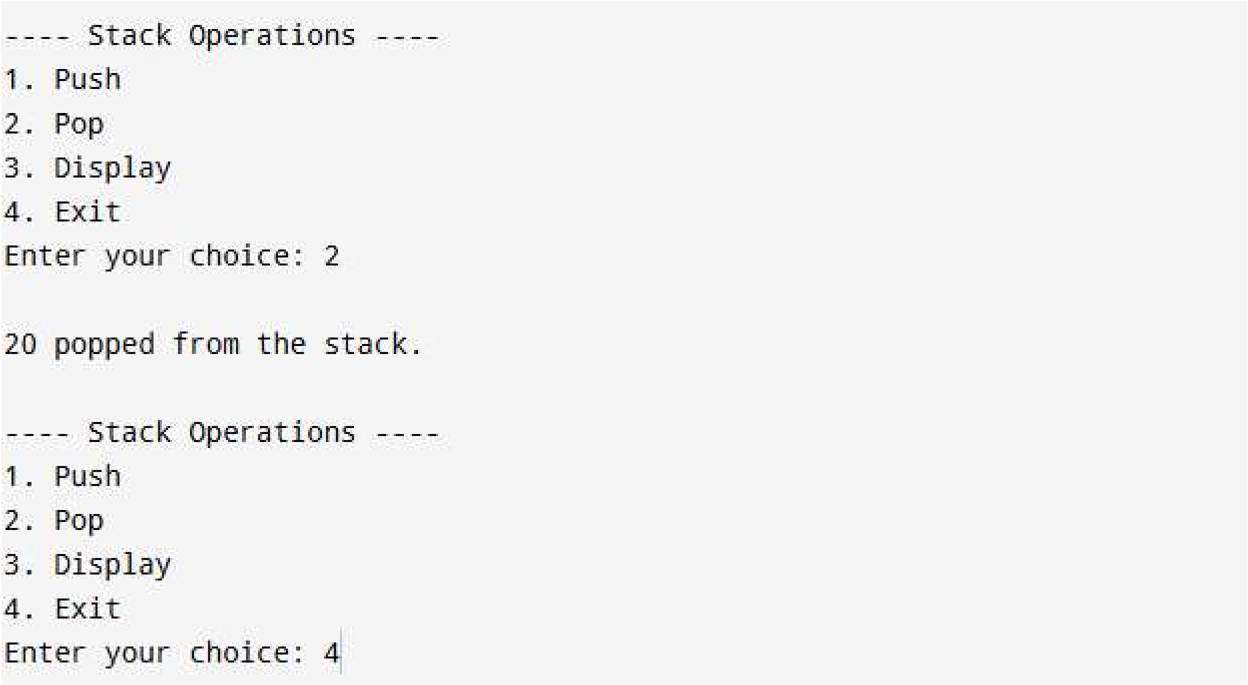
```
#include <stdio.h>
#define MAX 5

int stack[MAX];
int top = -1;

void push(int value) {
    if (top == MAX - 1) {
        printf("\nStack Overflow! Cannot push %d onto the stack.\n", value);
    } else {
        top++;
        stack[top] = value;
        printf("\n%d pushed onto the stack.\n", value);
    }
}

void pop() {
    if (top == -1) {
        printf("\nStack Underflow! Cannot pop from an empty stack.\n");
    } else {
        printf("\n%d popped from the stack.\n", stack[top]);
        top--;
    }
}

void display() {
    if (top == -1) {
        printf("\nThe stack is empty.\n");
    } else {
        printf("\nStack elements are:\n");
        for (int i = top; i >= 0; i--) {
            printf("%d\n", stack[i]);
        }
    }
}

int main() {
    int choice, value;

    while (1) {
        printf("\n---- Stack Operations ----\n");
        printf("1. Push\n");
        printf("2. Pop\n");
        printf("3. Display\n");
        printf("4. Exit\n");
        printf("Enter your choice: ");
        scanf("%d", &choice);

        switch (choice) {
            case 1:
                printf("Enter value to push: ");
                scanf("%d", &value);
                push(value);
                break;
            case 2:
                pop();
                break;
            case 3:
                display();
                break;
            case 4:
                printf("\nExiting program.\n");
                return 0;
            default:
                printf("\nInvalid choice! Please try again.\n");
        }
    }
}
```

```
---- Stack Operations ----
1. Push
2. Pop
3. Display
4. Exit
Enter your choice: 1
Enter value to push: 10

10 pushed onto the stack.

---- Stack Operations ----
1. Push
2. Pop
3. Display
4. Exit
Enter your choice: 1
Enter value to push: 20

20 pushed onto the stack.

---- Stack Operations ----
1. Push
2. Pop
3. Display
4. Exit
Enter your choice: 3

Stack elements are:
20
10

---- Stack Operations ----
1. Push
2. Pop
3. Display
```



```
---- Stack Operations ----
1. Push
2. Pop
3. Display
4. Exit
Enter your choice: 2

20 popped from the stack.

---- Stack Operations ----
1. Push
2. Pop
3. Display
4. Exit
Enter your choice: 4
```