

**Code:**

```
#include <stdio.h>
#include <stdlib.h>
#define n 4
int stack[n];
int top;

void main()
{
    int ch;
    top = -1;
    printf("Menu:\n1. Push element\n2. Pop Element\n3. Display Stack\n4. Exit\n");
    printf("Enter choice: ");
    scanf("%d", &ch);
    while(1)
    {
        switch(ch)
        {
            case 1:
                push();
                break;
            case 2:
                pop();
                break;
            case 3:
                display();
                break;
            case 4:
                printf("Exiting!");
                exit(0);
            default:
                printf("Please enter valid choice!\n");
        }
        printf("Enter choice: ");
        scanf("%d", &ch);
    }
}

void push()
{
```

```

if(top>=n)
{
    printf("Stack is full! Overflow error!\n");
}
else
{
    int a;
    printf("Enter element to be inserted: ");
    scanf("%d", &a);
    top++;
    stack[top] = a;
    printf("Element inserted!\n");
}
}

void pop()
{
    if(top== -1)
    {
        printf("Stack is empty! Underflow error!\n");
    }
    else
    {
        printf("Element deleted is: %d\n", stack[top]);
        top--;
    }
}

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

```

## Output:

```
Menu:
1. Push element
2. Pop Element
3. Display Stack
4. Exit
Enter choice: 1
Enter element to be inserted: 1
Element inserted!
Enter choice: 1
Enter element to be inserted: 2
Element inserted!
Enter choice: 1
Enter element to be inserted: 3
Element inserted!
Enter choice: 1
Enter element to be inserted: 4
Element inserted!
Enter choice: 1
Enter element to be inserted: 5
Element inserted!
Enter choice: 1
Stack is full! Overflow error!
Enter choice: 3
Elements are: 0
5
4
3
2
1
Enter choice: 2
Element deleted is: 5
Enter choice: 2
Element deleted is: 4
Enter choice: 2
Element deleted is: 3
Enter choice: 2
Element deleted is: 2
Enter choice: 2
Element deleted is: 1
Enter choice: 2
Stack is empty! Underflow error!
Enter choice: 3
Stack is empty!
Enter choice: 4
Exiting!
Process returned 0 (0x0)   execution time : 39.723 s
Press any key to continue.
```