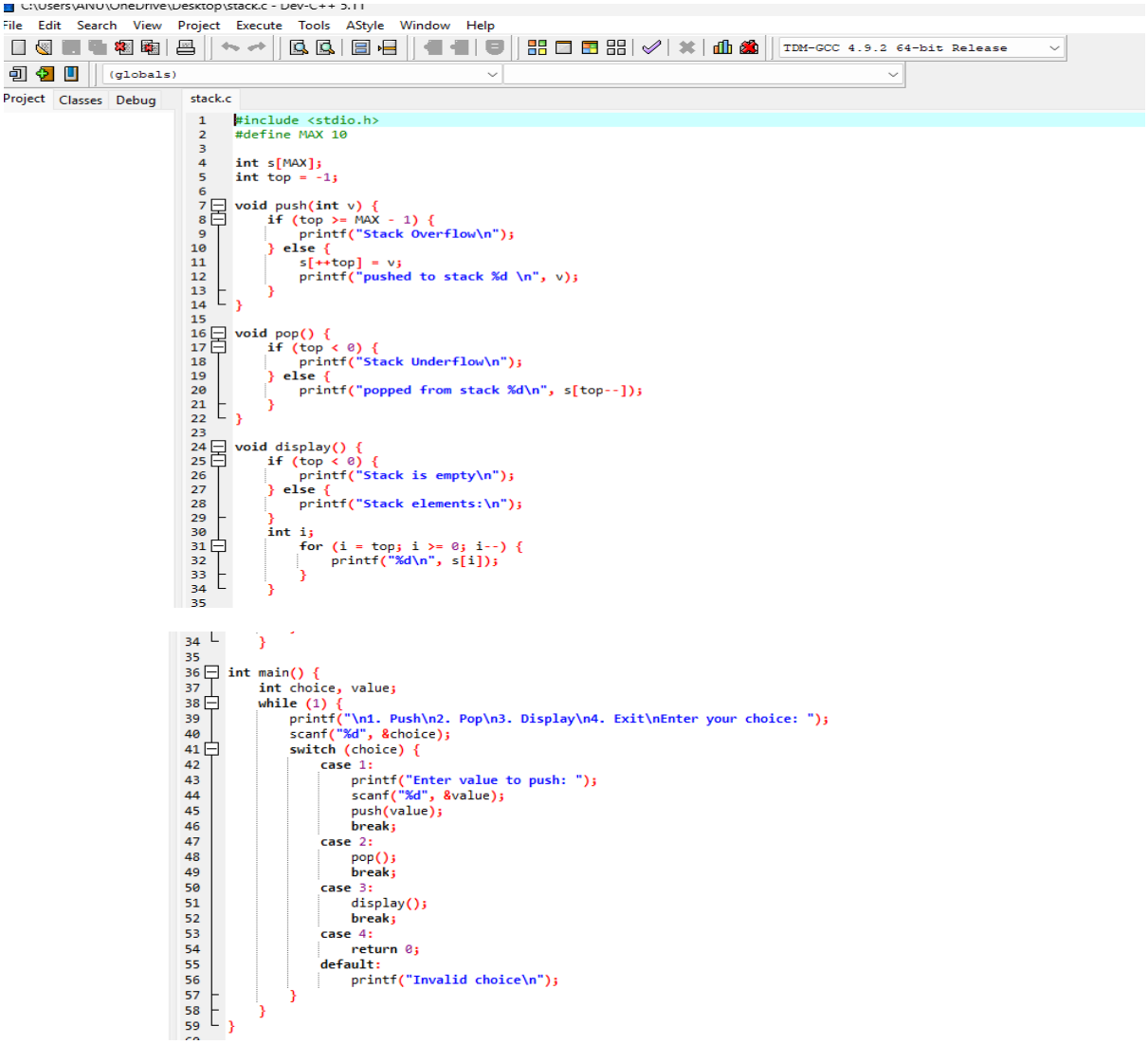
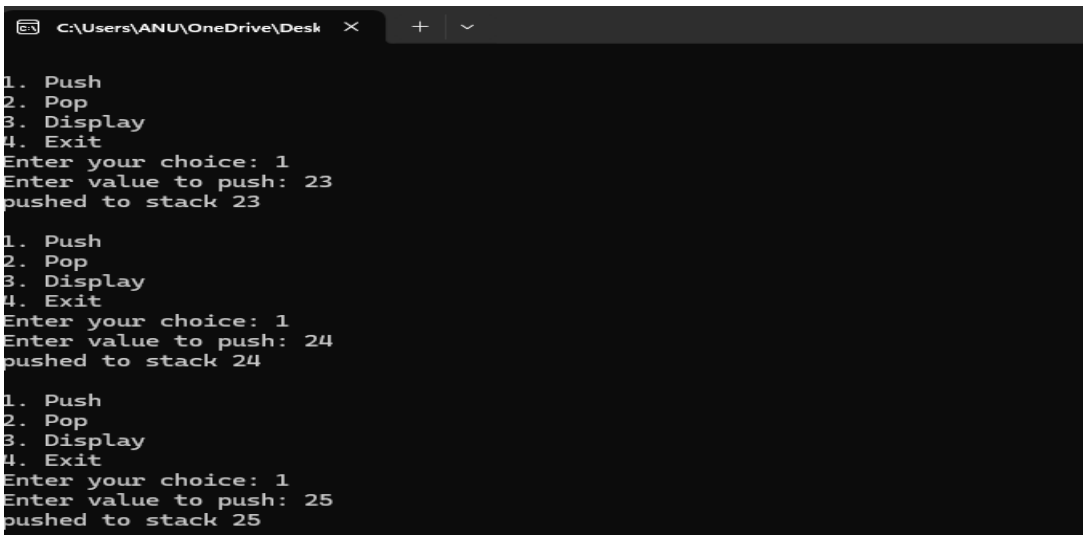
Program 1:




```c
#include <stdio.h>
#define MAX 10

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

void push(int v) {
    if (top >= MAX - 1) {
        printf("Stack Overflow\n");
    } else {
        s[++top] = v;
        printf("pushed to stack %d \n", v);
    }
}

void pop() {
    if (top < 0) {
        printf("Stack Underflow\n");
    } else {
        printf("popped from stack %d\n", s[top--]);
    }
}

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

    }

int main() {
    int choice, value;
    while (1) {
        printf("\n1. Push\n2. Pop\n3. Display\n4. Exit\nEnter 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:
                return 0;
            default:
                printf("Invalid choice\n");
        }
    }
}
```

Output:



```
1. Push
2. Pop
3. Display
4. Exit
Enter your choice: 2
popped from stack 25

1. Push
2. Pop
3. Display
4. Exit
Enter your choice: 3
Stack elements:
24
23

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

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Process exited after 210.2 seconds with return value 0
Press any key to continue . . .
```