

Output:

MAIN MENU

1. Push

2. Pop

3. Display

4. Quit

enter your choice : 1

input the element to be insert on top

the stack : 25

MAIN MENU

1. Push

2. Pop

3. Display

4. Quit

enter your choice : 1

input the element to be insert on top

the stack : 24

MAIN MENU

1. Push

2. Pop

3. Display

Program No : 7

Program to implement stack using Linked List.

Program

#include <stdio.h>

#include <conio.h>

#include <stdlib.h>

struct stack

{

int data;

struct stack *next;

}; struct stack *top = NULL, *temp;

int main()

{

int choice;

clrscr();

while(1)

{

printf("In MAIN MENU");

printf("In 1. Push");

printf("In 2. Pop");

printf("In 3. Display");

printf("In 4. Quit");

printf("In "enter your choice : ");

scanf("%d", &choice);

switch("%d", &choice);

4. Quit
enter your choice : 1

input the element to be insert on
to the stack : 89

MAIN MENU

1. Push

2. Pop

3. Display

4. Quit

enter your choice : 3

Stack elements are :

89

44

25

MAIN MENU

1. Push

2. Pop

3. Display

4. Quit

enter your choice : 2

Popped item is . 89

{

case 1 : push();
break;

case 2 : pop();
break;

case 3 : display();
break;

case 4 : exit(1);
break;

default :

printf("In wrong choice");

}

}

}

push()

{

struct stack * temp;

int pushitem;

temp = (struct stack *)malloc(sizeof(struct stack));

printf("In input the element to be insert on
to the stack:");

scanf("%d", &pushitem);

temp->data = pushitem;

temp->next = top;

top = temp;

return;

{

pop()

{

struct stack *ptr;

5 if (top == NULL)

{

printf("In stack is empty");

{

else

10

{

temp = top;

printf("In popped item is %d \n", temp->data);

top = top ->next;

free (temp);

15

{

return;

{

display()

{

20 struct stack *ptr;

ptr = top;

if (top == NULL)

{

printf("In stack is empty \n");

{

else

{

printf("In stack elements are :\n");

while (ptr != NULL)

{

5 printf ("%d\n", ptr->data);

ptr = ptr->next;

{

{

return;

{

10

15

20

25

DOSBox 0.74, Cpu speed: max 100% cycles, Frameskip 0, Program: TC

MAIN MENU

- 1. push
 - 2. pop
 - 3. display
 - 4. quit
- enter your choice: 1

input the element to be inserte on to the stack: 25

MAIN MENU

- 1. push
 - 2. pop
 - 3. display
 - 4. quit
- enter your choice: 1

input the element to be inserte on to the stack: 44

MAIN MENU

- 1. push
 - 2. pop
 - 3. display
 - 4. quit
- enter your choice: _

DOSBox 0.74, Cpu speed: max 100% cycles, Frameskip 0, Program: TC

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2. pop
3. display
4. quit
enter your choice: 1

input the element to be inserte on to the stack: 89

MAIN MENU
1. push
2. pop
3. display
4. quit
enter your choice: 3

stack elements are:
89
544
25

MAIN MENU
1. push
2. pop
3. display
4. quit
enter your choice:
```

DOSBox 0.74, Cpu speed: max 100% cycles, Frameskip 0, Program: TC

2. pop
3. display
4. quit
enter your choice: 3

stack elements are:
89
44
25

MAIN MENU
1. push
2. pop
3. display
4. quit
enter your choice: 2

popped item is 89
:

MAIN MENU
1. push
2. pop
3. display
4. quit
enter your choice: _