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#include<stdio.h>
#include<stdlib.h>

struct lnode{
    int data;
    struct lnode* next;
};
typedef struct lnode node;

node* top=NULL;
void push(int val){
    node* newnode=(node*)malloc(sizeof(node));
    newnode->data=val;
    newnode->next=top;
    top=newnode;
}
int pop(){
    node* del=top;
    top=top->next;
    int temp=del->data;
    free(del);
    return temp;
}
int peek(){
    if(top==NULL){
        printf("stack is empty");
    }
    else{
    return top->data;
    }
}
void display(){
    node* temp=top;
    while(temp!=NULL){
        printf("%d\n",temp->data);
        temp=temp->next;
    }

}
int main(){
    int n,x;
    while(1){
        printf("1.push\n2.pop\n3.peek\n4.display\nexit\n");
        printf("enter the operation:");
        scanf("%d",&n);
        switch(n){
        case 1:
            printf("enter the push element:");
            scanf("%d",&x);
            push(x);
            break;
        case 2:
            printf("popped %d\n",pop());
            break;
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        case 3:
            printf("%d\n",peek());
            break;
        case 4:
            display();
            break;
        case 5:
            exit(0);
            break;
        default:
            printf("invalid syntax please enter the correct option");
            break;

    }
}
}
```