Stack Operation

Shanmugam C

2212049

CSE

```c
1   #include <stdio.h>
2   int cap=10;
3   int top=-1;
4   int isfull(){
5       return (top+1)==cap;
6   }
7   int isempty(){
8     return top==-1;
9   }
10  void push(int *b,int x){
11      if(isfull()){
12          printf("Stack Overflow");\If it is full show an this message
13          return;
14      }
15    top++;
16    b[top]=x;
17  }
18  int pop(int *b){
19      if(isempty()){
20          printf("Cannot do pop operation");
21          return;
22      }
23      top--;
24
25  }
26  int peek(int *b){
27    return b[top];
28  }
29  void display(int *b){
30    for(int i=0;i<top+1;i++){
31      printf("%d ",b[i]);
32    }
33  }
34  int main() {
35
36      int a,f,m,l;
37      scanf("%d",&a);
38
39      int b[cap];
40      for(int i=0;i<a;i++){
41          scanf("%d",&b[i]);
42        top++;
43      }
44      do{
45        printf("Enter 1.push 2.pop 3.peek  4.display 5.Exit\n");
46
47        scanf("%d",&m);
48        switch(m){
49          case 1:
50              printf("Enter the element you want to push:\n");
51              scanf("%d",&l);
52              push(b,l);
53              break;
54          case 2:
55              pop(b);
56              break;
57          case 3:
58              printf("The peek element is %d\n",peek(b));
59              break;
60          case 4:
61              display(b);
62              break;
63        }
64      }while(m!=5);
65
66
67
68
69
70      return 0;
71  }
72
73
```

OUTPUT


```
2
1 2
Enter 1.push 2.pop 3.peek  4.display 5.Exit
1
Enter the element you want to push:
3
Enter 1.push 2.pop 3.peek  4.display 5.Exit
1
Enter the element you want to push:
4
Enter 1.push 2.pop 3.peek  4.display 5.Exit
1
Enter the element you want to push:
5
Enter 1.push 2.pop 3.peek  4.display 5.Exit
1
Enter the element you want to push:
6
Enter 1.push 2.pop 3.peek  4.display 5.Exit
2
Enter 1.push 2.pop 3.peek  4.display 5.Exit
4
1 2 3 4 5
Process returned 0 (0x0)   execution time : 23.517 s
Press any key to continue.
```