

```

1  #include <stdio.h>
2  #include<stdlib.h>
3  struct node
4  {
5      int data;
6      struct node * next;
7  }*top,*ptr,*temp;
8  void push(int num)
9  {
10     if(top==NULL)
11     {
12         top=(struct node *)malloc(sizeof(struct node * ));
13         top->next=NULL;
14         top->data=num;
15     }
16     else{
17         temp=(struct node *)malloc (sizeof(struct node *));
18         temp->next=top;
19         temp->data=num;
20         top=temp;
21     }
22 }
23 int pop()
24 {
25     if(top==NULL)
26     {
27         printf("underflow");
28         return -1;
29     }
30     else
31     {
32         ptr=top;
33         ptr=ptr->next;
34         int pop=top->data;
35         free(top);
36         top=ptr;
37         return pop;
38     }
39 }
40 void display()
41 {
42     if(top==NULL)
43         printf("empty");
44     else
45     {
46         ptr=top;
47         while(ptr!=NULL)

```

```

39     }
40     void display()
41     {
42         if(top==NULL)
43             printf("empty");
44         else
45         {
46             ptr=top;
47             while(ptr!=NULL)
48             {
49                 printf("%d\t", ptr->data);
50                 ptr=ptr->next;
51             }
52         }
53     }
54
55
56     void main()
57     {
58         int choice,num;
59         while(1)
60         { printf("\n1.push\n2.pop\n3.display\n4.exit");
61           printf("\nEnter choice");
62           scanf("%d",&choice);
63           switch(choice)
64           {
65               case 1:printf("\nEnter num ");
66                     scanf("%d",&num);
67                     push(num);
68
69                     break;
70               case 2:
71                     printf("\n%d is deleted",pop());
72                     break;
73               case 3:
74                     display();
75                     break;
76
77               case 4:
78                     exit(0);
79           }
80
81         }
82     }
83 }
84

```

```
"C:\Users\Admin\Desktop\stack implementaion.exe"

1.push
2.pop
3.display
4.exit
enter choice1

enter num 3

1.push
2.pop
3.display
4.exit
enter choice3
3
1.push
2.pop
3.display
4.exit
enter choice1

enter num 6

1.push
2.pop
3.display
4.exit
enter choice3
6      3
1.push
2.pop
3.display
4.exit
enter choice2

6 is deleted
1.push
2.pop
3.display
4.exit
enter choice3
3
1.push
2.pop
3.display
4.exit
enter choice4

Process returned 0 (0x0)   execution time : 21.275 s
Press any key to continue.
```