

## STACK AS SINGLE LINKED LIST

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

struct Node
{
    int value;
    Node *next;

    Node (int value)
    {
        this->value=value;
        this->next=nullptr;
    }
};

class Stack_Single_List
{
private:
    Node *head;
    Node *top;
    Node *tail;
public:
    Stack_Single_List():head(nullptr),top(nullptr),tail(nullptr)
    {}

    void push(int value)
    {
        Node *newnode=new Node(value);

        if(nullptr==head)
            tail=newnode;

        else
            newnode->next=head;

        head=top=newnode;
    }

    int pop()
    {
        if(top==nullptr)
            cout<<"Stack Underflow"<<endl;

        Node *temp=top;
        head=top->next;
        delete top;
        top=head;
        return temp->value;
    }

    void printForward()
    {
        for(Node *current=head; current; current=current->next)
            cout<<current->value<<" ";
        cout<<endl;
    }
}
```

```

};

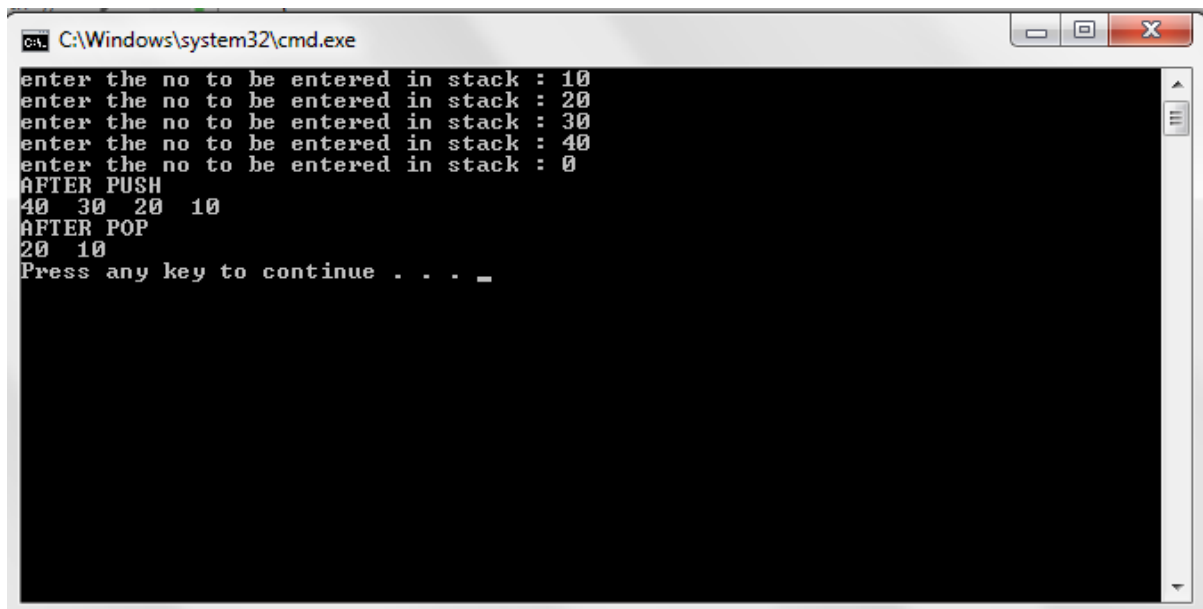
int main()
{
    Stack_Single_List s;
    int num;

    while(cout<<"enter the no to be entered in stack : ",cin>>num,num)
    {
        s.push(num);
    }

    cout<<"AFTER PUSH "<<endl;
    s.printForward();

    cout<<"AFTER POP "<<endl;
    s.pop();
    s.pop();
    s.printForward();
}

```



```

C:\Windows\system32\cmd.exe
enter the no to be entered in stack : 10
enter the no to be entered in stack : 20
enter the no to be entered in stack : 30
enter the no to be entered in stack : 40
enter the no to be entered in stack : 0
AFTER PUSH
40 30 20 10
AFTER POP
20 10
Press any key to continue . . . _

```