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/*stack using linked list */
#include <stdio.h>
#include <conio.h>
#include <malloc.h>
#include <stdlib.h>

struct stack
{
    int item;
    struct stack *next;
};
struct stack *top

struct stack *st=NULL;

void push(int);
void print(void);
int pop(void);

void main(void)
{
    int opt,ch,y;
    clrscr();

    do
    {
        clrscr();
        printf("\n1. Push\n");
        printf("\n2. Pop\n");
        printf("\n3. Print\n");
        printf("\n4. Exit\n");
        printf("\n\n\t Enter your Choice\n");
        scanf("%d",&opt);

switch(opt)
{
    case 1:
        printf("\nEnter item to Push\n");
        scanf("%d", &y);
        push(y);
        break;

    case 2:

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        y=pop();
        printf("Pushed item is : %d" ,y);
        break;

    case 3:

        printf("\nThe Given List is\n");
        print();

    }

    printf("\n Continue 1/0");
    scanf("%d",&ch);
}while(ch==1);
}

void print(void)
{
    struct stack *t;
    t=st;
    while(st!=NULL)
    {
        printf("%d  ",st->item);
        st=st->next;
    }
    st=t;
}

void push(int x)
{
    struct stack *r;
    r=(struct stack*)malloc(sizeof(struct stack));
    r->item=x;
    r->next=st;
    st=r;
    top=st;
    return;
}

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int pop(void)
{
    struct stack *r;
    int x;
    r=st;
    if(top==NULL)
    {
        printf("Empty Stack");
        exit(0);
    }
    else
    {
        r=st->next;
        x=st->item;
        free(st);
        st=r;
        top=st;
    }
    return x;
}
```