }
    else
    {
        root = NULL;
    }
}

```

```

void display(node *temp)
{
    if (temp != NULL)
    {
        display(temp->l);
        display(temp->r);
        cout << temp->data << " ";
    }
}

```

```

void postorder(node *temp)
{
    s.push(temp);
    while (!s.empty())
    {
        curr = s.top();
        s.pop();
        s1.push(curr);
        if (curr->l != NULL)
        {
            s.push(curr->l);
        }
        if (curr->r != NULL)
        {
            s.push(curr->r);
        }
    }
    while (!s1.empty())
    {
        curr = s1.top();
        s1.pop();
    }
}

```

```

        cout << curr->data << " ";
    }
}

void deletet(node *temp)
{
    if (temp != NULL)
    {
        deletet(temp->l);
        deletet(temp->r);
        delete temp;
    }
}

};

int main() {
    TREE ob;
    ob.create();
    cout << "\n Postorder traversal: ";
    ob.postorder(ob.root);
    cout << "\n Deleting tree...";
    ob.deletet(ob.root);
    cout << "\n Tree deleted successfully";
    return 0;
}

```

OUTPUT:

```

Enter the expression: +--a*bc/def
Postorder traversal: a b c * - d e / - f +
Deleting tree...
Tree deleted successfully

```