

```

/*
NAME:SARVESH BAPUSAHEB CHAVAN
ROLL NO: SYCOA124
*/

#include <iostream>
#include <iomanip>
using namespace std;
struct bst
{
    int data;
    bst *left = NULL, *right = NULL;
};
class tree
{
public:
    bst *root = NULL;
    void create()
    {
        bst *nn = new bst;
        bst *cn, *parent;
        cn = root;
        cout << "enter data in tree:" << endl;
        cin >> nn->data;
        if (cn == NULL)
        {
            root = nn;
        }
        else
        {
            while (cn != NULL)
            {
                parent = cn;
                if (cn->data > nn->data)
                {
                    cn = cn->left;
                }
                else
                {
                    cn = cn->right;
                }
            }
            if (parent->data > nn->data)
            {
                parent->left = nn;
            }
            else
            {

```

```

        parent->right = nn;
    }
}
}
void display()
{
    int ch;
    cout << "enter the choice:1)inorder2)preorder:" << endl;
    cin >> ch;
    bst *cn = root;
    if (cn == NULL)
    {
        cout << "binary tree is not in existence" << endl;
    }
    else
    {
        if (ch == 1)
            inorder(cn);
        else if (ch == 2)
            preorder(cn);
        else
        {
            cout << "wrong choice" << endl;
        }
    }
    cout << endl;
}
void inorder(bst *root)
{
    bst *cn = root;
    if (cn != NULL)
    {
        inorder(cn->left);
        cout << cn->data << " ";
        inorder(cn->right);
    }
}
void preorder(bst *root)
{
    bst *cn = root;
    if (cn != NULL)
    {
        cout << cn->data << " ";
        preorder(cn->left);
        preorder(cn->right);
    }
}
};

```

```

int main()
{
    tree bstree;
    int choice, ch;
    while (1)
    {
        cout << endl
            << "menu" << endl
            << "1)insert" << endl
            << "2)display" << endl
            << "3)exit" << endl;
        cin >> choice;
        cout << endl;
        switch (choice)
        {
            case 1:
                do
                {
                    bstree.create();
                    cout << "want to add more:1)yes" << endl;
                    cin >> ch;
                } while (ch == 1);
                break;
            case 2:
                bstree.display();
                break;
            case 3:
                return 0;
                break;
            default:
                cout << "wrong choice" << endl;
                break;
        }
    }
    return 0;
}

```