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#include <stdio.h>
#include <stdlib.h>

#define max 10

int stack[max];
int top = -1;
int val;

void push(int);
void pop();
void display();

int main()
{
    int choice = 0;

    do
    {
        printf("Enter your choice\n");
        printf("1.Push\n2.Pop\n3.Display\n4.Exit\n");
        scanf("%d", &choice);

        switch (choice)
        {
            case 1:
                if (top == max - 1)
                {
                    printf("Overflow\n");
                }
                else
                {
                    printf("Enter value to be pushed\n");
                    scanf("%d", &val);
                    push(val);
                    printf("Push operation completed\n");
                }
                break;

            case 2:
                if (top == -1)
                {
                    printf("Underflow\n");
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        }
        else
        {
            pop();
            printf("Pop operation completed\n");
        }
        break;

    case 3:
        if (top == -1)
        {
            printf("Stack is empty\n");
        }
        else
        {
            display();
        }
        break;

    case 4:
        printf("Exit\n");
        exit(0);

    default:
        printf("Incorrect input\n");
    }
} while (choice != 4);

return 0;
}

void push(int val)
{
    if (top != max - 1)
    {
        top++;
        stack[top] = val;
    }
    else
    {
        printf("Overflow\n");
    }
}

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void pop()
{
    if (top != -1)
    {
        val = stack[top];
        top--;
    }
    else
    {
        printf("Underflow\n");
    }
}

void display()
{
    if (top != -1)
    {
        for (int i = 0; i <= top; i++)
            printf("%d\t", stack[i]);
    }
    printf("\n");
}
```

```
PS C:\Users\kadab\OneDrive\Desktop\DS> gcc one.c
PS C:\Users\kadab\OneDrive\Desktop\DS> .\a.exe
Enter your choice
1.Push
2.Pop
3.Display
4.Exit
1
Enter value to be pushed
1
Push operation completed
Enter your choice
1.Push
2.Pop
3.Display
4.Exit
1
Enter value to be pushed
2
Push operation completed
Enter your choice
1.Push
2.Pop
3.Display
4.Exit
1
Enter value to be pushed
3
Push operation completed
Enter your choice
1.Push
2.Pop
3.Display
4.Exit
3
1      2      3
Enter your choice
1.Push
2.Pop
3.Display
4.Exit
2
Pop operation completed
Enter your choice
1.Push
2.Pop
3.Display
4.Exit
3
1      2
Enter your choice
1.Push
2.Pop
3.Display
4.Exit
4
Exit
PS C:\Users\kadab\OneDrive\Desktop\DS> 
```

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N/A  
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