

## tutorial\_01.c

```
1  #include <stdio.h>
2  #define MAX 100
3
4  int stack[MAX];
5  int top = -1;
6
7  void push(int value) {
8      if(top == MAX - 1)
9          printf("Stack Overflow\n");
10     else {
11         top++;
12         stack[top] = value;
13         printf("%d pushed into stack\n", value);
14     }
15 }
16
17 void pop() {
18     if(top == -1)
19         printf("Stack Underflow\n");
20     else {
21         printf("%d popped from stack\n", stack[top]);
22         top--;
23     }
24 }
25
26 void display() {
27     if(top == -1)
28         printf("Stack is empty\n");
29     else {
30         printf("Stack elements: ");
31         for(int i = top; i >= 0; i--)
32             printf("%d ", stack[i]);
33         printf("\n");
34     }
35 }
36
37 int main() {
38     int choice, value;
39     while(1) {
40         printf("\n1. Push\n2. Pop\n3. Display\n4. Exit\n");
41         printf("Enter choice: ");
42         scanf("%d", &choice);
43
44         switch(choice) {
45             case 1:
46                 printf("Enter value to push: ");
47                 scanf("%d", &value);
48                 push(value);
```

```
49         break;
50     case 2:
51         pop();
52         break;
53     case 3:
54         display();
55         break;
56     case 4:
57         return 0;
58     default:
59         printf("Invalid choice\n");
60     }
61 }
62 }
63
```