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1: #include <stdio.h>
2: #include <stdlib.h>
3: #define SIZE 4
4: int top = -1, inp_array[SIZE];
5: void push();
6: void pop();
7: void show();
8: int main()
9: {
10:     int choice;
11:     while (1)
12:     {
13:         printf("\nPerform operations on the stack:");
14:         printf("\n1.Push the element\n2.Pop the element\n3.Show\n4.End");
15:         printf("\n\nEnter the choice: ");
16:         scanf("%d", &choice);
17:         switch (choice)
18:         {
19:             case 1:
20:                 push();
21:                 break;
22:             case 2:
23:                 pop();
24:                 break;
25:             case 3:
26:                 show();
27:                 break;
28:             case 4:
29:                 exit(0);
30:             default:
31:                 printf("\nInvalid choice!!");
32:         }
33:     }
34: }
35: void push()
36: {
37:     int x;
38:
39:     if (top == SIZE - 1)
40:     {
41:         printf("\nOverflow!!");
42:     }
43:     else
44:     {
45:         printf("\nEnter the element to be added onto the stack: ");
46:         scanf("%d", &x);
47:         top = top + 1;
48:         inp_array[top] = x;
49:     }
50: }
51: void pop()
52: {
53:     if (top == -1)
54:     {
55:         printf("\nUnderflow!!");
56:     }
57:     else
58:     {
59:         printf("\nPopped element: %d", inp_array[top]);
60:         top = top - 1;
61:     }

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62: }
63: void show()
64: {
65:     if (top == -1)
66:     {
67:         printf("\nUnderflow!!");
68:     }
69:     else
70:     {
71:         printf("\nElements present in the stack: \n");
72:         for (int i = top; i >= 0; --i)
73:             printf("%d\n", inp_array[i]);
74:     }
75: }
```