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

void push();
void pop();
void peek();
void display();

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

struct node *newnode,*temp;
struct node *top=NULL;

main()
{
 int choice;
 do
 {
  printf("\n1.Push\n2.Pop\n3.Peek\n4.Display\n5.Exit\nEnter ur choice:");
  scanf("%d",&choice);
  switch(choice)
  {
   case 1:push();break;
   case 2:pop();break;
   case 3:peek();break;
   case 4:display();break;
   case 5:printf("\nExiting Program ");
     exit(0);
   default:printf("\nEnter Valid choice");
  }
 }while(1);

}

void push()
{
 newnode=(struct node*)malloc(sizeof(struct node));
 printf("\nEnter item to be pushed:");
 scanf("%d",&newnode->data);
 newnode->next=NULL;
 if(top==NULL)
 {
  top=newnode;
 }
 else
 {
  newnode->next=top;
  top=newnode;
 }
}

void pop()
{
 int item;
 if(top==NULL)
 {
  printf("\nStack UNDERFLOW.Item cannot be popped");
  return;
 }
```

```
 else
 {
  item=top->data;
  temp=top;
  top=top->next;
  free(temp);
  printf("\nItem popped from stack: %d",item);
 }
}



void peek()
{
 if(top==NULL)
 {
  printf("\nStack Empty");
  return;
 }
 else
 {
  printf("\nElement at the top of stack is %d",top->data);
 }
}
void display()
{
 int i;
 if(top==NULL)
 {
  printf("\nStack Empty");
  return;
 }
 else
 {
  printf("\nElements in the stack are:\n");
  temp=top;
  while(temp!=NULL)
  {
   printf("%d -> ",temp->data);
   temp=temp->next;
  }
  printf("NULL");
 }
}
```