

```
#include <stdio.h>
#define N 4
int top = -1;
void push (int[], int);
int pop (int[]);
void display (int[]);
int main (int argc, char **argv)
{
    int stack[N];
    int choice = 0, element;
    printf ("Please choose options: \n");
    printf ("1 - Push \n");
    printf ("2 - Pop \n");
    printf ("3 - Display \n");
    printf ("4 - Quit \n");
    while (choice != 4)
    {
        printf ("Please enter Your choice: ");
        scanf ("%d", &choice);
        if (choice == 1)
        {
            printf ("Enter an element to push: ");
            scanf ("%d", &element);
            push (stack, element);
        }
    }
}
```

```
else if (choice == 2)
{
    int num = pop (stack);
    printf("The popped element : %.d", num);
}
else if (choice == 3)
{
    display (stack);
}
else if (choice == 4)
    break;
else
    printf("Invalid choice");
}
return 0;
}

void push (int stack[], int element)
{
    if (top == N - 1)
        printf("Stack Overflow\n");
    else
    {
        top++;
        stack[top] = element;
    }
}
```

```
int pop(int stack[])
{
    int num;
    if (top == -1) {
        printf("Stack Underflow\n");
        return -1;
    }
    else {
        num = stack[top];
        top--;
        return num;
    }
}
```

```
void display(int stack[])
{
    int i;
    printf("The elements in stack:\n");
    for (i = top; i >= 0; i--)
    {
        printf("%d\n", stack[i]);
    }
}
```