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//Implement stack using linked list
#include <stdio.h>
#include <stdlib.h>

struct node
{
    int x;
    node *next;
};

node *get_new_node()
{
    node *p;
    p = (node *)malloc(sizeof(node));
    return p;
}

void push(node **top, int x_val)
{
    node *p = get_new_node();
    p->x = x_val;
    p->next = *top;
    *top = p;
}

int pop(node **top)
{
    if(*top == NULL)
    {
        printf("Stack Underflow\n");
        return -1;
    }
    node *p = *top;
    *top = (*top)->next;
    return p->x;
}

void display(node *top)
{
    node *p = top;
    while(p != NULL)
    {
        printf("%d -> ", p->x);
        p = p->next;
    }
    printf("\n");
}

int main()
{
    node *top;
    top = NULL;
    push(&top, 1);
    push(&top, 2);
    push(&top, 3);
    push(&top, 4);
    display(top);
    printf("After popping once\n");
    pop(&top);
    display(top);
}

/*
OUTPUT
4 -> 3 -> 2 -> 1 ->
After popping once
3 -> 2 -> 1 ->
*/

```