

```

#include <stdio.h>
#define SIZE 5
int stack[SIZE], top = -1;
void push(int val) {
    if (top == SIZE - 1) printf("Stack Overflow\n");
    else stack[++top] = val;
}
void pop() {
    if (top == -1) printf("Stack Underflow\n");
    else printf("Popped: %d\n", stack[top--]);
}
void peek() {
    if (top == -1) printf("Stack is empty\n");
    else printf("Top: %d\n", stack[top]);
}

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

int main() {
    int ch, val;
    do {
        printf("\n1.Push 2.Pop 3.Peek 4.Display 5.Exit\nEnter choice: ");
        scanf("%d", &ch);
        switch (ch) {
            case 1: printf("Enter value: "); scanf("%d", &val); push(val); break;
            case 2: pop(); break;
            case 3: peek(); break;
            case 4: display(); break;
        }
    } while (ch != 5);
    return 0;
}

```

1.Push 2.Pop 3.Peek 4.Display 5.Exit
Enter choice: 1
Enter value: 10

1.Push 2.Pop 3.Peek 4.Display 5.Exit
Enter choice: 1
Enter value: 20

1.Push 2.Pop 3.Peek 4.Display 5.Exit
Enter choice: 3
Top: 20

1.Push 2.Pop 3.Peek 4.Display 5.Exit
Enter choice: 3
Top: 20

1.Push 2.Pop 3.Peek 4.Display 5.Exit
Enter choice: 4
Stack: 20 10

1.Push 2.Pop 3.Peek 4.Display 5.Exit
Enter choice: 2
Popped: 20

1.Push 2.Pop 3.Peek 4.Display 5.Exit
Enter choice: 4
Stack: 10

1.Push 2.Pop 3.Peek 4.Display 5.Exit
Enter choice: 5

=== Code Execution Successful ===