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1: #include <stdio.h>
2: #include <stdlib.h>
3: #include <conio.h>
4: #define MAX 3
5: int st[MAX], top=-1;
6: void push(int st[], int val);
7: int pop(int st[]);
8: int peek(int st[]);
9: void display(int st[]);
10: int main(int argc, char *argv[])
11: {
12:     int val, option;
13:     do
14:     {
15:         printf("\n ***STACK OPERATIONS***");
16:         printf("\n 1. PUSH");
17:         printf("\n 2. POP");
18:         printf("\n 3. PEEK");
19:         printf("\n 4. DISPLAY");
20:         printf("\n 5. EXIT");
21:         printf("\n Enter your option: ");
22:         scanf("%d", &option);
23:         switch(option)
24:         {
25:             case 1:
26:                 printf("\n Enter the number to be pushed on stack: ");
27:                 scanf("%d", &val);
28:                 push(st, val);
29:                 break;
30:             case 2:
31:                 val = pop(st);
32:                 if(val != -1)
33:                     printf("\n The value deleted from stack is: %d", val);
34:                 break;
35:             case 3:
36:                 val = peek(st);
37:                 if(val != -1)
38:                     printf("\n The value stored at top of stack is: %d", val);
39:                 break;
40:             case 4:
41:                 display(st);
42:                 break;
43:         }
44:     }
45:     while(option != 5);
46:     return 0;
47: }
48: void push(int st[], int val)
49: {
50:     if(top == MAX-1)
51:     {
52:         printf("\n STACK OVERFLOW");
53:     }
54:     else
55:     {
56:         top++;
57:         st[top] = val;
58:     }
59: }
60: int pop(int st[])
61: {

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62: int val;
63: if(top == -1)
64: {
65:     printf("\n STACK UNDERFLOW");
66:     return -1;
67: }
68: else
69: {
70:     val = st[top];
71:     top--;
72:     return val;
73: }
74: }
75: void display(int st[])
76: {
77: int i;
78: if(top == -1)
79: {
80: printf("\n STACK IS EMPTY");
81: }
82: else
83: {
84:     for(i=top;i>=0;i--)
85:         printf("\n %d",st[i]);
86:     printf("\n");
87: }
88: }
89: int peek(int st[])
90: {
91: if(top == -1)
92: {
93: printf("\n STACK IS EMPTY");
94: return -1;
95: }
96: else
97: return (st[top]);
98: }

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