

- 1.push
- 2.pop
- 3.display
- 4.exit

Enter your choice

2

1 popped from the stack

stack menu

- 1.push
- 2.pop
- 3.display
- 4.exit

Enter your choice

2

stack underflow

2

stack underflow

stack underflow

stack menu

stack menu

stack menu

- 1.push
- 2.pop
- 3.display
- 4.exit

```
}  
int main(){  
    int choice,val;  
    while(1){  
        printf("\n stack menu \n");  
        printf(" 1.push\n 2.pop \n 3.display \n 4.exit \n");  
        printf("Enter your choice\n");  
        scanf("%d", &choice);  
        switch(choice){  
            case 1:printf("Enter value \n");  
                scanf("%d",&val);  
                push(val);  
                break;  
            case 2:pop();  
                break;  
            case 3:display();  
                break;  
            default : printf("invalid choice \n");  
                break;  
        }  
    }  
    return 0;  
}
```

3 pushed to stack

stack menu

1.push

2.pop

3.display

4.exit

Enter your choice

1

Enter value

4

4 pushed to stack

stack menu

1.push

2.pop

3.display

4.exit

Enter your choice

1

Enter value

5

5 pushed to stack

stack menu

1.push

2.pop

3.display

4.exit

Enter your choice

1

Enter value

6

stack overflow

Enter your choice

2

4 popped from the stack

stack menu

1.push

2.pop

3.display

4.exit

Enter your choice

2

3 popped from the stack

stack menu

1.push

2.pop

3.display

4.exit

Enter your choice

2

2 popped from the stack

stack menu

1.push

2.pop

3.display

4.exit

Enter your choice

2

1 popped from the stack

stack menu

1.push

2.pop

```
C pro1.c> main()
```

```
16 void pop(){
17     else{
18
19     }
20
21 void display(){
22     if(top==-1){
23         printf("stack is empty \n");
24     }
25     else{
26         printf("stack elements: \n");
27         for(int i=top;i>=0;i--){
28             printf("%d \n",stack[i]);
29         }
30     }
31 }
32
33 int main(){
34     int choice,val;
35     while(1){
36         printf("\n stack menu \n");
37         printf(" 1.push\n 2.pop \n 3.display \n 4.exit \n");
38         printf("Enter your choice\n");
39         scanf("%d", &choice);
40         switch(choice){
41             case 1:printf("Enter value \n");
42                 scanf("%d",&val);
43                 push(val);
44                 break;
45             case 2:pop();
46                 break;
47             case 3:display();
48                 break;
49             case 4:exit(0);
50                 break;
51             default:printf("Invalid choice\n");
52         }
53     }
54 }
```



C pro1.c > main()

```
1  #include <stdio.h>
2  #define max 5
3  int stack[max];
4  int top=-1;
5  void push(int val)
6  {
7      if (top==max-1){
8          printf("stack overflow \n");
9      }
10     else{
11         top++;
12         stack[top]=val;
13         printf("%d pushed to stack \n",val);
14     }
15 }
16 void pop(){
17     if(top==-1){
18         printf("stack underflow \n");
19     }
20     else{
21         printf("%d popped from the stack \n",stack[top]);
22         top--;
23     }
24 }
25 void display(){
26     if(top==-1){
27         printf("stack is empty \n");
```

stack overflow

stack menu

1.push

2.pop

3.display

4.exit

Enter your choice

3

stack elements:

5

4

3

2

1

stack menu

1.push

2.pop

3.display

4.exit

Enter your choice

2

5 popped from the stack

stack menu

1.push

2.pop

3.display

4.exit

Enter your choice

2

4 popped from the stack

stack menu

PS C:\Users\nitis\OneDrive\Desktop\C programs> cd "c:\User

stack menu

1.push

2.pop

3.display

4.exit

Enter your choice

1

Enter value

1

1 pushed to stack

stack menu

1.push

2.pop

3.display

4.exit

Enter your choice

1

Enter value

2

2 pushed to stack

stack menu

1.push

2.pop

3.display

4.exit

Enter your choice

1

Enter value

3

3 pushed to stack