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#include<stdio.h>
#include<stdlib.h>
int stack[50];

int ch;
void push(void);
void pop(void);
void display(void);
int n,top,no,i;
int main()
{
    top=-1;
    printf("\n Enter the size of stack:");
    scanf("%d",&n);
    printf("\n Please enter the stack operation which you want to perform:");
    printf("\n 1.Push\n 2.Pop\n 3.display\n 4.exit");
    while(ch!='4')
    {
        printf("\n Enter the Choice:");
        scanf("%d",&ch);
        switch(ch)
        {
            case 1:
                push();
                break;
            case 2:
                pop();
                break;
            case 3:
                display();
                break;
        }
    }
}
```

```
        break;
    case 3:
        display();
        break;
    case 4:
        exit(0);
        break;
    default:
    {
        printf ("\nINVALID CHOICE!");
    }

}
return 0;
}

void push()
{
    if (top>=n-1)
    {
        printf ("\nSTACK OVERFLOW");
    }
    else
    {
        printf(" Enter a value to be inserted/pushed:");
        scanf("%d", &no);
        top++;
    }
}
```

```
5     scanf ("%d", &no);
6     top++;
7     stack[top]=no;
8 }
9
10 void pop()
11 {
12     if (top<= -1)
13     {
14         printf ("\n UNDERFLOW");
15     }
16     else
17     {
18         printf ("\n The popped element is %d", stack[top]);
19         top--;
20     }
21 }
22
23 void display()
24 {
25     if (top>=0)
26     {
27         printf ("\n The elements in stack are as follows: \n");
28         for (i=top; i>=0; i--)
29         {
30             printf ("\n%d\n", stack[i]);
31         }
32         printf ("\n Press Next Choice");
33     }
34     else
35     {
36     }
37 }
```

```
        printf("\n UNDERFLOW");
    }
else
{
    printf("\n The popped element is %d", stack[top]);
    top--;
}
}

void display()
{
    if(top>=0)
    {
        printf("\n The elements in stack are as follows: \n");
        for(i=top;i>=0;i--)
            printf("\n%d,", stack[i]);
        printf("\n Press Next Choice");
    }
    else
    {
        printf("\n The stack is empty");
    }
}
```

Enter the size of stack:5

Please enter the stack operation which you want to perform:

1.Push

2.Pop

3.display

4.exit

Enter the Choice:1

Enter a value to be inserted/pushed:2

Enter the Choice:1

Enter a value to be inserted/pushed:3

Enter the Choice:2

The popped element is 3

Enter the Choice:3

The elements in stack are as follows:

2,

Press Next Choice

Enter the Choice: